DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

SOUTH STOCKTON COMMERCE CENTER

OCTOBER 2021

Prepared for:

City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

Prepared by:

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A Land Use Planning, Design, and Environmental Firm

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DRAFT EIR

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INTRODUCTION

The City of Stockton, as the lead agency, determined that the proposed project, South Stockton Commercial Cente r Project (SSCC) is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

The EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the Notice of Preparation (NOP) were considered in preparing the analysis in this EIR.

PROJECT DESCRIPTION

The proposed Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site.

The SSCC Project proposes a Tentative Map for the 422.22-acre site to create 13 development lots, two basin lots, one park lot, one open space lot, one sewer pump station lot, and off-site sewer improvements. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses. Although a Site Plan is not currently proposed, for planning purposes a conceptual site plan was prepared to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and for purposes of environmental review As described in Chapter 2.0, Project Description, the Project would result in a maximum of 6,091,551 square feet of industrial type land uses, 140,350 square feet of commercial land uses, 54 acres of open space, 41 acres of public facilities, and 18 acres of right-of-way circulation improvements.

Although the proposed SSCC Project is consistent with the site's existing General Plan and Zoning designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment and Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way. These areas are currently designated Commercial and Industrial and are zoned CG (Commercial, General) and IL (Industrial, Light), respectively. The current

boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be designated Commercial and zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial and zoned IL.

The principal objective of the proposed Project is to implement and achieve the goals and objectives of the General Plan through the approval and subsequent implementation of the SSCC Project. The development of approximately 422-acres of land will include industrial uses, commercial uses, open space, public facilities, and public roadway right-of-way land uses and meet the objectives of the General Plan.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Project that are known to the City of Stockton, were raised during the NOP process, or raised during preparation of the Draft EIR. This Draft EIR discusses potentially significant impacts associated with aesthetics and visual resources, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and population, noise, public services, transportation and circulation, and utilities.

The City of Stockton received written comment letters on the NOP for the proposed Project. Copies of those letters are provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping meeting on October 26, 2020. No written or verbal comments were provided at that scoping meeting.

- California Air Resources Board;
- California Department of Conservation, Division of Geology and Mines;
- California Department of Conservation, Division of Land Resource Protection;
- California Department of Justice;
- California Department of Transportation;
- California Water Board. Central Valley Regional Water Quality Control Board;
- Center for Biological Diversity;
- Delta-Sierra Group;
- Marvin Norman;
- Native American Heritage Commission; and
- San Joaquin Valley Air Pollution Control District.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the Project or to the location of the Project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed Project. Three alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to

identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Reduced Project Alternative:** Under this alternative, the proposed Project would be developed with the same types of commercial, industrial, open space, and public facility uses as described in the Project Description, but the commercial and industrial square footage would decrease by 25 percent, the amount of open space would decrease by 25 percent, and the amount of developed land would decrease by 25 percent.
- **Agriculture Protection Alternative:** Under this alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative.

Alternatives are described in detail in Chapter 5. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives.

TABLE ES-1: COMPARISON SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*REDUCED PROJECT ALTERNATIVE*	*AGRICULTURE PROTECTION ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Agricultural Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Air Quality	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Cultural and Tribal Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Geology and Soils	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (3rd Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Land Use and Population	Greater (3rd Best)	Equal (Best)	Equal (2nd Best)
Noise	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Public Services	Less (Best)	Equal (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Project Alternative and Agriculture Protection Alternative both rank higher than the proposed Project. The Reduced Project Alternative would have equal impacts in three areas, slightly less impacts in seven areas, and less impacts in four areas. The Agriculture Protection Alternative would have equal impacts in nine areas and less impacts in five

areas. Therefore, the Reduced Project Alternative would be the next environmentally superior alternative. It is noted that neither the Agriculture Protection Alternative nor the Reduced Project Alternative fully meet all of the Project objectives that is to develop 422-acres of land for industrial uses, commercial uses, open space, public facilities, and public roadway right-of-way.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed Project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations.

The environmental impacts of the proposed Project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character.	SU	*None feasible.*	SU
Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway.	LS	*None required.*	--
Impact 3.1-3: Project implementation may result in light and glare impacts.	PS	***Mitigation Measure 3.1-1:*** *A lighting plan shall be completed for future development of each Project parcel. The lighting plan shall be submitted to the City for review and approval. All proposed outdoor lighting shall meet applicable city standards regulating outdoor lighting in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Lighting and glare guidelines provided in the City of Stockton's Municipal Codes for Design and Development require that all light sources be shielded and directed downwards so as to minimize trespass light and glare to adjacent residences. Additionally, all outdoor lighting sources of 1,000 lumens or greater shall be fully shielded.*	LS
AGRICULTURAL RESOURCES			
Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses.	PS	***Mitigation Measure 3.2-1:*** *Prior to the conversion of Important Farmland on the Project site, the Project applicant shall participate in the SJMSCP agricultural mitigation fee program by paying the established fees on a per-acre basis for the loss of Important Farmland.*	SU
Impact 3.2-2: The proposed Project may 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	LS	*None required.*	--

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PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AIR QUALITY			
Impact 3.3-1: Proposed Project operation would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	PS	***Mitigation Measure 3.3-1****: Prior to the approval of individual phases of development (i.e. final maps, improvement plans, site plan review, etc.), each project applicant shall coordinate with the SJVAPCD to ensure compliance with Rule 9510 for both operational and construction emissions. The intent is that each phase of development would demonstrate that the individual project does not exceed the applicable SJVAPCD criteria pollutant thresholds for project operations or construction. If the SJVAPCD criteria pollutant thresholds for an individual project is exceeded, the project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term air quality impacts to below the applicable SJVAPCD thresholds of significance. This may consistent of fee payments to the SJVAPCD for their use in funding offsite mitigation strategies. Each off-site mitigation strategy shall be developed with, and approved by, the SJVAPCD and the City of Stockton. Each offsite mitigation strategy is subject to the review and approval of the Air District and the City of Stockton on a project-by-project basis, and is intended to be in addition to offsets that are obtained through any on-site mitigation measures. The City of Stockton is required to verify each offsite mitigation strategy and its associated reductions to ensure that the associated air quality impacts are reduced to the maximum extent feasible (i.e. to below the applicable SJVAPCD thresholds of significance, at minimum). Examples of off-site mitigation strategies may include (but are not limited to) transportation demand management (TDM) measures and/or financial incentives for project employees to utilize alternative transportation options such as buses, bicycles, or electric vehicles.*	SU
Impact 3.3-2: Proposed Project construction activities would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	PS	***Mitigation Measure 3.3-2:*** *Prior to the commencement of construction activities for each phase of the Project, the Project proponent shall prepare and submit a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021, Section 6.3, for the review and approval of the APCD Air Pollution Control Officer.* ***Mitigation Measure 3.3-3:*** *During all construction activities, the Project proponent shall implement dust control measures, as required by APCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less. Dust control measures shall include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil*	SU

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules. ***Mitigation Measure 3.3-4:*** *During all construction activities, the Project proponent shall implement the following dust control practices identified in Tables 6-2 and 6-3 of the GAMAQI (2002).* *a. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.* *b. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.* *c. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.* *d. When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.* *e. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.* *f. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.* *g. Limit traffic speeds on unpaved roads to 5 mph; and* *h. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.* ***Mitigation Measure 3.3-5:*** *Asphalt paving shall be applied in accordance with APCD Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.*	

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Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts.	LS	*None required.*	--
Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants.	LS	*None required.*	--
Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LS	*None required.*	--
BIOLOGICAL RESOURCES			
Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species.	LS	*None required.*	--
Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species.	PS	***Mitigation Measure 3.4-1:*** *Prior to commencement of any grading activities, the Project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*	LS
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	PS	*Implement* ***Mitigation Measure 3.4-1.***	LS
Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	LS	*None required.*	--
Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on	LS	*None required.*	--

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candidate, sensitive, or special-status plant species.			
Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters.	LS	*None required.*	--
Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community.	LS	*None required.*	--
Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites.	LS	*None required.*	--
Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan.	LS	*None required.*	--
Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	PS	***Mitigation Measure 3.4-2:*** *Should the Project require the removal of a Heritage Tree (as defined in the Stockton Municipal Code), the applicant shall comply with the City's Heritage Tree Permit requirements outlined in Chapter 16.130 of the City's Municipal Code.*	LS
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074.	LS	*None required.*	--
Impact 3.5-2: Project implementation has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines §15064.5, or a significant	PS	***Mitigation Measure 3.5-1:*** *Prior to any ground-disturbing activities on the Project site, a qualified archaeologist shall conduct pre-construction worker cultural resources sensitivity training. The training session shall focus on the recognition of the types of historical and cultural, including Native American, resources that could be encountered, procedures to be followed if resources are found, and pertinent laws protecting these resources.*	LS

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tribal cultural resource, as defined in Public Resources Code §21074.		***Mitigation Measure 3.5-2:*** *If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, are found during grading and construction activities during any phase of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s).* *Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.* *If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the Project applicant's expense.* ***Mitigation Measure 3.5-3:*** *If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:* • *The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.* • *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American*	

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		human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs: o *The Native American Heritage Commission is unable to identify a descendent.* o *The descendant identified fails to make a recommendation.* o *The City of Stockton or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*	
Impact 3.5-3: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	PS	*Implement* ***Mitigation Measure 3.5-3.***	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The proposed Project may directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, or landslides.	LS	*None required.*	--
Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil.	PS	*Implement* ***Mitigation Measure 3.9-1.***	LS
Impact 3.6-3: The proposed project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse.	PS	***Mitigation Measure 3.6-1****: Prior to earthmoving activities for each phase of the Project, a certified geotechnical engineer, or equivalent, shall be retained to perform a final geotechnical evaluation of the soils at a design-level as required by the requirements of the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or lateral*	LS

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		spreading. The grading and improvement plans, as well as the storm drainage and building plans for each phase of the Project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.	
Impact 3.6-4: Potential for expansive soils to create substantial risks to life or property.	PS	*Implement* ***Mitigation Measure 3.6-1.***	LS
Impact 3.6-5: The proposed Project has the potential to directly or indirectly destroy a unique geological feature or paleontological resource.	PS	***Mitigation Measure 3.6-2:*** *If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find.* *Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology.*	LS
GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY			
Impact 3.7-1: The proposed Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	PS	***Mitigation Measure 3.7-1****: Prior to the approval of individual phases of development (i.e. final maps, site plan review, etc.), each Project applicant shall demonstrate that the individual Project does not exceed the applicable SJVAPCD greenhouse thresholds for Project operations. If the SJVAPCD greenhouse thresholds for an individual Project is exceeded, the Project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term greenhouse gas impacts to below the applicable SJVAPCD thresholds of significance. Each off-site mitigation strategy shall be developed with, and approved by, the SJVAPCD and the City of Stockton. Each offsite mitigation strategy is subject to the review and approval of the SJVAPCD and the City of Stockton on a project-by-project basis, and is intended to be in addition to offsets that are obtained through any on-site mitigation measures. The City of Stockton is required to verify each offsite mitigation strategy and its associated reductions to ensure that the associated greenhouse gas impacts are reduced to the maximum extent feasible (i.e. to below the applicable SJVAPCD thresholds of significance, at minimum). Examples of off-site mitigation strategies may include (but are not limited to) transportation demand management (TDM) measures and/or financial incentives for Project employees to utilize alternative transportation options such as buses, bicycles, or electric vehicles.*	SU

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Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources.	LS	*None required.*	--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	***Mitigation Measure 3.8-1****: In the event that hazardous materials are encountered during construction, a Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.* ***Mitigation Measure 3.8-2****: Prior to the issuance of grading permits for any of the parcels (i.e., Parcels 1-13, Basins A and C, Open Space B, Sewer Pump Station D, and Open Space E) identified on the Project's Tentative Subdivision Map (see Figure 2.0-7 of this EIR), the applicant or future project proponent shall hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.* ***Mitigation Measure 3.8-3****: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or his subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).* *Implement* ***Mitigation Measure 3.9-1****.*	LS

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Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	*None required.*	--
Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	LS	*None required.*	--
Impact 3.8-4: Potential for the Project to result in a safety hazards for people residing or working on the project site as a result of public airport or public use airport.	LS	*None required.*	--
Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LS	*None required.*	--
HYDROLOGY AND WATER QUALITY			
Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	PS	***Mitigation Measure 3.9-1***: *Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Stockton and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.* ***Mitigation Measure 3.9-2:*** *Prior to the issuance of grading permits, the applicant and/or future Project proponent must submit a site-specific Project Stormwater Quality Control*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		Plan to the City of Stockton Department of Municipal Utilities for review and approval. The site-specific Project Stormwater Quality Control Plan must specify BMPs the Project will use and design specifications for selected BMPs to ensure the Project's consistency with State and local water quality regulations.	
Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	LS	*None required.*	--
Impact 3.9-3: The proposed Project has the potential to alter the existing drainage pattern of the site or area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff.	LS	*None required.*	--
Impact 3.9-4: The proposed Project has the potential to, in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation	LS	***Mitigation Measure 3.9-3:*** *Prior to the issuance of grading permits, the applicant shall obtain the local NFIP administrating community's approval and file a Conditional Letter of Map Revision based on Fill (CLOMR-F) to remove any structures located within a FEMA designated Zone AO from the Special Flood Hazard Area.*	--
Impact 3.9-5 The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LS	*None required.*	--
LAND USE AND POPULATION			
Impact 3.10-1: The proposed Project would not physically divide an established community.	LS	*None required.*	--
Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.10-3: The proposed Project would not 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).	LS	*None required.*	--
NOISE			
Impact 3.11-1: The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	***Mitigation Measure 3.11-1:*** *To reduce traffic noise increases under Existing Plus Project conditions to less than +3.0 dB, the following roadway segments shall be paved with quiet pavement:* • ***Airport Way from Commerce Drive to French Camp Road****. Approximately 1,000 feet (approximately 0.19 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.* • ***Airport Way from French Camp Road to Roth Road****. Approximately 6,600 feet (approximately 1.25 miles) of quiet pavement for two-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.* • ***Airport Way from Performance Drive to Arch Road****. Approximately 500 feet (approximately 0.09 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.* *The pavement would be required for any portion of roadway passing a noise-sensitive use, and for a distance of 100 feet on either side of the sensitive-use. This requirement shall be noted on the Project improvement plans. Approximate pavement locations are shown on Figure 3.11-6.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		Mitigation Measure 3.11-2: *To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:* • *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.* • *Quiet construction equipment, particularly air compressors, shall be selected whenever possible.* • *All stationery noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.* • *Unnecessary idling of internal combustion engines shall be prohibited.* • *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.* • *Construction shall be limited to 7:00 a.m. to 10:00 p.m.* • *Staging areas on the Project site shall be located in areas that maximize, to the extent feasible, the distance between staging activity and sensitive receptors.* *These requirements shall be noted on the Project improvement plans.*	
Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels.	LS	*None required.*	--
Impact 3.11-3: The proposed Project would not expose people residing or working in the Project area to excessive noise levels	LS	*None required.*	--
PUBLIC SERVICES			
Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
substantial adverse physical environmental impacts.			
Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities.	LS	*None required.*	--
Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-6: The proposed Project has the potential to 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.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	PS	***Mitigation Measure 3.13-1:*** *The Project applicant shall work with the City of Stockton to implement feasible transportation demand management (TDM) strategies, which would decrease the VMT generated by the Project. Specific potential TDM strategies include, but are not limited to, the following:* • *Provide public transit service, including improving San Joaquin Rapid Transit District (RTD) transit service connecting workers with existing and future residential developments;* • *Implement a fair value commuting program or other pricing of vehicle travel and parking;* • *TDM coordinator for large employers;* • *Provide carpool and/or vanpool incentive programs;* • *Provide on-site lockers and showers for workers who take alternative transportation;* • *Promote walking and bicycling for employees who live and/or work in the area through the preparation of an Active Transportation Plan;* • *Incentivize the use of alternative travel modes for travel within the project site through shared use of e-bikes and e-scooters;* • *Allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours; and* • *Employer coordination to SJCOG's DIBs program for workers.* *A TDM Plan shall be submitted to the City for review, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if necessary. The TDM Plan shall include the TDM strategies which will be implemented during the lifetime of the Project, and shall outline the anticipated effectiveness of the strategies. The effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City.*	SU
Impact 3.13-2: Project implementation would not conflict with a program, plan, ordinance or policy	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities			
Impact 3.13-3: Project implementation would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LS	*None required.*	--
Impact 3.13-4: Project implementation would not result in inadequate emergency access	LS	*None required.*	--
Impact 3.13-5: Project implementation would not cause impacts due to construction.	LS	*None required.*	--
UTILITIES			
Impact 3.14-1: The proposed Project has the potential to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	LS	*None required.*	--
Impact 3.14-2: The proposed Project has the potential to result in a determination by the wastewater treatment and/or collection provider which serves or may serve the Project that is does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	PS	***Mitigation Measure 3.14-1:*** *Prior to occupancy of any building that would require wastewater treatment services, the Project proponent shall secure adequate wastewater treatment capacity/allocation.*	LS
Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-4: The proposed Project has the potential to require construction of new water treatment facilities or expansion of existing	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
facilities, the construction of which could cause significant environmental effects.			
Impact 3.14-5: The proposed Project has the potential to have insufficient water supplies available to serve the Project from existing entitlements and resources.	LS	*None required.*	--
Impact 3.14-6: The proposed Project has the potential to require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-7: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste	LS	*None required.*	--
CUMULATIVE IMPACTS			
Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway	LS and LCC	*None required.*	--
Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region	PS	*None feasible.*	CC and SU
Impact 4.3: Cumulative Impact on Light and Glare	LS and LCC	*None required.*	--
Impact 4.4: Cumulative Impact on Agricultural Resources	PS	*None feasible.*	CC and SU
Impact 4.5: Cumulative Impact on the Region's Air Quality	PS	*None feasible.*	CC and SU
Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LS and LCC	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources	LS and LCC	*None required.*	--
Impact 4.8: Cumulative Impact on Geologic and Soils Resources	LS and LCC	*None required.*	--
Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions	PS	*None feasible.*	CC and SU
Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials	LS and LCC	*None required.*	--
Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project site	LS and LCC	*None required.*	--
Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality	LS and LCC	*None required.*	--
Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LS and LCC	*None required.*	--
Impact 4.14: Cumulative Impacts Related to Flooding	LS and LCC	*None required.*	--
Impact 4.15: Cumulative Impact on Communities and Local Land Uses and Population	LS and LCC	*None required.*	--
Impact 4.16: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development	LS and LCC	*None required.*	--
Impact 4.17: Cumulative Impact on Public Services	LS and LCC	*None required.*	--
Impact 4.18: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	PS	*None feasible.*	CC and SU
Impact 4.19: Under Cumulative conditions, the proposed Project would not adversely affect pedestrian and bicycle facilities	LS and LCC	*None required.*	--
Impact 4.20: Cumulative Impact on Wastewater Utilities	LS and LCC	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.21: Cumulative Impact on Water Utilities	LS and LCC	*None required.*	--
Impact 4.22: Cumulative Impact on Stormwater Facilities	LS and LCC	*None required.*	--
Impact 4.23: Cumulative Impact on Solid Waste Facilities	LS and LCC	*None required.*	--

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1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Stockton, as the lead agency, determined that the proposed project, South Stockton Commercial Center Project is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

The City of Stockton, as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. This EIR will be used by the City of Stockton to determine whether to approve, modify, or deny the proposed Project and associated approvals in light of the Project's environmental effects. The EIR will be used as the primary environmental document to evaluate full development, all associated infrastructure improvements, and permitting actions associated with the proposed Project. All of the actions and components of the proposed Project are described in detail in Chapter 2.0, Project Description.

1.2 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation. The project-level analysis considers the broad environmental effects of the proposed Project.

1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the proposed Project or an aspect of the proposed Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over

natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386).

The following agencies are considered "Responsible Agencies" or "Trustee Agencies" for the proposed Project, and may be required to issue permits or approve certain aspects of the proposed Project:

- Union Pacific Railroad – Encroachment Permit for the sewer line and Easement for the proposed overpass;
- California Department of Fish and Wildlife – Streambed Alteration Agreement pursuant to Section 1602 of the California Fish and Game Code;
- United States Army Corps. Of Engineers (USACE) – Permitting of federal jurisdictional areas pursuant to Section 404 of the Clean Water Act.
- Central Valley Regional Water Quality Control Board (CVRWQCB) – Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- CVRWQCB – Water quality certification pursuant to Section 401 of the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Approval of construction-related air quality permits;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – As an industrial development, the Project may be subject to Indirect Source Review (ISR) by the SJVAPCD. The storm drain pump station may require an Authority to Construct and, Permit to Operate;
- Stockton Fire Department – Plan check of the site plan and roadway improvements for adequate emergency vehicle access and fire flow capabilities;
- Central Valley Flood Protection Board (CVFPB) – Approval of the storm drainage flood channel;
- San Joaquin County Flood Control and Water Conservation District – Approval of the proposed storm basins, outfall and pump stations;
- Sacramento & San Joaquin Drain District (SSJDD) – Approval for construction of an outfall; and
- San Joaquin Council of Governments (SJCOG) – Issuance of incidental take permit under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

1.4 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City of Stockton circulated an Initial Study (IS) and Notice of Preparation (NOP) of an EIR for the proposed Project on September 30, 2020 to State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held via WebEx on October 26, 2020 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding

the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The IS, NOP, and comments received on the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the proposed Project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Stockton will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period. Additionally, the City of Stockton will file the Notice of Availability with the County Clerk and have it published in a newspaper of regional circulation to begin the local public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City of Stockton will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Attn: Nicole D. Moore, LEED AP – Acting Current Planning Manager
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202
(209) 937-8561

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Stockton will review and consider the Final EIR. If the City of Stockton finds that the Final EIR is "adequate and complete", the City of Stockton will certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

Following review and consideration of the Final EIR, the City of Stockton may take action to approve, modify, or reject the proposed Project. A Mitigation Monitoring Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the proposed Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the proposed Project, environmental and planning documentation prepared for recent projects located within the City of Stockton, applicable local and regional planning documents, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

This Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the proposed Project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the proposed Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology and Soils
- Greenhouse Gases and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Population
- Noise
- Public Services
- Transportation and Circulation
- Utilities

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed Project, which could feasibly attain the basic objectives of the proposed Project and avoid and/or lessen any significant environmental effects of the proposed Project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the proposed Project and the selected alternatives.

CHAPTER 6 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis.

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Stockton received five written comment letters on the NOP for the proposed Project. A copy of the letters is provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping meeting on October 26, 2020. No written or verbal comments were provided at that scoping meeting.

- California Air Resources Board;
- California Department of Conservation, Division of Geology and Mines;
- California Department of Conservation, Division of Land Resource Protection;
- California Department of Justice;
- California Department of Transportation;
- California Water Board. Central Valley Regional Water Quality Control Board;
- Center for Biological Diversity;
- Delta-Sierra Group;
- Marvin Norman;
- Native American Heritage Commission; and
- San Joaquin Valley Air Pollution Control District.

1.7 POTENTIAL AREAS OF CONCERN

Aspects of the proposed project that could be of public concern include the following:

- Impacts associated with development near oil and gas wells;
- Potential cancer risks from on-site transport refrigeration units;
- The type and amount of agricultural land converted to urban uses;
- Impacts on any current and future agricultural operations in the vicinity;
- Pollution concerns associated with dust and increased truck traffic;
- Potential health risks in disadvantaged communities associated with diesel emissions, oxides of nitrogen, and greenhouse gases during operation and construction;
- Siting incompatible land uses and reducing air pollution impacts at the project- and cumulative-levels;
- Methods to reduce vehicle miles traveled and greenhouse gas emissions, such as promoting multimodal transportation;

- Project consistency with the 2014 City of Stockton Climate Action Plan and greenhouse gas reduction requirements;
- Ancestral tribal territory for the United Auburn Indian Community and the Northern Valley Yokuts;
- Increased traffic on project area roadways and State highway facilities;
- Traffic impacts to bicycle and pedestrian facilities; and
- Potential impacts related to on-site drainage and flooding.

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2.0.1 PROJECT LOCATION

The South Stockton Commerce Center Project site (proposed Project site) is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site.

The Project also includes off-site sewer improvements located along and adjacent to existing Project area roadways. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north.

Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity.

2.0.2 PROJECT SETTING

EXISTING SITE CONDITIONS

The Project site is located on all or a portion of five assessor parcels for which the Assessor's Parcel Number (APN) for each is listed in Table 2.0-1, and displayed on Figure 2.0-3.

TABLE 2.0-1: PARCELS WITHIN THE PROJECT AREA

APN	*LOCATION*	*ACREAGE*
177-110-040	6110 S. Airport Way	218.30
177-100-030	7070 S. Airport Way	71.03
177-110-050	6122 S. Airport Way	3.26
201-020-010	9091 S. State Route 99	75.07
177-050-090	8606 S. Airport Way	54.20
N/A	UPRR right-of-way	0.36
	Total	**422.22**

SITE TOPOGRAPHY

The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level.

EXISTING SITE USES

Figure 2.0-4 shows aerial imagery of the current existing site uses within the Project site. As shown, the Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection).

EXISTING SURROUNDING USES

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard, and Stockton Airport to the north within County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks (also referred to as French Camp Slough).
- West – The UPRR, Airport Way, and agricultural lands.

The off-site sewer improvements are located along and adjacent to Airport Way to the north and west of the Project site. The existing uses near the off-site sewer improvements include existing and future industrial uses.

2.0.3 GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

EXISTING CITY OF STOCKTON GENERAL PLAN LAND USE DESIGNATIONS

The Envision Stockton 2040 General Plan Land Use Map (Figure 2-8) designates the Project site as Industrial, Commercial, and Open Space/Agriculture. Figure 2.0-5 depicts the Envision 2040 Stockton General Plan land use designations for the Project site and the surrounding areas. The General Plan contains the following standards to guide development for these land uses:

Industrial (I): This designation allows for a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, retail sales, service businesses, public and quasi-public uses, and other similar and compatible uses. Residential uses are prohibited. The maximum FAR for industrial uses is 0.6.

Commercial (C): This designation allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses. Community or regional commercial centers as well as freestanding commercial establishments are permitted. In addition, limited industrial uses are allowed, provided that they are indoors and compatible with surrounding uses. The maximum FAR ranges differ based on the geographic area. The project is located Outside the Greater Downtown, and the maximum FAR is 0.3.

Open Space/Agriculture (OS/A): This designation allows for agriculture, parks, single-family residential units, farm worker housing, wetlands, wildlife reserves, and other similar and compatible uses and structures related to the primary use of the property for preservation of natural resources or agriculture. Lands under this designation are intended to remain unincorporated and under the jurisdiction of San Joaquin County. The minimum parcel size is 40 acres, maximum density is 1 dwelling unit per parcel, and maximum FAR is 0.01. The Open Space/Agriculture land use designation within the Project area is currently proposed to be approximately 54 acres of the Project site located near the French Camp Slough. This area would not be developed or otherwise altered by the proposed Project.

EXISTING CITY OF STOCKTON ZONING DESIGNATIONS

The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space).[1] Figure 2.0-6 depicts the City's zoning districts for the Project site and the surrounding areas. Below is a general description of the zoning districts within the Project site.

IL (Industrial, Limited) District: This zone is applied to areas appropriate for light manufacturing uses that may generate more nuisance impacts than acceptable in commercial zoning districts and whose operations are totally conducted indoors. Includes retail stores and ancillary office uses. The IL zoning district is consistent with the industrial land use designation of the General Plan.

CG (Commercial, General) District: This zone is applied to areas appropriate for a wide variety of general commercial uses, including retail, personal and business services; commercial recreational uses; and a mix of office, commercial, and/or residential uses. The CG zoning district is consistent with the commercial land use designation of the General Plan.

OS (Open Space) District: This zone is applied to areas of the City with open space resources, including agricultural lands, wetlands, wildlife reserves, and other sensitive natural resources; passive recreational areas such as golf courses; or natural hazards. Structural uses are limited to those which support the maintenance and/or use of the open space area. The OS zoning district is consistent with the open space and agricultural land use designations of the General Plan.

SURROUNDING GENERAL PLAN DESIGNATIONS

Within San Joaquin County, lands to the north and east of the Project site are designated Public (P/F) and lands to the south are designated Urban Reserve (A/UR) and General (A/G). Within the City, lands to the west are designated Industrial. The City's General Plan also designates land to the east and south (within unincorporated San Joaquin County) as Industrial and Open Space/Agriculture. The City of Stockton and San Joaquin County General Plan land use designations for the Project site and surrounding areas are shown on Figure 2.0-6.

2.0.4 PROJECT GOALS AND OBJECTIVES

Consistent with the California Environmental Quality Act (CEQA), Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed. The principal objective of the proposed Project is to implement and achieve the goals and objectives of the General Plan through the approval and subsequent implementation of the South Stockton Commerce Center (SSCC) Project (the proposed Project). The objective of the proposed Project involves the development of approximately 422-acres of land which will include: industrial uses, commercial uses, open space, public facilities, and public roadway right-of-way land uses, as described below.

[1] The Stockton Zoning Map (last revised June 29, 2020) identifies the zoning for APN 177-050-09 as CG (Commercial), RM (Residential Medium-Density), and RH (Residential High-Density). However, City of Stockton Ordinance No. 2019-07-16-1501-02 (adopted July 16, 2019, effective August 15, 2019) rezoned APN 177-050-09 to IL (Industrial-Limited) and CG (Commercial), consistent with the Industrial and Commercial General Plan Land Use Designations. These zoning actions will be reflected in the next revision of the Stockton Zoning Map.

The Project area aims to develop in multiple phases, a well-planned industrial type project that will attract businesses to the City of Stockton and provide for local employment opportunities. The Project also provides for a seamless expansion of the existing industrial area located in southeast Stockton, in the vicinity of the Stockton Airport, and will create the opportunity for rail served parcels from the adjacent Union Pacific rail line.

The following objectives have been identified for the proposed SSCC Project:

- Logical Expansion of Industrial Area: Seamless expansion of the existing industrial area around the Stockton Airport and being positioned to easily access multiple forms of transportation (i.e., rail, air, multiple state highways (I-5 and SR-99) and local road network).
- Develop a Class A Industrial Complex and Amenities: The large-scale development (298 acres of industrial uses) provides for a class A-type industrial complex with a variety of building sizes suited for a variety of end users, landscaped roadways and open space elements along French Camp Slough.
- Employment Opportunities: Provide for local and regional employment opportunities that take advantage of the Project area's high level of accessibility, allow for the expansion of the City's economic base, help create a jobs/housing balance, and reduce the commute for regional residents.
- Improve Circulation: Create safe access to the industrial area by constructing an overpass of the Union Pacific Railroad line.
- Enhance Transportation: Create the ability to develop rail service to the three largest parcels within the SSCC Project Area, if needed.
- Public Facilities and Services: Provide infrastructure and services that meet City standards and integrate with existing and planned facilities.
- Phasing: Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards, while maintaining the functionality and feasibility of the Project.

2.0.5 PROJECT CHARACTERISTICS AND DESCRIPTION

PROJECT CHARACTERISTICS

The SSCC Project proposes a Tentative Map for the 422.22-acre site to create 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses.

More specifically, the SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. Although a final and definitive Site Plan is not currently proposed, for planning purposes a conceptual site plan was prepared to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and for purposes of environmental review. Based on a maximum FAR of 0.47, a maximum of 6,091,551 square feet of industrial type land uses could be developed throughout the site. Table 2.0-2, SSCC Land Use Summary, identifies the land uses and associated development potential.

TABLE 2.0-2: SSCC LAND USE SUMMARY

LAND USE	*ACREAGE (NET)*	*TOTAL SQUARE FEET PER LAND USE*	*FLOOR AREA RATIO*	*MAXIMUM SQUARE FEET*
Commercial	11.0	467,834	0.30	140,350
Industrial[1]	298.0	12,960,747	0.47	6,091,551
Open Space	54.0	--	--	--
Public Facilities (Storm Basins, Outfall and Pump Stations)	41.0	--	--	--
Roadway Right of Way	18.2	--	--	--
TOTAL	**422.2**	**--**	**--**	**6,231,901**

NOTE: FOR PURPOSES OF THE ENVIRONMENTAL ANALYSIS, A RANGE OF INDUSTRIAL USES IS ASSUMED. THESE USES INCLUDE GENERAL LIGHT INDUSTRIAL, INDUSTRIAL PARK, WAREHOUSING, MINI-WAREHOUSE, HIGH-CUBE TRANSLOAD AND SHORT-TERM STORAGE WAREHOUSE, HIGH-CUBE FULFILLMENT CENTER WAREHOUSE, HIGH-CUBE PARCEL HUB WAREHOUSE, AND HIGH-CUBE COLD STORAGE WAREHOUSE.

The SSCC Tentative Map also proposes approximately 11 acres of general commercial uses located between Airport Way and the UPRR right-of-way. Similar to the industrial uses, a final Site Plan is not currently proposed; however, based on a FAR of 0.30, a maximum of 140,350 square feet of commercial land uses could be developed in this area; refer to Table 2.0-2.

The project proposes approximately 54 acres of open space areas within the site, which will include approximately seven acres of open space in which a portion of it will be for a habitat setback area located east of the UPRR, south of the future Commerce Drive (refer to the Circulation Improvements discussion below) and along French Camp Slough. The remaining 47 acres of open space area is associated with the French Camp Slough drainage area.

Approximately 41 acres of the site will be for public facilities uses to serve the development, including storm basins, outfall, and pump stations; refer to the Utilities and Planned Infrastructure Improvements discussion below. The Project proposes to locate a sewer pump lot (0.28 acres) at the northeast corner of Airport Way and future Commerce Drive, within the portion of the site designated Commercial. The project also includes off-site sewer improvements along Airport Way Project frontage, north until Industrial Drive.

Approximately 18 acres of the site will consist of the proposed west-east road right-of-way (referred to as Commerce Drive), which will provide connections to the SR 99 Frontage Road and Airport Way; refer to the Circulation Improvements discussion below.

GENERAL PLAN AMENDMENT AND REZONE

Although the proposed SSCC Project is consistent with the site's existing General Plan and Zoning designations, due to the location of drive entrances for surrounding developments and the alignment of the future Commerce Drive, a General Plan Amendment and Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way is required. As seen on Figures 2.0-5 and 2.0-6, these areas are currently designated Commercial and Industrial in the Envision Stockton 2040 General Plan and are zoned CG and IL, respectively. The current boundaries of the designations will be modified (i.e., redrawn) to be consistent with the future Commerce Drive right-of-way center line. The area to the north

of the Commerce Drive right-of-way centerline will be designated Commercial and zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial and zoned IL. Figure 2.0-8 and Figure 2.0-9 show the proposed boundary modifications to the General Plan land use designations and Zoning districts for these two areas.

CIRCULATION IMPROVEMENTS

The Project proposes a west-east trending primary road referred to as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the UPRR right-of-way will be constructed to accommodate the primary access road and avoid conflicts with the UPRR rail line.

The majority of Commerce Drive is proposed to have a 78-foot right-of-way with one 16-foot traffic lane in each direction, and a 16-foot center turn lane. Five-foot landscaped areas would separate the traffic lanes from the 8-foot sidewalks on both the north and south sides of the road.

As Commerce Drive approaches the intersection with Airport Way, the right-of-way will be reduced to 77 feet 5 inches and provide one 16-foot westbound traffic lane, a 14-foot left turn lane, a 14-foot eastbound traffic lane, and a 16-foot eastbound traffic lane. A five-foot landscaped area and 8-foot sidewalk would only be provided on the north side of the road between the intersection with Airport Way and just east of the grade separated structure.

The grade separated crossing over the UPRR right-of-way will be 40-feet with one 16-foot travel lane in each direction. An eight-foot pedestrian walkway will be provided on the north side of the overcrossing.

As part of the Project, a 10-foot-wide right-of-way will be dedicated along Airport Way, adjacent to the Project site. Improvements at Airport Way would also occur due to the signalization of this intersection.

The Project also proposes to potentially include rail service to up to three large parcels (parcels 2, 3, and 4) within the Project site. A potential railroad spur line would extend east from the UPRR along the Project site's northern edge providing rail access to the parcels. The future industrial developer(s) of Parcels 2, 3 and 4 will make the ultimate decision to utilize rail service to these parcels. The design and layout of the Tentative Map (and the Draft EIR) has assumed that this service would be provided.

The 99 Frontage Road will provide access to the Arch Road and SR 99 Interchange. Airport Way will provide access to both the French Camp/Arch Road and Interstate 5 Interchange and the French Camp and the SR 99 Interchange.

UTILITIES AND PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of infrastructure improvements will be required to accommodate development of the proposed Project, as described below. It should be noted that the potential environmental impacts associated with off-site infrastructure improvements associated with the larger Tidewater Crossing Project, which included the SSCC Project site, were analyzed as part of the Tidewater Crossing Project Environmental Impact Report (SCH No. 2005122101) certified on October 28, 2008. The Tidewater

Crossing Project and the associated infrastructure improvements are considered baseline conditions. Thus, the SSCC Project environmental analysis will focus on the proposed on-site improvements.

Potable Water. The Project proposes a 24-inch water transmission line to be located within the proposed Commerce Drive right-of-way. The proposed 24-inch water line will connect to the existing City of Stockton water main in Airport Way and travel east along the proposed Commerce Drive right of way to the 99 Frontage Road. At this point, as part of the Newcastle Road and South Airport Way Water Transmission Main Project, the 24-inch water line will travel east to Newcastle Road and tie into the City's existing water line. Environmental impacts associated with the Newcastle Road and South Airport Way Water Transmission Project installation and operation were analyzed as part of a Mitigated Negative Declaration (SCH No. 2009042082), dated April 2010. It is noted that the alignment for this water transmission line is being realigned from what was originally anticipated. A portion of the realignment is within the Project site and analyzed as part of the overall infrastructure for the proposed Project. The balance of the water transmission line realignment that is outside of the Project site is being analyzed under a separate CEQA document that is currently being prepared.

The Project also proposes a 12-inch water service line to be located with the Commerce Drive right of way, parallel to the 24-inch water transmission main. The proposed 12-inch water line will connect to the proposed 24-inch water line just west of the 99 Frontage Road and will travel west along the proposed Commerce Drive right of way. The 12-inch line will connect back into the 24-inch transmission line on the east of the existing railroad tracks before the start of the grade separated structure. Water services for the proposed project will tie directly into the proposed 12-inch main, unless an alternative method is approved by the City of Stockton through a Water Master Plan. An example of a possible alternative method would be to provide services to the Project through 12-inch minimum diameter service stubs connected directly to the 24-inch transmission main. This would eliminate the need for a separate, parallel water main within Commerce Drive.

Wastewater. The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. A sewer pump station is proposed to be located at the northeast corner of Airport Way and the future Commerce Drive. A sewer line (ranging from 8 to 24 inches) will be located within the proposed Commerce Drive right-of-way. Within the western portion of Parcel 2, the sewer line within the Commerce Drive right-of-way will shift north outside of the Commerce Drive right-of-way into Parcel 2 and extend west along the southern edge of Parcel 1, continuing under the UPRR right-of-way. West of the UPRR right-of-way, the sewer line will extend into the proposed Commerce Drive right-of-way. The 24-inch sewer line within Commerce Drive will connect to a proposed 36-inch sewer line within Airport Way whereupon it will flow to a proposed regional sewer pump station located at the intersection of Airport Way and Commerce drive. An 18-inch force main within Airport Way will extend from the regional sewer pump station to the intersection of Arch Airport Road and Airport Way where it will connect to a gravity pipeline. This gravity pipeline will be upsized from an existing 33-inch gravity sewer pipeline to a 48-inch gravity sewer pipeline. The 48-inch gravity pipeline will extend to the intersection of Industrial Drive. The off-site sewer pipeline improvements total approximately 10,843 linear feet (or about 2.05 miles).

It should be noted that as part of a separate development project associated with the Tidewater Crossing Project, a Sewer Master Plan has been prepared and provides the engineering detail related to the

construction of proposed force mains within Airport Way and the proposed sewer pump station. The Tidewater Crossing Overall Sewer Master Plan is included in Appendix H of this EIR.

Storm Drain. The Project proposes to construct two storm drain detention basins to provide flood control. The primary basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. The Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5. The drainage channel will connect to a proposed outfall to the primary detention basin, generally located within the northeast area of the basin.

A storm drain (ranging from 15 to 96 inches) is proposed within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 and connect to the proposed outfall to the detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain for Commerce Drive will connect to the proposed outfall to the detention basin, generally located within the northeast area of the basin. An outfall from the secondary basin to French Camp slough will also be constructed just east of the secondary basin. Two options are being considered: 1) An overland flow discharge where the water will be released into a rock lined structure to slow flow velocities before flowing into French Camp Slough; or 2) A more tradition outfall structure and rock rip rap placed on the banks of French Camp Slough.

DEVELOPMENT AGREEMENT

The proposed project includes a request for approval of a Development Agreement (DA) governing the relationship between the City of Stockton and the SSCC Applicant, or its successors. A primary purpose of the DA may be to regulate development density and intensity over an extended period of time; however, the DA would not increase the maximum density or development intensity. The DA will also be used to establish other agreements between the City/Applicant (or its successors) related to the project. Such other agreements may include, but are not limited to, commitments to project entitlements and development standards as well as any other administrative and/or financial relationships that may be defined during the review of the initial application or subsequent applications related to developing the project.

2.0.6 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

CITY OF STOCKTON

The City of Stockton will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;

- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Stockton General Plan Amendment
- Approval of City of Stockton Zoning Map Amendment
- Approval of Tentative and Final maps;
- Approval of Improvement Plans;
- Approval of Grading Plans;
- Approval of Building Permits;
- Approval of Site Plan Review;
- Approval of Design Review;
- Approval of Completeness Review;
- Approval of Development Agreement;
- Issuance of grading, encroachment, and building permits;
- City review and approval of Project utility plans.

OTHER GOVERNMENTAL AGENCY APPROVALS

The following agencies are considered “Responsible Agencies” and will need to rely on this EIR to issue permits or approve certain aspects of the proposed Project. A "Responsible Agency" is any public agency, other than the lead agency, which has the responsibility for approving the project where more than one public agency is involved. Other governmental agencies that may require approval include, but are not limited to, the following:

- Union Pacific Railroad and the California Public Utility Commission – Encroachment Permit for the sewer line and Easement for the proposed overpass;
- California Department of Fish and Wildlife – Streambed Alteration Agreement pursuant to Section 1602 of the California Fish and Game Code;
- United States Army Corps. Of Engineers (USACE) – Permitting of federal jurisdictional areas pursuant to Section 404 of the Clean Water Act.
- Central Valley Regional Water Quality Control Board (CVRWQCB) – Storm Water Pollution Prevention Plan (SWPPP) approval pursuant to the Clean Water Act;
- CVRWQCB – Water quality certification pursuant to Section 401 of the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Construction-related permits;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – As an industrial development, the Project may be subject to Indirect Source Review (ISR) by the SJVAPCD. The storm drain pump station may require an Authority to Construct and, Permit to Operate;
- Stockton Fire Department – Plan check of the site plan and roadway improvements for adequate emergency vehicle access and fire flow capabilities;
- Central Valley Flood Protection Board (CVFPB) – Approval of the storm drainage flood channel;
- San Joaquin County Flood Control and Water Conservation District – Approval of the proposed storm basins, outfall and pump stations;
- Sacramento & San Joaquin Drain District (SSJDD) – Approval for construction of an outfall; and
- San Joaquin Council of Governments (SJCOG) – Issuance of incidental take permit under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

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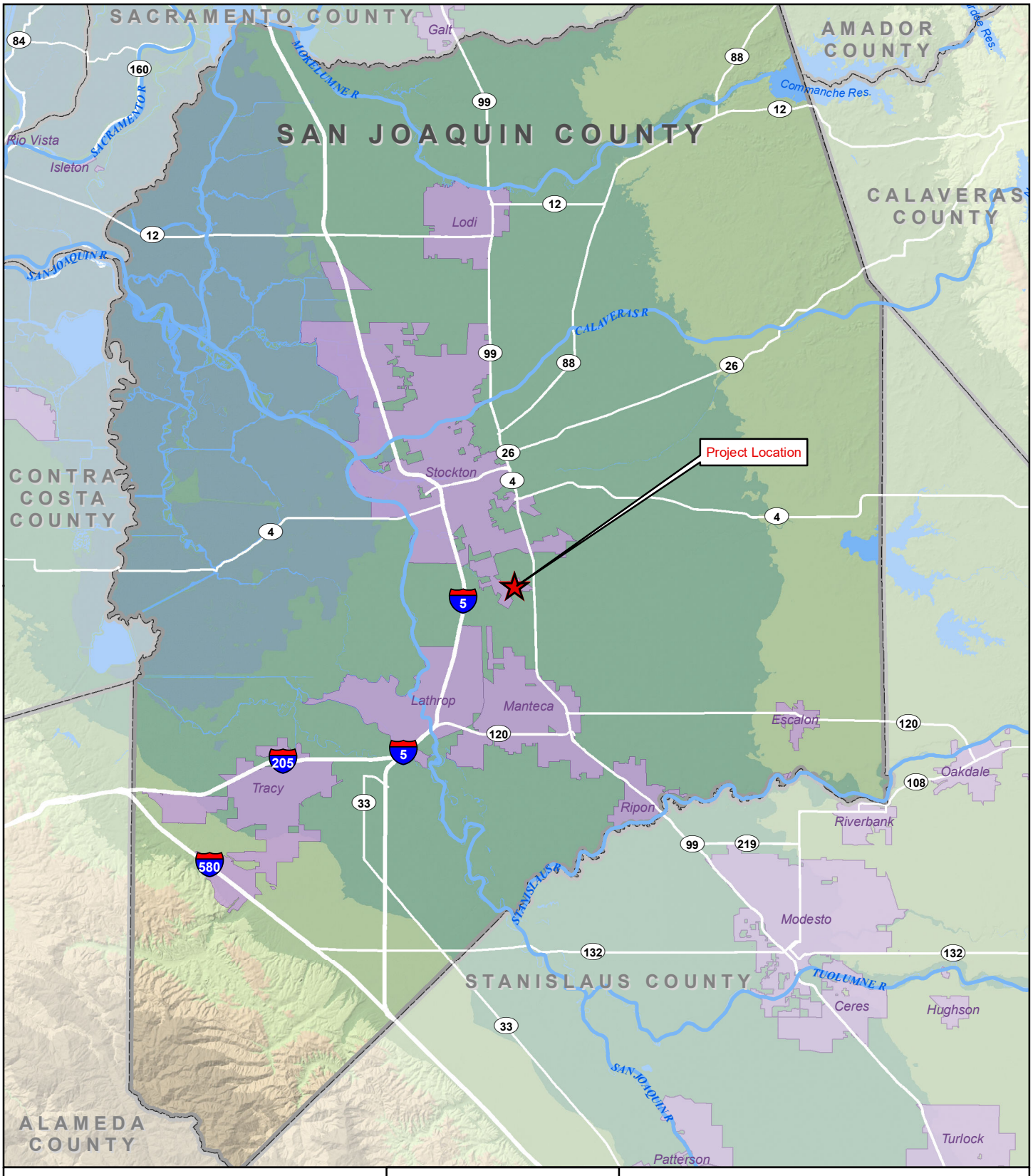

LEGEND

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; California County GIS Departments. Map date: July 20, 2020.

0 2½ 5
Miles

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-1. Regional Location Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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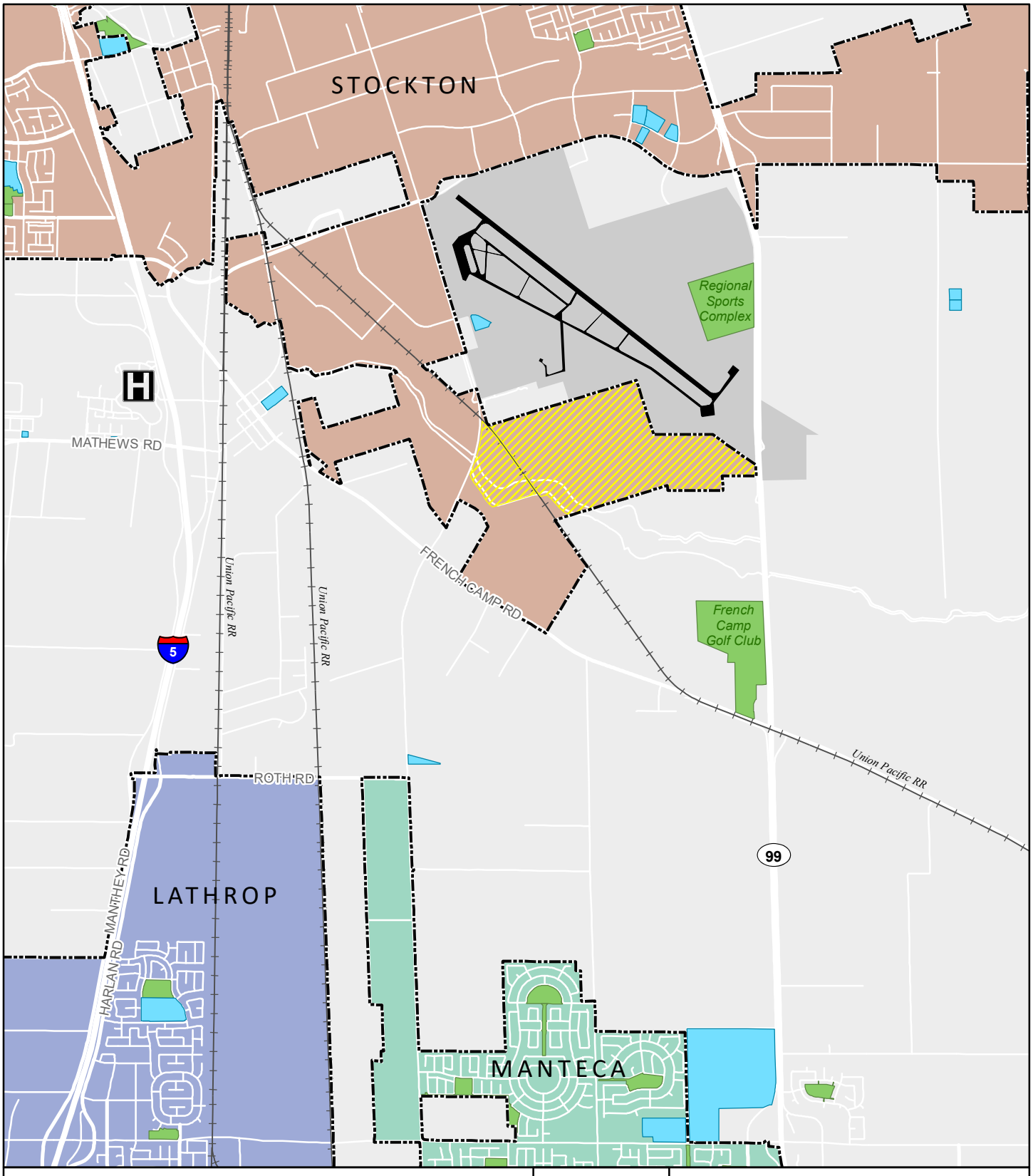

LEGEND

- Project Boundary

City Limits

- Stockton
- Lathrop
- Manteca

Public Facilities

- Park
- Schools
- San Joaquin General Hospital

Stockton Metropolitan Airport

- Runway
- Airport Area

N

0 ¼ ½ Miles

Sources: San Joaquin County GIS. Map date: July 20, 2020. Revised December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-2. Vicinity Map

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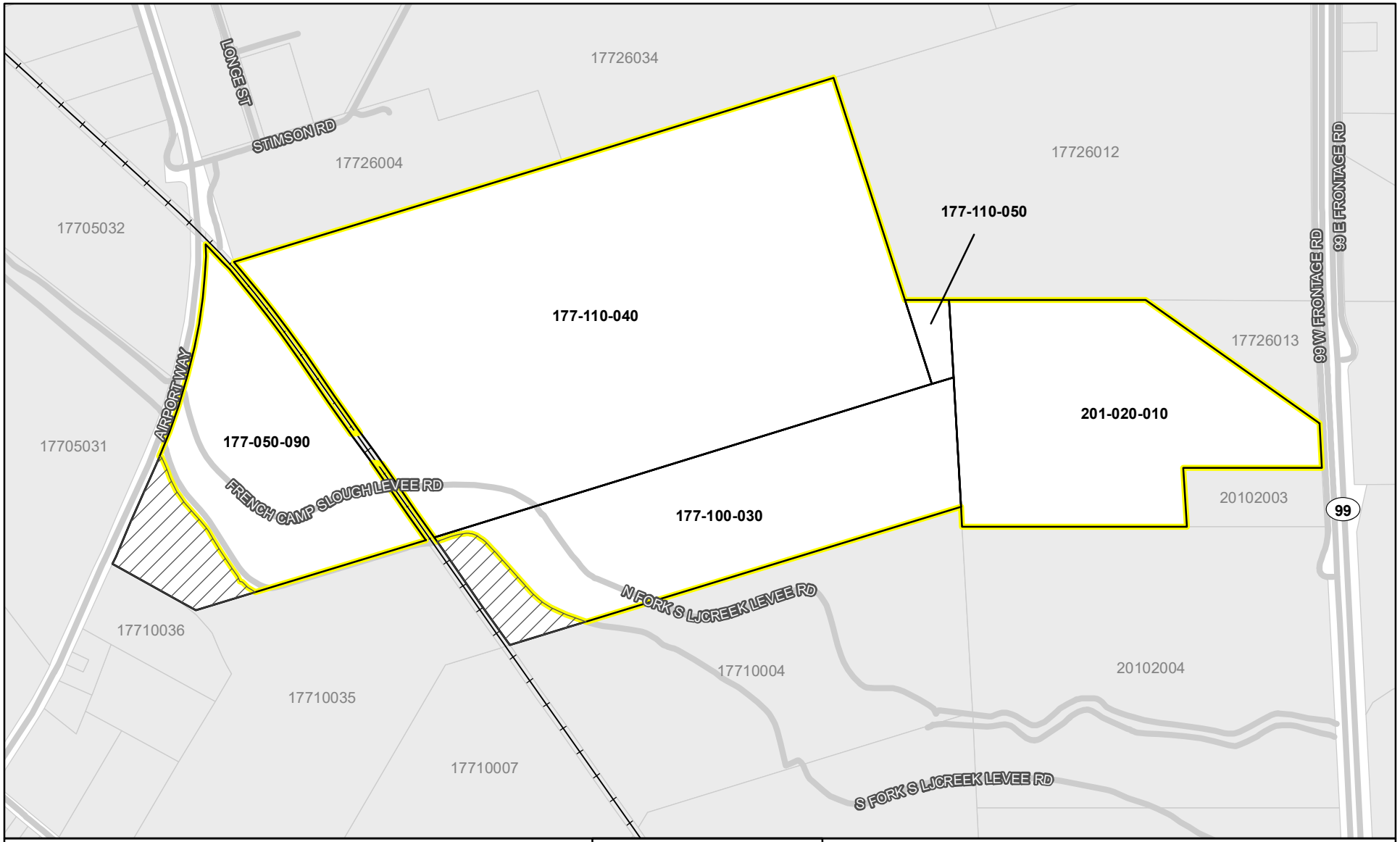

LEGEND

- Project Boundary
- Project Parcels
- Portion of Parcel Excluded from Project
- Surrounding Parcels

Source: San Joaquin County GIS. Map date: July 20, 2020. Revised: December 29, 2020.

N

0 500 1,000

Feet

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-3. Assessor's Parcel Map

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LEGEND

- Project Site
- Off-Site Sewer Line Improvement

0 500 1,000
Feet

Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service; VVII Consulting Engineers. Map date: Spetmeber 20, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-4. Aerial View of Project Site with Offsite Improvements

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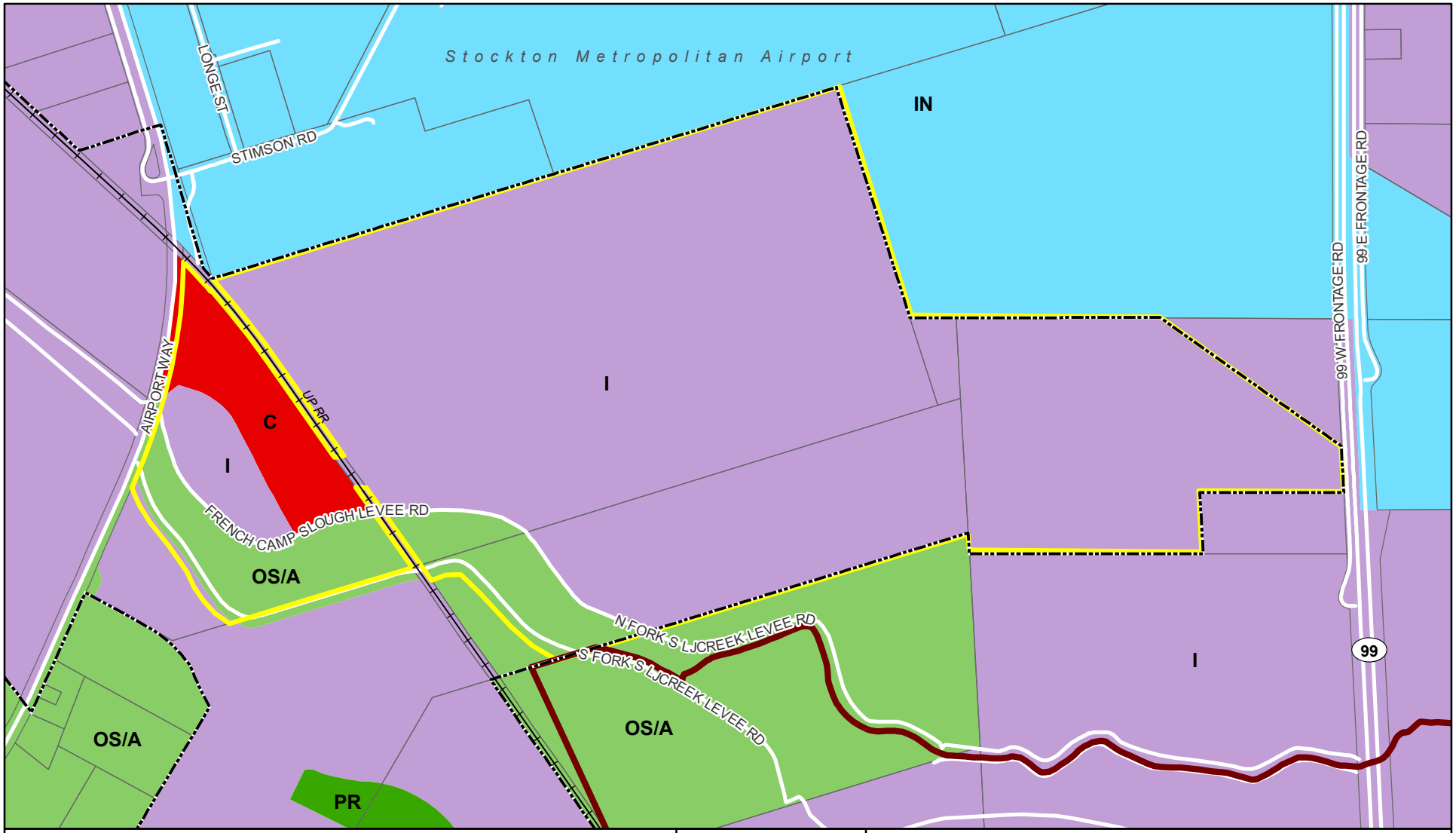

LEGEND

- Project Boundary
- Stockton City Limits
- Stockton Sphere of Influence
- Assessor Parcel

City of Stockton General Plan Land Use

- C - Commercial
- I - Industrial
- IN - Institutional
- OS/A - Open Space/Agriculture
- PR - Parks and Recreation

0 500 1,000
Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-5. Existing General Plan Land Use

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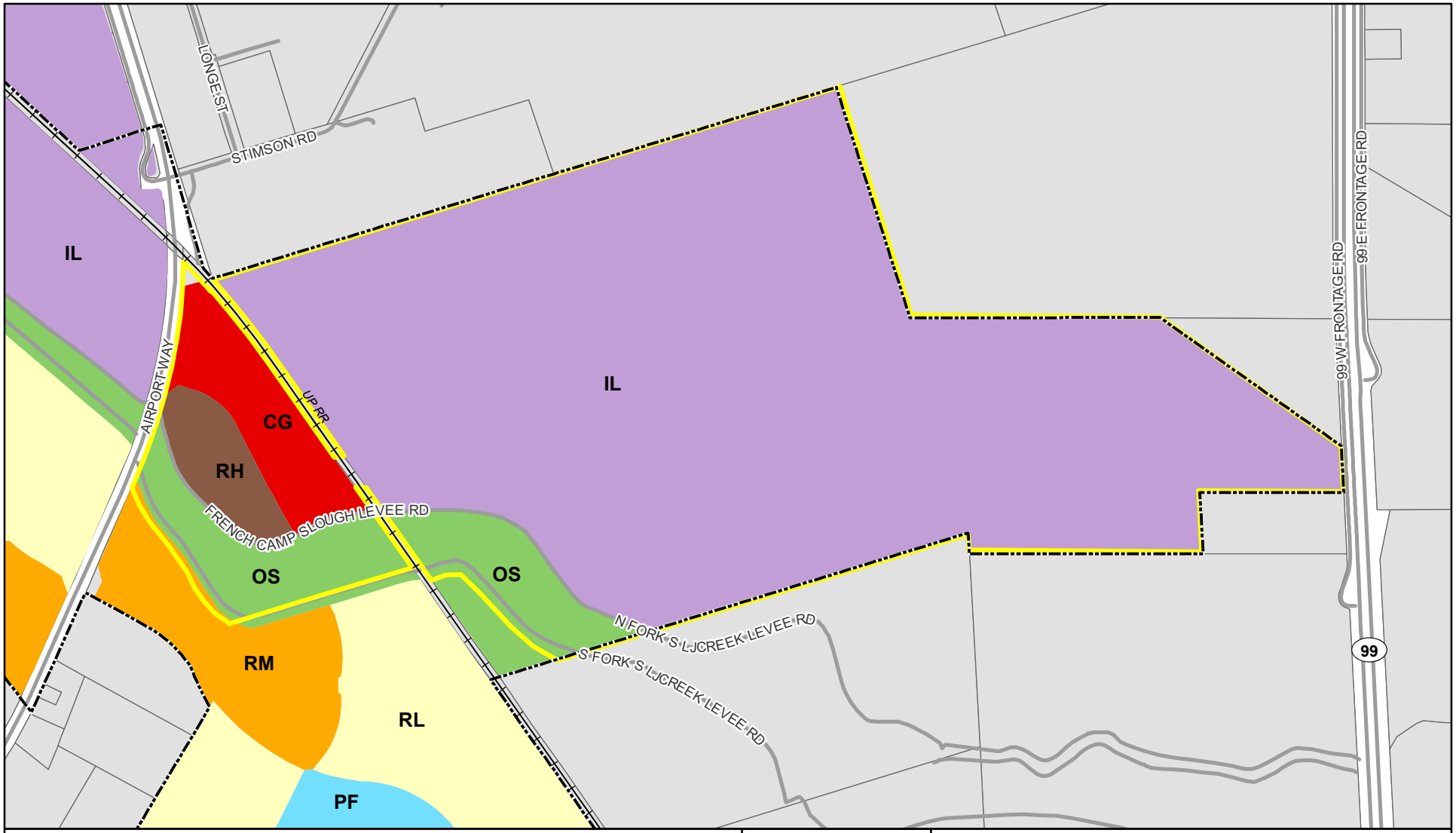

LEGEND

Project Boundary | Stockton City Limits | Assessor Parcel

City of Stockton General Plan Land Use

- RL - Residential Low
- RM - Residential Medium
- RH - Residential High
- IL - Industrial Limited
- CG - Commercial General
- PF - Public Facility
- OS - Open Space

0 500 1,000 Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-6. Existing Zoning Districts

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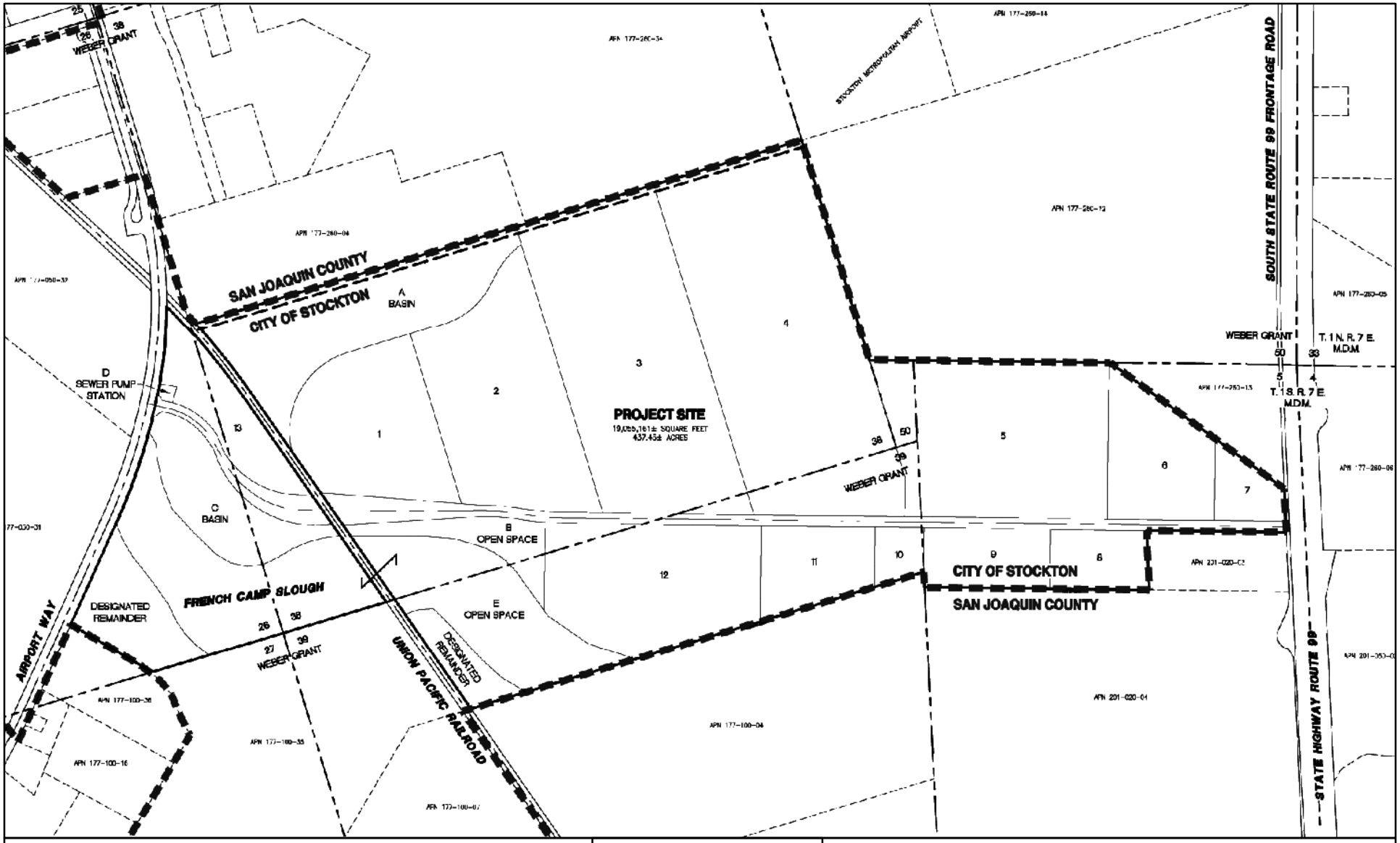

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-7. Proposed Tentative Map

Source: North Star Engineering Group 8/2/2021. Map date: August 20, 2021.

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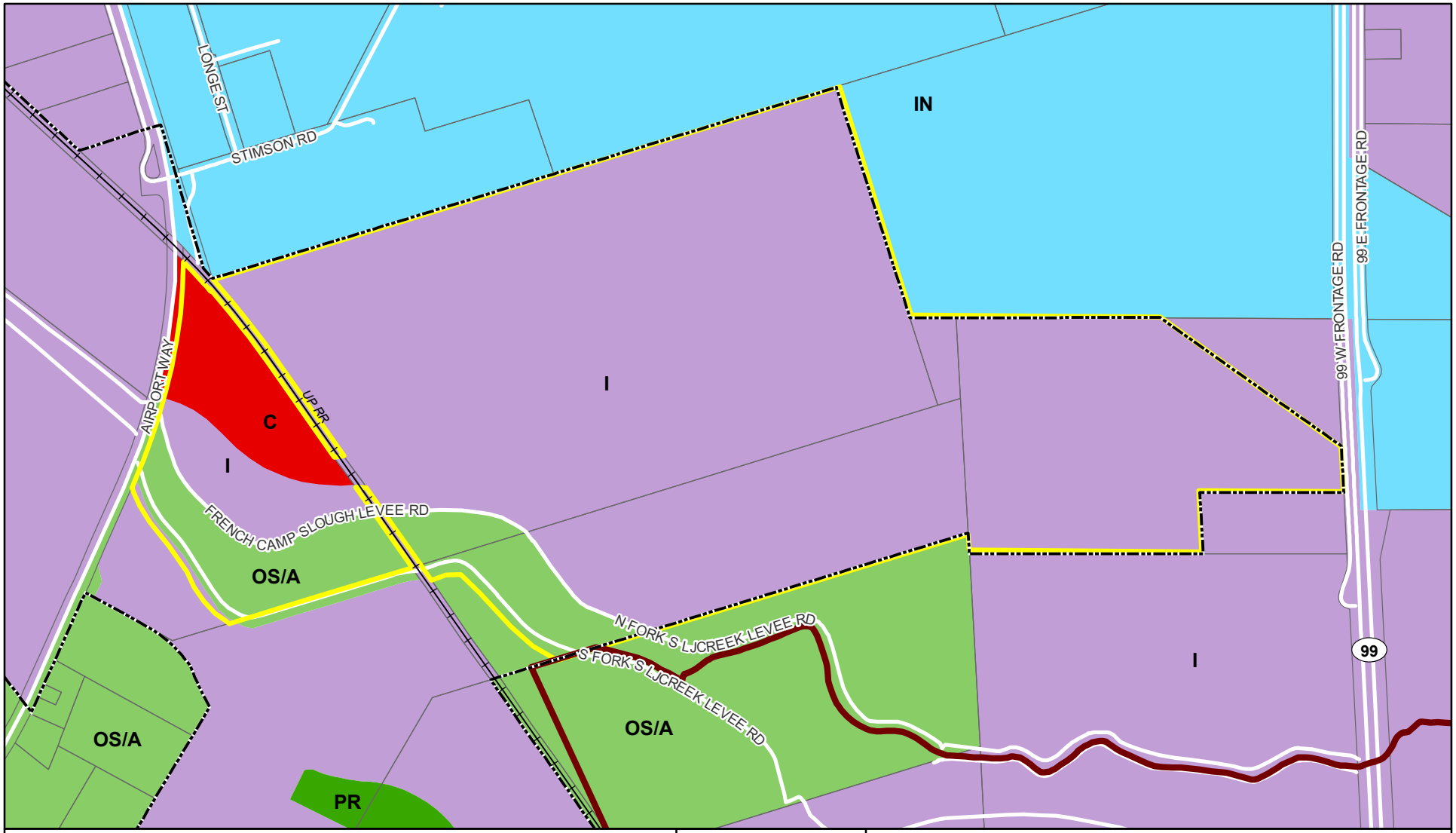

LEGEND

- Project Boundary
- Stockton City Limits
- Stockton Sphere of Influence
- Assessor Parcel

City of Stockton General Plan Land Use

- C - Commercial
- I - Industrial
- IN - Institutional
- OS/A - Open Space/Agriculture
- PR - Parks and Recreation

0 500 1,000
Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-8. Proposed General Plan Land Use

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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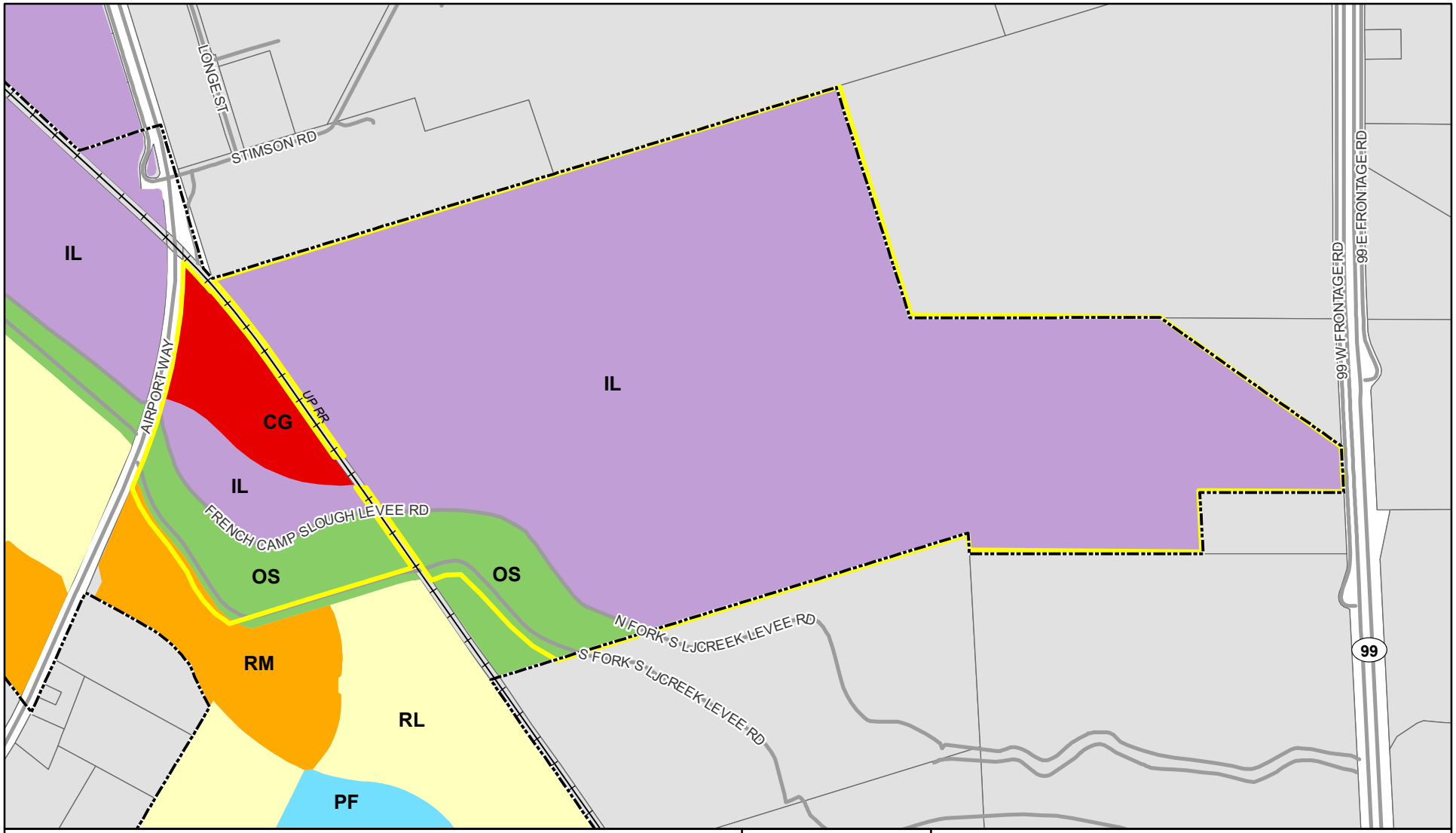

LEGEND

Project Boundary | Stockton City Limits | Assessor Parcel

City of Stockton General Plan Land Use

- RL - Residential Low
- RM - Residential Medium
- RH - Residential High
- IL - Industrial Limited
- CG - Commercial General
- PF - Public Facility
- OS - Open Space

N

0 500 1,000

Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 2.0-9. Proposed Zoning Districts

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This section provides an overview of the visual character, scenic resources, views, scenic highways, and sources of light and glare that are encountered on the Project site and the vicinity. This section concludes with an evaluation of the impacts and recommendations for mitigating impacts. Information in this section is derived primarily from the California Department of Transportation (Caltrans) Scenic Highways Program website (2020), San Joaquin County General Plan (2016), Envision Stockton 2040 General Plan (2018), and City of Stockton Municipal Code (2020).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.1.1 ENVIRONMENTAL SETTING

VISUAL AND SCENIC RESOURCES

Visual resources are generally classified into two categories: scenic views and scenic resources. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually mid-ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements.

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural water bodies. Features of the built environment that may also have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and a location where a historic event occurred.

SCENIC HIGHWAYS AND CORRIDORS

Scenic highways and corridors make major contributions to the quality of life enjoyed by the residents of a region. The development of community pride, the enhancement of property values, and the protection of aesthetically-pleasing open spaces reflecting a preference for the local lifestyle are all ways in which scenic corridors are valuable to residents.

Scenic highways and corridors can also strengthen the tourist industry. For many visitors, highway corridors will provide their only experience of the region. Enhancement and protection of these corridors ensures that the tourist experience continues to be a positive one and, consequently, provides support for the tourist-related activities of the region's economy.

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape

can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 to Interstate 205. This route traverses the edge of the Coast Range to the west and Central Valley to the east. The City of Stockton, including the Project site, is not visible from this roadway segment, which is located approximately 20 miles southwest of the site.

Scenic Corridors/Routes

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

Figure NCR-1 of the Natural and Cultural Resources Element of the San Joaquin County General Plan designates scenic routes in the county. The closest designated scenic route to the Project site is Interstate 5. The Project site is not visible from the segment of Interstate 5 that is designated a scenic route by the County General Plan. The Envision Stockton 2040 General Plan does not identify any scenic routes.

SCENIC WATER RESOURCES AND WILD AND SCENIC RIVERS

Water resources are important visual resources that draw tourists to the area for recreational opportunities. The most visually significant water body in the region is the San Joaquin River.

Wild and Scenic Rivers

Federal agencies have jurisdiction, under the Wild and Scenic Rivers Act, to designate rivers or river sections to “be preserved in free-flowing condition and…protected for the benefit and enjoyment of present and future generations.”

The San Joaquin River is not designated as a Wild and Scenic River under the Federal Wild and Scenic Rivers Act.

PROJECT SITE

The proposed Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the State Route (SR) 99 Frontage Road and SR 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Sough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection).

Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level. As a result of site disturbance associated with the agricultural operations, limited natural scenic areas can be found within the Project site. There is little native vegetation located on the site, and the flat topography of the site renders the site essentially void of prominent natural visual features. Native/naturalized habitat is located along French Camp Slough. Existing trees are found in the orchard portion of the site, as well as along French Camp Slough. There are no light sources on-site.

The unique or distinguishing visual or aesthetic characteristics of the Project site include the openness of the undeveloped agricultural land, which offers a vast expanse of cropland, and French Camp Slough. The undeveloped agricultural land can provide visual relief to a passerby/viewer from common manmade structures and visual obstructions found in an urban environment. The Project site's aesthetic value can be attributed to its openness and undeveloped nature, which contrasts the industrial nature to the north and northwest.

Throughout the year the land, used for agriculture, evolves from an environment that appears lush with vegetation (green farmland) to an environment that appears barren (tilled soil). Agricultural land in California's Great Central Valley is generally accepted as an important visual resource. The visual character is only occasionally interrupted by shrubbery and mature trees (primarily located along French Camp Slough), or by telephone poles (located along Airport Way).

Surrounding Land Uses

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton Airport. These uses are located within the County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks (French Camp Slough).

- West – The UPPR, Airport Way, and agricultural lands.

3.1.2 REGULATORY SETTING

STATE

California Scenic Highway Program

The intent of the California Scenic Highway Program is "to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources." Caltrans administers the program, which was established in 1963 and is governed by the California Streets and Highways Code §260 et seq. The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land. Caltrans has compiled a list of state highways that are designated as scenic and county highways that are officially designated or eligible for designation as scenic. Scenic highway designation can provide several types of benefits to the region. Scenic areas are protected from encroachment of inappropriate land uses, free of billboards, and are generally required to maintain existing contours and preserve important vegetative features. Only low-density development is allowed on steep slopes and along ridgelines on scenic highways, and noise setbacks are required for residential development.

To obtain an official "Scenic Highway" designation, the State and Caltrans require a responsible local agency or Local Governing Body (LGB) to prepare a scenic corridor protection plan. In the Tracy area, San Joaquin County is the LGB. Corridor protection programs are required to contain the following five elements, which have been included in the San Joaquin County's policies:

- Regulations of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising;
- Careful attention to and control of earthmoving and landscaping; and
- The design and appearance of structures and equipment. [1]

According to the Caltrans Scenic Highway Programs website, Caltrans monitors state-designated scenic routes in order to ensure each local jurisdiction's consistency with State guidelines. Specifically, Caltrans District Scenic Highway Coordinator (DSHC) will review a scenic highway for compliance every five years, but can recommend the revocation of scenic designation at any time. To enforce the program, the DSHC will contact the responsible local agency or LGB, in this case, San Joaquin County. The LGB must either respond by submitting its current Corridor Protection Program or a letter of intent to request a revocation of the scenic designation. The DSHC reviews the

[1] Scenic Highways Program website, Frequently Asked Questions, https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2, accessed on November 25, 2019.

submittal and takes corrective action to resolve any issues of non-compliance, certifies compliance, or recommends revocation of scenic designation.

LOCAL

The City of Stockton General Plan identifies the importance of scenic resources in establishing community identity. The Stockton Municipal Code contains standards, provisions, and procedures related to landscaping design, light and glare, and design review.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to an evaluation of the visual quality of the Project site. General Plan policies applicable to the Project are identified below:

POLICIES: LAND USE ELEMENT

- LU-1.3. Improve the visual quality of the urban environment to be more welcoming and inviting at key gateways and travel corridors into the city.
- LU-5.1. Integrate nature into the city and maintain Stockton's urban forest.
- LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development.
- LU-5.3. Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

ACTIONS: LAND USE ELEMENT

- LU-5.1A. Require renovated and new projects to provide open spaces that create gateways, act as collectors for pedestrian systems, and/or provide a social focal point for a project and the surrounding community and corridor, as appropriate.
- LU-5.1B. Protect, preserve, and improve riparian corridors and incorporate them in the City's parks, trails, and open space system.
- LU-5.1C. Require landscape plans to incorporate native and drought-tolerant plants in order to preserve the visual integrity of the landscape, conserve water, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
- LU-5.3A. At the interface between development and rural landscapes, use landscaping and other attractive edging instead of soundwalls and similar utilitarian edges of developments to maintain the visual integrity of open space.
- LU-5.3B. Coordinate with San Joaquin County and property owners in unincorporated areas to preserve agricultural land and open space areas in the unincorporated county that contribute to maintaining clear boundaries between cities.

City of Stockton Municipal Code

Section 16.56.240, Landscape Standards, of Chapter 16.56, Landscaping Standards, of the City Municipal Code contains standards and provisions related to landscaping design, installation, and maintenance. The primary purpose of this section is to provide general design standards and plant material requirements. This section also includes provisions related to water efficient landscaping consistent with the State Model Water Efficient Landscape Ordinance that would apply to the proposed Project. Section 16.72.240, Landscaping, of Chapter 16.72, Public Improvements, of the City Municipal Code contains standards and provisions related to landscaping for nonresidential and residential development. This section includes provisions related to landscape design that would apply to the proposed Project. These applicable provisions include street tree and other landscaping area design standards for residential subdivisions, setback area landscaping standards for nonresidential subdivisions, and standards for irrigation, installation, and maintenance of landscaping.

Section 16.32.070, Light and Glare, of Chapter 16.32, General Performance Standards, of the City Municipal Code contains standards and provisions related to exterior lighting. According to the Code, light or glare from mechanical or chemical processes or from reflective materials used or stored on a site shall be shielded or modified to prevent emission of light or glare beyond the property line, or upward into the sky. The Code also includes the following provisions:

A. Exterior lights shall be located so as to eliminate spillover illumination or glare onto adjoining properties and to prohibit any interference with the normal operation or enjoyment of adjacent property.
B. Exterior lights shall be made up of a light source, reflector, and shielding devices so that, acting together, the light beam is controlled and not directed across a property line or upward into the sky. Bare bulbs shall not be allowed.
C. Lighting fixtures used to illuminate an outdoor advertising display shall be mounted on the top of the advertising structure and be directed downward.
D. Exterior light fixtures existing and legally installed prior to the effective date of the ordinance codified in this Development Code are exempt from the requirements of this section. When existing luminaries are reconstructed or replaced, the reconstruction or replacement shall comply with this section.
E. Lights used for holiday decorations are exempt from the requirements of this section.
F. Portable temporary lighting used by law enforcement or emergency services personnel to protect life or property, are exempt from the requirements of this section.

Chapter 16.120, Design Review, of the City Municipal Code establishes procedures for the design review of development throughout the City in order to encourage development that is compatible and harmonious with the design and use of surrounding properties and with the City in general. The primary purpose of this chapter is to set forth the types of projects that are subject to the City's design review process, the use of the design guidelines, and the application filing, processing and review procedures.

City of Stockton Citywide Design Guidelines

The Design Guidelines, adopted in 2004, serve as a reference point for the City's expectations for quality development and provide guidance for the designated review authority during the design review process. The Design Guidelines provide minimum design criteria for the achievement of functional and attractive developments that fit within the context of their surroundings and do not clash with neighboring buildings. In general, the Design Guidelines are intended to ensure that new or modified development preserves or improves the positive characteristics of the city's image while avoiding negative impacts. The Design Guidelines are organized into seven chapters and includes objectives and design standards for each type of development project that is subject to design review.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- 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 the applicable zoning and other regulations governing scenic quality; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character (Significant and Unavoidable)

The proposed Project would convert the 422.22-acre Project site from its existing use as primarily agricultural land for:

- Development of approximately 298 acres of industrial uses (building and parking areas);
- Development of approximately 41 acres of public facilities (storm basins and pump stations);
- Creation of approximately 54 acres of open space (open space area and avoidance of French Camp Slough); and
- Development of up to a maximum of 6,091,551 square feet of employment-generating industrial uses.

The General Plan does not designate scenic vistas. However, the General Plan identifies open space, agricultural fields, and riparian areas, particularly along the San Joaquin River and the Calaveras River, as significant visual features. Given the relatively flat topography of the city, views within the core of the city are generally limited to the built environment. Views along the periphery can be more expansive with fewer developed features blocking views of surrounding open space, agricultural fields, and riparian areas.

Although the Project site is not designated as a scenic vista by the General Plan, the site does contain some of the significant visual features discussed in the General Plan, such as agricultural fields and riparian area along French Camp Slough. The above-referenced public views are primarily available to motorists traveling along the major transportation corridors, some of which travel at highway speed (such as along Airport Way and SR 99). In addition, these public views of agricultural fields and riparian areas are characteristic of San Joaquin County, and the exist throughout the region.

Implementation of the proposed Project would change the existing visual character of the site from a primarily agricultural site to an urbanized site. Impacts related to a change in visual character are largely subjective and very difficult to quantify. People have different reactions to the visual quality of a project or a project feature, and what is considered “attractive” to one viewer may be considered “unattractive” to other viewers. The agricultural lands on the project provide visual relief from urban and suburban developments, and help to define the character of a region. The loss of agricultural lands can have an adverse cumulative impact on the overall visual character and quality of a region.

As described above, Project implementation would introduce industrial uses, as well as supporting infrastructure into an area that is currently undeveloped and is primarily occupied by agricultural uses. The proposed Project would include visual components that would assist in enhancing the appearance of the site following site development. Landscaping improvements, such as new street trees and other vegetation landscaping, would be provided throughout the Project site, including along the site boundary. Additionally, the proposed Project would also include approximately 54 acres of open space near French Camp Slough in order to minimize conflicts between the uses, maintain the habitat area along the Slough, and provide a visual shield.

The proposed Project would result in the conversion of the land from agricultural uses, which would contribute to changes in the regional landscape and visual character of the area. In order to reduce visual impacts, development within the Project site is required to be consistent with the General Plan and the Stockton Zoning Ordinance which includes design standards in order to ensure quality and cohesive design of the Project site and ensure the public views from the transportation corridors would be of high quality. These standards include specifications for exterior lighting, landscaping, and architectural design and compatibility. Implementation of the design standards would ensure quality design throughout the Project site, and result in a Project that would be internally cohesive while maintaining aesthetics similar to surrounding uses.

Nevertheless, the loss of the visual appearance of the existing agricultural land on the site will change the visual character of the Project site in perpetuity. Compliance with the requirements within the General Plan and Zoning Code would reduce visual impacts to the greatest extent feasible;

however, the proposed Project would permanently convert the agricultural uses to urbanized uses. This is considered a ***significant and unavoidable*** impact. There is no additional feasible mitigation available that would reduce this impact to a less than significant level.

Impact 3.1-2: Project implementation may substantially damage scenic resources within a state scenic highway (Less than Significant)

As previously discussed, one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 to Interstate 205. This route traverses the edge of the Coast Range to the west and Central Valley to the east. The City of Stockton, including the Project site, is not visible from this roadway segment, which is located approximately 20 miles southwest of the site. Therefore, impacts related to a state scenic highway would be ***less than significant***.

Impact 3.1-3: Project implementation may result in light and glare impacts (Less than Significant with Mitigation)

Implementation of the proposed Project would introduce new sources of light and glare into the vacant Project site. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Project site and from vehicles parked at the site. There is also the potential for reflective building materials and windows to result in increases in daytime glare. A detailed lighting plan has not been prepared for the proposed Project, but for the purposes of this analysis, it has been conservatively assumed that nighttime street lighting, exterior lighting around the warehouses and buildings, and safety lighting will be installed throughout areas of the Project site. It is assumed that security lighting will be installed within the various parking areas surrounding the warehouses and buildings. Therefore, light and glare could adversely affect day or nighttime views in the area.

Section 16.32.070, Light and Glare, of Chapter 16.32, General Performance Standards, of the City Municipal Code contains standards and provisions related to exterior lighting for both commercial and residential development. The primary purpose of this section is to regulate exterior lighting to balance the safety and security needs for lighting with the City's desire to prevent emissions of light or glare beyond the property line, or upward into the sky.

Without a detailed lighting plan, increase of light spillover and nighttime lighting to adjacent properties is a potentially significant impact. Implementation of Mitigation Measure 3.1-1 would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.1-1*: A lighting plan shall be completed for future development of each Project parcel. The lighting plan shall be submitted to the City for review and approval. All proposed outdoor lighting shall meet applicable city standards regulating outdoor lighting in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Lighting and glare guidelines provided in the City of Stockton's Municipal Codes for Design and Development require that all light*

sources be shielded and directed downwards so as to minimize trespass light and glare to adjacent residences. Additionally, all outdoor lighting sources of 1,000 lumens or greater shall be fully shielded.

This section provides an overview of the agricultural resources in San Joaquin County and the City of Stockton, agricultural capability of the soils on the Project site, and existing site conditions. This section concludes with an evaluation of the impacts related to agricultural resources and recommendations for mitigating impacts as needed. Information in this section is derived primarily from the *California Important Farmlands Map* (California Department of Conservation, 2012), the *San Joaquin County Agricultural Report* (San Joaquin County Agricultural Commissioner, 2018), and the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2016).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: Sierra Club – Delta Sierra Group – Mother Lode Chapter (October 27, 2020), and California Department of Conservation – Division of Land Resources Protection (October 13, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

As discussed in the Initial Study prepared for the proposed Project, the Project site is not under a Williamson Act contract. There are no forest resources or zoning for forest lands located on the project site, or within the City of Stockton; thus, ***no impact*** would occur. These CEQA topics are not relevant to the proposed Project and will not be addressed further in this EIR.

3.2.1 ENVIRONMENTAL SETTING

SAN JOAQUIN COUNTY AGRICULTURE

San Joaquin County occupies a central location in California's vast agricultural heartland, the San Joaquin Valley. The County's Agricultural Commissioner's most recent published Crop Report (2018) contains the following information about agriculture in the County.

Agricultural Value

San Joaquin County has a total land area of 1,391 square miles. The total acreage of crop land in 2018 was 709,050.

The gross value of agricultural production in San Joaquin County for 2018 was $2,594,246,000. This represents an increase of 2.62 percent from 2017. Table 3.2-1 lists the top eight commodities in San Joaquin County in 2018.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

PRODUCT TYPE	*2016 VALUE IN DOLLARS*
Field Crops	$200,369,000.00
Vegetable Crops	$245,902,000.00
Fruit and Nut Crops	$1,403,768,000.00
Nursery Products	$120,004,000.00
Livestock and Poultry	$120,100,000.00
Livestock and Poultry Products	$467,289,000.00
Seed Crops	$3,904,000.00
Apiary Products	$32,910,000.00

SOURCE: SAN JOAQUIN COUNTY AGRICULTURAL REPORT, 2018.

AGRICULTURAL CAPABILITY

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) identifies lands that have agriculture value and maintains a statewide map of these lands called the Important Farmlands Inventory (IFI). IFI classifies land based upon the productive capabilities of the land, rather than the mere presence of ideal soil conditions.

The suitability of soils for agricultural use is just one factor for determining the productive capabilities of land. Suitability is determined based on many characteristics, including fertility, slope, texture, drainage, depth, and salt content. A variety of classification systems have been devised by the State to categorize soil capabilities. The two most widely used systems are the Soil Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture, with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. The IFI is in part based upon both of these two classification systems.

Soil Capability Classification System

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils that are unsuitable for agriculture. Generally, as the rating of the capability classification increases, yields and profits are more difficult to obtain. A general description of soil classifications, as defined by the NRCS is provided in Table 3.2-2 below.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

CLASS	*DEFINITION*
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that restrict choice plants or that require moderate conservation practices.
III	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove that limits their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plans and restrict their use to recreation, wildlife habitat, water supply, or aesthetic purposes.

SOURCE: USDA SOIL CONSERVATION SERVICE.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (less than 10) which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil

nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 3.2-3.

TABLE 3.2-3: STORIE INDEX RATING SYSTEM

GRADE	*INDEX RATING*	*DEFINITION*
1	80 – 100	Few limitations that restrict their use for crops
2	60 – 80	Suitable for most crops, but have minor limitations that narrow the choice of crops and have a few special management needs
3	40 – 60	Suited to a few crops or to special crops and require special management
4	20 – 40	If used for crops, severely limited and require special management
5	10 – 20	Not suited for cultivated crops, but can be used for pasture and range
6	Less than 10	Soil and land types generally not suited to farming

SOURCE: USDA SOIL CONSERVATION SERVICE, SOIL SURVEY OF SAN JOAQUIN COUNTY, CALIFORNIA, 1992.

In addition to soil suitability, other factors for determining the agricultural value of land include whether soils are irrigated, the depth of soil, water-holding capacity, and physical and chemical characteristics. Areas considered to have the greatest agricultural potential are designated as Prime Farmland or Farmland of Statewide Importance.

Important Farmlands

The Farmland Mapping and Monitoring Program (FMMP) is a farmland classification system administered by the California Department of Conservation. Important farmland maps are based on the Land Inventory and Monitoring criteria, which classify a land's suitability for agricultural production based on both the physical and chemical characteristics of soils, and the actual land use. The system maps five categories of agricultural land, which include important farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) and grazing land, as well as three categories of non-agricultural land, which include urban and built-up land, other land, and water area.

IMPORTANT FARMLANDS IN SAN JOAQUIN COUNTY

Data from the Department of Conservation indicates that approximately 1,245 acres of Prime Farmland in the County was developed for other uses between 2014 and 2016 resulting in an existing total of 381,634 acres of Prime Farmland (51 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (11 percent), Unique Farmland (11 percent), Farmland of Local Importance (9 percent), and Grazing Land (18 percent). The types and acreages of farmland in 2014 and 2016 are shown below in Table 3.2-4.

TABLE 3.2-4: SAN JOAQUIN COUNTY FARMLANDS SUMMARY AND CHANGE BY LAND USE CATEGORY

LAND USE CATEGORY	*2014-2016 ACREAGE CHANGES*							
	TOTAL ACREAGE INVENTORIED				*ACRES LOST*	*ACRES GAINED*	*TOTAL ACREAGE CHANGED*	*NET ACREAGE CHANGED*
	2014		*2016*		*(-)*	*(+)*		
	Acres	*Percent*	*Acres*	*Percent*				
Prime Farmland	382, 879	42%	381,634	42%	4,338	3,093	7,431	-1,245
Farmland of Statewide Importance	82,271	9%	82,618	9%	1,189	1,536	2,725	347
Unique Farmland	76,415	8%	81,920	9%	830	6,335	7,165	5,505
Farmland of Local Importance	73,429	8%	68,903	7%	9,150	4,624	13,774	-4,526
IMPORTANT FARMLAND SUBTOTAL	*614,994*	*67%*	*615,075*	*67%*	*15,507*	*15,588*	*31,095*	*81*
Grazing Land	132,950	15%	129,760	14%	3,385	195	3,580	-3,190
AGRICULTURAL LAND SUBTOTAL	*747,944*	*82%*	*744,835*	*81%*	*18,892*	*15,783*	*34,675*	*-3,109*
Urban and Built-up Land	93,888	10%	95,329	10%	365	1,806	2,171	1,441
Other Land	59,004	6%	60,602	7%	1,482	3,080	4,562	1,598
Water Area	11,766	1%	11,836	1%	235	305	540	70
TOTAL AREA INVENTORIED	912,602	100%	912,602	100%	20,974	20,974	41,948	0

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2016.

EXISTING SITE CONDITIONS

The 422.22-acre Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The agricultural lands on the Project site have been used historically for intensive agricultural purposes.

Surrounding Land Uses

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton Airport. These uses are located within the County.
- East – Agricultural lands, State Route (SR) 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks (French Camp Slough).
- West – The UPPR, Airport Way, and agricultural lands.

Figure 2.0-4 in Chapter 2.0, Project Description, provides an aerial view of the site.

Project Site Farmland Characteristics

The State of California Department of Conservation FMMP and San Joaquin County GIS data were used to illustrate the farmland characteristics for the Project site. Farmlands on the Project site are identified in Figure 3.2-1. The farmland classifications for the site and surrounding area are described below.

PRIME FARMLAND

Prime Farmland is farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. To receive this designation, land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Prime Farmland on the Project site totals approximately 158.6 acres (37.6 percent). Prime Farmlands are also located: north of the site, north of the Stockton Airport; adjacent east of the site and east of State Route (SR) 99; adjacent south of the site, and adjacent west of the site.

FARMLAND OF STATEWIDE IMPORTANCE

Farmland of Statewide Importance is farmland with characteristics similar to those of Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. To receive this designation, land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

The majority of agricultural land, approximately 259.3 acres (61.4 percent), is designated Farmland of Statewide Importance as shown on Figure 3.2-1. Farmland of Statewide Importance is also located in the general vicinity of the Project site to the north, east, south, and west.

UNIQUE FARMLAND

Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. To receive this designation, land must have been cropped at some time during the four years prior to the mapping date.

Approximately 4.3 acres (1.0 percent), located along the levee road, are designated Unique Farmland as shown on Figure 3.2-1. There is no Unique Farmland located near the Project site.

FARMLAND OF LOCAL IMPORTANCE

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

There is no Farmland of Local Importance on the Project site. Areas designated Farmland of Local Importance are located to the north and west of the Project site.

URBAN AND BUILT-UP LAND

Urban or Built-Up Land is classified by the FMMP as land 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.. This land can be used for residential, industrial, commercial, construction, institutional, public administration,

railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

There is no Urban and Built-Up Land located on the Project site. Areas designated Urban and Built-Up Land are located to the north, south, and west of the Project site.

RURAL RESIDENTIAL LAND

Rural Residential Land is classified by the FMMP with a building density of less than 1 structure per 1.5 acres, but with at least one structure per 10 acres.

There is no Rural Residential Land on the Project site. Areas designated Rural Residential Land are located to the northeast, southwest, and west of the Project site.

OTHER LAND

Other Land is not included in any other mapping category. Common examples include brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Other Land is not located on the Project site, but Semi-Agricultural and Rural Commercial Land are located in the general vicinity of the Project site as shown on Figure 3.2-1.

Soils and Farmland Characteristics

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.2-5 identifies the soils found on the Project site. The NRCS Soils Map is provided on Figure 3.2-2.

TABLE 3.2-5: PROJECT SOILS

NAME	*ACRES IN PROJECT SITE*	*PERCENT OF PROJECT SITE*	*CAPABILITY CLASSIFICATION*
Hollenbeck silty clay, 0 to 2 percent slopes	0.2	0.05%	IIs-5 irrigated, IVs-5 non-irrigated
Stockton clay, 0 to 2 percent slopes	158.4	37.52%	IIIs-8 irrigated, IVs non-irrigated
Jacktone clay, 0 to 2 percent slopes	259.3	61.42%	IIs-5 irrigated, IVs non-irrigated

NOTE: THE 4.3 ACRES OF ON-SITE WATER IS NOT INCLUDED IN THIS TABLE.
SOURCE: NRCS CUSTOM WEB SOIL SURVEY, 2020.

Hollenback soil series. This series consists of deep to duripan, moderately well drained soils that formed in alluvium from mixed rock sources. Hollenbeck soils are on basin rims and interfan basins. Slopes are 0 to 3 percent. This series is characterized as moderately well drained, slow runoff, and permeability is slow.

Stockton soil series. This series consists of somewhat poorly drained soils in basins. These soils are artificially drained and are deep to a hardpan. Stockton clay is formed in alluvium derived from

mixed rock sources. Slope ranges from 0 to 2 percent. This series is characterized as poorly drained, slow runoff, high shrink/swell potential, and permeability is slow.

Jacktone soil series. This series consists of somewhat poorly drained soils in basins. These soils are artificially drained and are moderately deep to a hardpan. Slopes range from 0 to 2 percent. This series is characterized as poorly drained, slow runoff, high shrink/swell potential, and permeability is slow.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. It ensures that, to the extent practicable, federal programs are compatible with state and local units of government as well as private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for crop production. In fact, the land can be forest land, pastureland, cropland, or other land, but does not include water bodies or land developed for urban land uses (i.e., residential, commercial, or industrial uses).

The NRCS administers the Farmland Protection Program. NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. The assessment is completed on form AD-1006, Farmland Conversion Impact Rating. The sponsoring agency completes the site assessment portion of the AD-1006, which assesses non-soil related criteria such as the potential for impact on the local agricultural economy if the land is converted to non-farm use and compatibility with existing agricultural use.

The Project site and adjacent parcels will not be developed by a federal agency, or with assistance from a federal agency. Therefore, the Project will not be subject to the FPPA.

STATE

Farmland Security Zones

In 1998 the state legislature established the Farmland Security Zone (FSZ) program. FSZs are similar to Williamson Act contracts, in that the intention is to protect farmland from conversion. The main difference however, is that the FSZ must be designated as Prime Farmland, Farmland of Statewide

Importance, Unique Farmland, or Farmland of Local Importance. The term of the contract is a minimum of 20 years. The property owners are offered an incentive of greater property tax reductions when compared to the Williamson Act contract tax incentives; the incentives were developed to encourage conservation of prime farmland through FSZs. The non-renewal and cancellation procedures are similar to those for Williamson Act contracts.

The Project site and the adjacent parcels are not within the FSZ program.

LOCAL

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan Land Use Map designates the Project site as Industrial, Commercial, and Open Space/Agriculture.

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to agricultural resources. General Plan policies applicable to the Project are identified below:

POLICIES: LAND USE ELEMENT

- LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development.
- LU-5.3. Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

ACTIONS: LAND USE ELEMENT

- LU-5.3A. At the interface between development and rural landscapes, use landscaping and other attractive edging instead of sound walls and similar utilitarian edges of developments to maintain the visual integrity of open space.
- LU-5.3B. Coordinate with San Joaquin County and property owners in unincorporated areas to preserve agricultural land and open space areas in the unincorporated county that contribute to maintaining clear boundaries between cities.
- LU-5.3C. Maintain the City's agricultural conservation program that requires either dedication of an agricultural conservation easement at a 1:1 ratio or payment of an in-lieu agricultural mitigation fee for the conversion of prime farmland, farmland of statewide importance, or unique farmland, as defined by the State Farmland Monitoring and Mapping Program.

City of Stockton Right-to-Farm Ordinance

Chapter 16.36 of the Stockton Municipal Code, General Development and Use Standards, establishes the City's "Right-to-Farm" ordinance, which is intended to protect agricultural uses in and around the City. Specifically, Section 16.36.040 of the ordinance establishes the City's policy to preserve the City and County's agricultural operations while minimizing conflicts to new urban

development. The City's "Right-to-Farm" ordinance serves to protect farmers from nuisance complaints. The ordinance requires owners and builders to notify their successors-in-interest of the potential conflicts and effects of agricultural activities, and the ordinance specifies that typical agricultural practices shall not be considered a nuisance.

Stockton Family Farmers' Sponsored Greenbelt and Agricultural Lands Protection Initiative

Issues regarding conversion of agricultural lands to urban uses, and potential mitigation measures for agricultural land conversion, is the subject of increasing dialogue in San Joaquin County. "The Stockton Family Farmers' Sponsored Greenbelt and Agricultural Lands Protection Initiative" was proposed in March 2004 and passed by the voters of Stockton in January 2005. This initiative is intended to protect farming operations and agricultural lands, to promote establishment of a greenbelt between Stockton and Lodi, and to facilitate the preservation of open space.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

The SJMSCP provides comprehensive measures for compensation and avoidance of impacts to various biological resources, which includes ancillary benefits to agricultural resources. For instance, many of the habitat easements that are purchased or facilitated by the SJMSCP program are targeted for the protection of Swainson's hawk or other sensitive species habitat that are dependent on agricultural lands. The biological mitigation for these species through the SJMSCP includes the purchase of certain conservation easements for habitat purposes. The conservation easements are placed over agricultural land, such as alfalfa and row crops (not vines or orchards). As such, SJMSCP fees paid to SJCOG as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

Mitigation of agricultural land conversion losses has been provided through the county-wide adoption of the SJMSCP and its local adoption by the City of Stockton. The SJMSCP requires the payment of a per-acre fee for loss of wildlife habitat, which in San Joaquin County is largely integral with agricultural use. One important use of the fees is the acquisition of conservation easements over agricultural land that are intended to preserve the agricultural use of these lands in order to maintain their biological habitat values.

Areas located within SJMSCP "No Pay Zones" are exempt from the agricultural land mitigation fee program. Lands in the No Pay Zones are lands that are largely developed. The vast majority of the Project site is designated as Category C/Pay Zone B. This zone consists of "Agricultural Habitat Lands", as described in Chapter 2.2 of the SJMSCP. Portions of the Project site located along French Camp Slough are designated as Category A/No Pay Zone. This zone consists of "Urban Lands", as described in Chapter 2.2 of the SJMSCP.

Stockton Agricultural Land Mitigation Program

The City of Stockton adopted the Agricultural Land Mitigation Program in 2007. The Program applies to projects that would convert agricultural lands, as defined by the most-recent Important Farmland

Maps published by the California Department of Conservation. Projects may provide "agricultural mitigation land" on a 1:1 basis for each acre of land converted, including administrative costs of approximately $1,000 per acre, or pay the established Agricultural Land Mitigation Fee of $12,822 (San Joaquin Council of Governments [SJCOG] San Joaquin County Multi-Species Habitat Conservation and Open Space Plan [SJMSCP] Habitat Fees, 2020) per acre.

The Agricultural Land Mitigation Program provides that agricultural mitigation lands will be dedicated to a qualifying management entity such as the Central Valley Farmland Trust. The fees would be collected by the City, held in a dedicated account, and then expended by the City to acquire agricultural mitigation land or pay for the monitoring and administrative costs of the program. The fees may also be transferred to a qualifying entity for the same purpose.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on agricultural resources if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmlands), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed Project would result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses (Significant and Unavoidable)

Development of the proposed Project would result in the permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland, as shown on Figure 3.2-1, to non-agricultural use. The loss of Important Farmland as classified under the FMMP is considered a potentially significant environmental impact.

The City's Agricultural Land Mitigation Program requires that projects provide "agricultural mitigation land" on a 1:1 basis for each acre of land converted, including administrative costs of approximately $1,000 per acre, or pay the established Agricultural Land Mitigation Fee of $12,822 (SJCOG-SJMSCP Habitat Fees, 2020) per acre. The Project would pay the established Agricultural Land Mitigation Fee of $12,822 per acre, as required by Mitigation Measure 3.2-1. SJCOG would then use these funds to purchase conservation easements on agricultural and habitat lands that are placed over agricultural land, such as alfalfa and row crops in the Project vicinity. As such, the Project

fees paid to SJCOG as administrator of the SJMSCP would result in the preservation of agricultural lands in perpetuity. The purchase of conservation easements and/or deed restrictions through the City's Agricultural Land Mitigation Program and the SJMSCP allows the agricultural landowner to retain ownership of the land and continue agricultural operations, and preserves such lands in perpetuity.

The Envision Stockton 2040 General Plan EIR anticipated development of the Project site as part of the overall evaluation of the buildout of the City. The General Plan EIR addressed the conversion and loss of Important Farmland that would result from the build out of the General Plan (General Plan Draft EIR, pp. 4.2-10 through 4.2-12). The General Plan EIR determined that impacts would be significant and unavoidable. According to the General Plan EIR, although the General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, it designates approximately 16,160 acres of farmlands of concern under CEQA for non-agricultural uses. Because these farmland areas are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. The only way to mitigate this impact would be to prohibit any development on farmland of concern. CEQA does not require that the project be changed in order to avoid an impact, and no additional mitigation is available, resulting in a significant and unavoidable impact.

While the proposed Project will contribute fees toward the purchase of conservation easements on agricultural lands through the SJMSCP (as required by Mitigation Measure 3.2-1), those fees and conservation easements would not result in the creation of new farmland to offset the loss that would occur with Project implementation. Implementation of the Project would result in a net loss of farmland, even with implementation of mitigation. As such, consistent with the conclusion of the General Plan EIR, the loss of Important Farmland would be a ***significant and unavoidable*** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.2-1: *Prior to the conversion of Important Farmland on the Project site, the Project applicant shall participate in the SJMSCP agricultural mitigation fee program by paying the established fees on a per-acre basis for the loss of Important Farmland.*

Impact 3.2-2: The proposed Project may 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 (Less than Significant)

Intensive agricultural operations adjacent or close to urban development can result in use conflicts. These conflicts can result from agricultural practices that generate complaints and result in limits on these practices, such as dust generated during cultivation, burning, noise during shaking operations (nut trees), and pesticide applications. Additionally, conflicts may result from substantial increases in unauthorized use of an agricultural area as the population of the area increases. This can result in the potential for increased trespass, littering and/or vandalism of agricultural properties. Both of

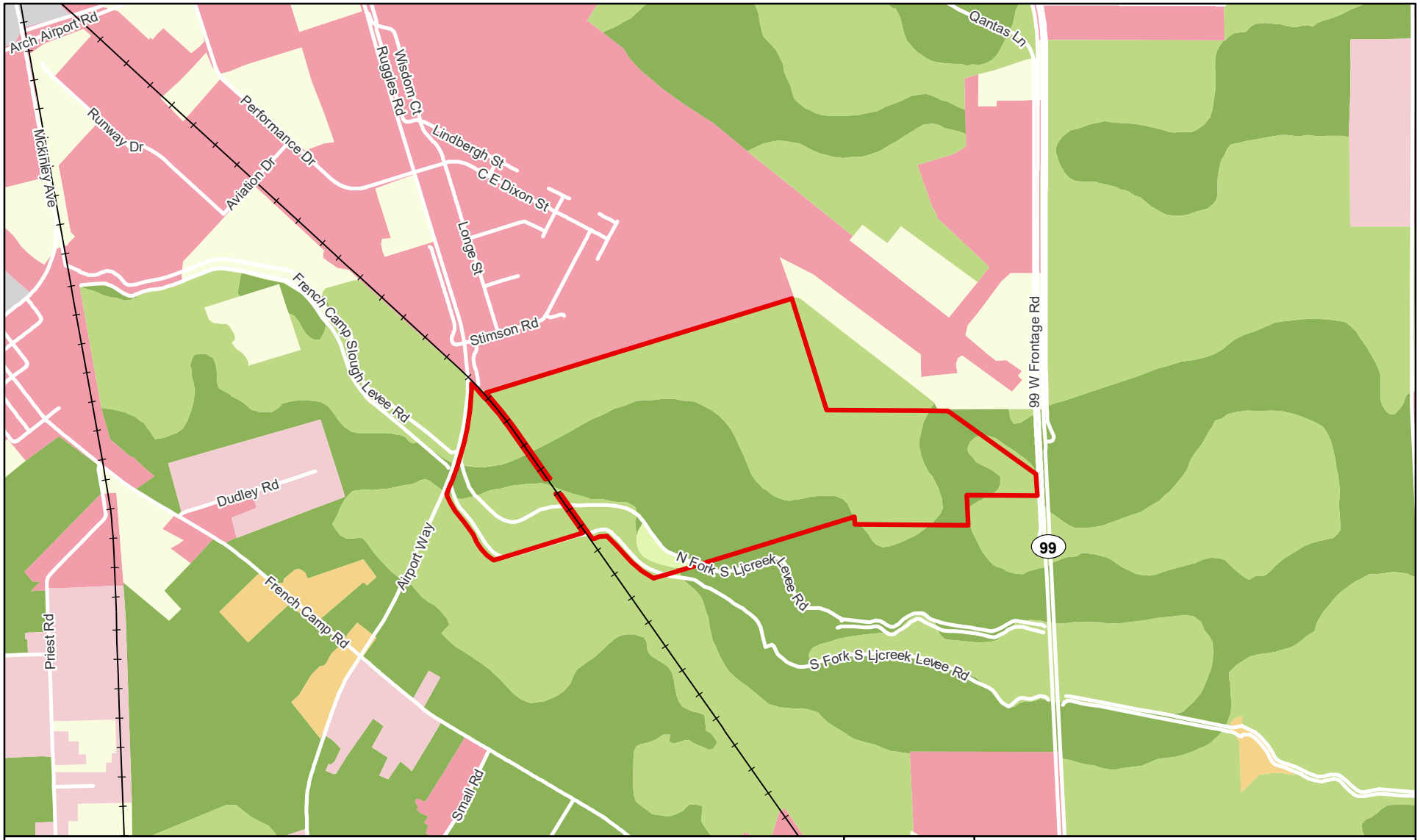
these potential conflicts are predominantly associated with the juxtaposition of agricultural and residential areas.

Potential urban/agricultural use conflicts between proposed urban and nearby agricultural uses are expected to be minimal. Neighboring agricultural lands, including Prime Farmland and Farmland of Statewide Importance, are located adjacent to the northern, eastern, southern, and western boundaries of the Project site, as shown on Figure 3.2-1. A variety of industrial and commercial uses would be developed on the Project site and sewer improvements would be constructed off-site along Airport Way to Industrial Drive to the north.

The City's General Plan anticipates that agricultural lands to the north, south, east, and west of the Project site would develop with urban uses. Agricultural lands that are located adjacent the Project site to the north (the triangle area adjacent south of the Airport runway), east (both east and west of SR 99, west of Airport Way, and to the south may be impacted by the increased human presence on the Project site. Additionally, the existing agricultural uses to the west are separated from the Project site by Airport Way and/or agricultural roadways and ditches. Airport Way is an arterial roadway and would act as an effective divider and buffer between urban and agricultural uses, limiting access for new urban population in the area. Additionally, as part of the Project, approximately 54 acres of open space uses would be provided along French Camp Slough. This open space corridor would also act as an effective divider and buffer between urban and agricultural uses.

Both Stockton and San Joaquin County have "Right-to-Farm" ordinances which prevent an existing agricultural operation using standard farming practices from being considered a nuisance by later adjoining uses. This protects farmers from attempts by residents to curtail agricultural activities. The Stockton ordinance, which would apply to the site, also requires owners and builders to notify their successors-in-interest of the potential conflicts and effects of agricultural activities, and the ordinance specifies that typical agricultural practices shall not be considered a nuisance. Implementation of the Right-to-Farm ordinance would ensure potential residential/agricultural incompatibilities would be less than significant.

The General Plan EIR identifies that implementation of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan Policies LU-5.2 and LU-5.3, and Actions LU-5.3B, 5.3C, and 6.2B. The General Plan EIR determined that the impact would be less than significant through implementation of these policies and actions, and through compliance with the City's "Right-to-Farm" ordinance (General Plan Draft EIR, p. 4.2-15). Therefore, implementation of the proposed Project would result in a ***less than significant*** impact related to conflicts with adjacent agricultural lands.



LEGEND

- Project Boundary

Farmland Classification (Acres Onsite)

- Prime Farmland (158.6 ac)
- Farmland of Statewide Importance (259.3 ac)
- Unique Farmland (4.3 ac)
- Farmland of Local Importance
- Vacant or Disturbed Land
- Rural Residential Land
- Semi-agricultural and Rural Commercial Land
- Urban and Built-Up Land

N

0 500 1,000
Feet

Source: San Joaquin County GIS; Farmland Mapping and Monitoring Program, San Joaquin 2016. Map date: September 22, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.2-1. Farmlands Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the entire site to urban uses. Following this discussion is an assessment of consistency of the proposed Project with applicable policies and local plans. The Greenhouse Gases and Climate Change analysis is located in a separate section of this document. This section is based in part on the following technical studies: *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board [CARB], 2007), *Guide for Assessing and Mitigation Air Quality Impacts* (San Joaquin Valley Air Pollution Control District [SJAVPCD], 2002), *Guidance for Assessing and Mitigating Air Quality Impacts - 2015* (SJAVPCD, 2015), and CalEEMod *(v.2016.3.1)* (CARB, 2007). There was one NOP comment provided by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The commenter pointed out that the SJVAPCD has the *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* (March 19, 2015) as a technical guidance for the review of air quality impacts from proposed projects within the boundaries of the District.

Four comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Sierra Club (October 27, 2020), State of California Department of Justice (November 24, 2021), California Air Resources Board (November 17, 2020), and the San Joaquin Valley Air Pollution Control District (October 30, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

The City of Stockton (City) is in the southern portion of the San Joaquin Air Basin (SJVAB). The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (San Joaquin Valley Air Pollution Control District (SJVAPCD), 2015).

Climate

The SJVAB is in a Mediterranean climate zone and is influenced by a subtropical high-pressure cell most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD, 2015).

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and transporting it to other locations.

Especially in summer, winds in the San Joaquin Valley most frequently blow from the northwest. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas.[1] The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeast and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds,

[1] SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20ai r%20quality%20in%20the%20San%20Joaquin%20Valley, accessed March 3, 2020.

winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period.

Temperature

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge and remove the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer does not lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (SJVAPCD, 2015).

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the valley's $PM_{2.5}$ and PM_{10} problem. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10} (SJVAPCD, 2015).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height." This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor (SJVAPCD, 2015).

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.3-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the Project are discussed below.

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROGs that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. EPA, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. EPA, 2019b). The average background level of ozone in the California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O_3 can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (CARB, 2019a).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S.

EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO_2 is the increased likelihood of respiratory problems. Under ambient conditions, NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2.

The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROGs, in the atmospheric reactions that produce O_3. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO_2 emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO_2 is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO_2 affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO_2 has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO_2 and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO_2 reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter ($PM_{2.5}$). Inhalation exposure to $PM_{2.5}$ has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO_2 levels would lead to increased risk of such effects.

SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other sulfur oxides (SOx). SOx can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and ROGs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM_{10} is particulate matter 10 micrometers or less in diameter (known as respirable particulate matte*r*), and $PM_{2.5}$ is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

$PM_{2.5}$ consists of fine particles, which are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lunch function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years

old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2019c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments to not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

Both the U.S. EPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and State standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone, $PM_{2.5}$, and PM_{10}. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015 (equivalent to the California state ambient air quality eight-hour standard for ozone).

TABLE 3.3-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	*AVERAGING TIME*	*FEDERAL PRIMARY STANDARD*	*STATE STANDARD*
Ozone	1-Hour 8-Hour	-- 0.070 ppm	0.09 ppm 0.070 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.053 ppm 0.100 ppm	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm 0.075 ppm	-- 0.04 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	-- 150 ug/m^3	20 ug/m^3 50 ug/m^3
$PM_{2.5}$	Annual 24-Hour	12 ug/m^3 35 ug/m^3	12 ug/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 0.15 ug/m^3	1.5 ug/m^3 --

NOTES: PPM = PARTS PER MILLION, UG/M3 = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The existing PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within San Joaquin County and the entire air basin are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, carbon monoxide, and nitrogen dioxide as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

San Joaquin County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. San Joaquin County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 presents the state and nation attainment status for San Joaquin County.

TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS IN SAN JOAQUIN COUNTY

CRITERIA POLLUTANTS	*STATE DESIGNATIONS*	*NATIONAL DESIGNATIONS*
Ozone (O_3)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2020.

San Joaquin County Air Quality Monitoring

The San Joaquin Valley Air Pollution District (SJVAPCD) and the CARB maintain air quality monitoring sites throughout San Joaquin County that collect data for ozone and $PM_{2.5}$. In addition, air quality monitoring sites for PM_{10} are located throughout the San Joaquin Valley (though not in San Joaquin County). It is important to note that while the State retains the one-hour standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Best available data obtained from the monitoring sites between 2017 and 2019 (latest year of data available) is shown in Table 3.3-3, Table 3.3-4, and Table 3.3-5.

TABLE 3.3-3 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN COUNTY) - OZONE

YEAR	DAYS > STANDARD				1-HOUR OBSERVATIONS			8-HOUR AVERAGES				YEAR COVERAGE	
	STATE		NATIONAL			STATE	NAT'L	STATE		NATIONAL			
	1-HR	8-HR	1-HR	8-HR	MAX.	D.V.[1]	D.V.[2]	MAX.	D.V.[1]	MAX.	D.V.[2]	MIN	MAX
2019	2	4	0	4	0.098	0.09	0.092	0.08	0.0823	0.079	0.073	91	99
2018	1	8	0	8	0.099	0.10	0.099	0.082	0.0872	0.081	0.076	96	99
2017	0	8	0	6	0.093	0.10	0.105	0.082	0.0898	0.082	0.077	84	95

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V. [1]= STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN VALLEY) – PM_{10}

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		HIGH 24-HR AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2019	16.2	129.7	55.6	55.6	652.2	664.2	0 – 100
2018	9.6	164.4	54.5	53.0	250.2	250.4	0 – 100
2017	7.7	145.5	55.3	48.4	298.4	210.0	0 – 100

NOTES: THE NATIONAL ANNUAL AVERAGE PM_{10} STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. ND=THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-5 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN COUNTY) - $PM_{2.5}$

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V.[1]	STATE ANNUAL D.V.[2]	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-HR STD. D.V.[1]	HIGH 24-HOUR AVERAGE		YEAR COVERAGE	
		NAT'L	STATE					NAT'L	STATE	MIN	MAX
2019	6.4	9.6	6.2	13.0	17	32.9	56	50.1	50.1	77	95
2018	25.0	17.6	17.4	13.8	17	96.9	56	188.0	257.5	96	100
2017	16.9	12.1	11.0	12.2	13	44.2	39	53.7	53.7	94	99

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. [1]= STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

ODORS

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, and schools. The closest sensitive receptors to the Planning Area include existing residences located within the Planning Area itself.

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and $PM_{2.5}$ ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the U.S. EPA administrator. Reviewing NAAQS is a lengthy undertaking and includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, U.S. EPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents is released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the U.S. EPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The CASAC's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutant as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standards consistent with the current California state standard.
- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.

- NO_2: The national NO_2 standard was most recently revised in 2010 following an exhaustive review of new literature pointed to evidence for adverse effects in asthmatics at lower NO_2 concentrations than the existing national standard.
- SO_2: On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average $PM_{2.5}$ standard was most recently revised in 2012 following an exhaustive review of new literature pointed to evidence for increased risk of premature mortality at lower $PM_{2.5}$ concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the U.S. EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. The CARB is the state agency that is responsible for preparing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the U.S. EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by U.S. EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas. Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the Project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address

mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which require auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CARB is the agency responsible for administering the CCAA. The CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.3-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the

Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The ARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM_{10} standard and established a new $PM_{2.5}$ annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

Tanner Air Toxics Act (TACs)

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted U.S. EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technologies (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

Omnibus Low-NOx Rule

The CARB approved the Omnibus Low-NOx Rule on August 28, 2020, which will require engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty truck and engines. Those additional requirements include a 50% reduction in

particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements. The regulatory requirements in the Omnibus Low-NOX Rule will first become effective in 2024, at the same time as the Advanced Clean Trucks regulations that CARB approved that mandates manufacturers convert increasing percentages of their heavy-duty trucks sold in California to zero-emission vehicles.

Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003, creating Government Code Section 65302.1, which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies, and feasible implementation strategies designed to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation, and open space. Section 65302.1.c identifies four areas of air quality discussion required in these amendments:

- A report describing local air quality conditions, attainment status, and state and federal air quality and transportation plans;
- A summary of local, district, state, and federal policies, programs, and regulations to improve air quality;
- A comprehensive set of goals, policies, and objectives to improve air quality; and
- Feasible implementation measures designed to achieve these goals.

LOCAL

Envision Stockton 2040 General Plan

The following goals and policies of the Stockton General Plan related to air quality are applicable to the proposed Project.

POLICIES: LAND USE ELEMENT

- LU-1.1. Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.
- LU-2.5. Promote Downtown Stockton as a primary transit node that provides multi-modal connections throughout the city and region.
- LU-3.2. Retain narrower roadways and reallocate right-of-way space to preserve street trees and mature landscaping and enhance the pedestrian and bicycle network within and adjacent to residential neighborhoods.
- LU-6.2. Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
- LU-6.4: Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).

- LU-TR-1.1. Ensure that roadways safely and efficiently accommodate all modes and users, including private, commercial, and transit vehicles, as well as bicycles and pedestrians and vehicles for disabled travelers.

POLICIES: TRANSPORTATION ELEMENT

- TR-1.2. Enhance the use and convenience of rail service for both passenger and freight movement.
- TR-2.1. Develop safe and interconnected bicycle and pedestrian facilities, including along "complete" streets that target multiple travel modes.
- TR.-2.3. Utilize natural features and routes with lower traffic volumes and speeds to encourage residents to walk and wheel more frequently.
- TR-3.1. Avoid widening existing roadways in an effort to preclude inducement of additional vehicle traffic.
- TR-3.2. Require new development and transportation projects to reduce travel demand and greenhouse gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.
- TR-4.2. Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.

POLICIES: SAFETY ELEMENT

- SAF-4.1. Reduce air impacts from mobile and stationary sources of air pollution.
- SAF-4.2. Encourage major employers to participate in a transportation demand management program (TDM) that reduces vehicle trips through approaches such as carpooling, vanpooling, shuttles, car-sharing, bikesharing, end-of-trip facilities like showers and bicycle parking, subscription bus service, transit subsidies, preferential parking, and telecommuting.
- SAF-4.3. Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.

ACTIONS: LAND USE ELEMENT

- LU-1.1A. Require renovated and new mixed-use projects to be planned and designed to contribute to the corridor's identity through appropriate public spaces, gateways, streetscapes, pedestrian walkways, setbacks, edge treatments, and other design features.
- LU-1.1B. Evaluate the City's parking policies, and amend the Development Code to provide more flexibility as appropriate to facilitate mixed-use redevelopment.
- LU-2.5A. Improve transit, bicycle, and pedestrian connectivity between the Downtown and local colleges and universities.

- LU-3.2A. Implement the "road diet" recommendations from the City's Bicycle Master Plan that reduce roadway widths to provide space for bike lanes and other amenities that improve safety and ease of the streetscape for all modes.
- LU-6.2D. Comply with State requirements that limit the idling of motor vehicles.
- LU-6.4B. Maintain a reasonable proximity and balance (i.e., magnitude) between job-generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.
- LU-6.4C. Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

POLICIES: COMMUNITY HEALTH ELEMENT

- CH-5.1. Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.
- CH-5.2. Expand opportunities for recycling, re-use of materials, and waste reduction.

ACTIONS: TRANSPORTATION ELEMENT

- TR-1.1A. Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing any new truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists.
- TR-1.1B. Maintain and periodically update a schedule for synchronizing traffic signals along arterial streets and freeway interchanges to facilitate the safe and efficient movement of people and goods and to provide signal priority for transit vehicles at intersections.
- TR-1.1C. Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.
- TR-1.1D. Update existing Precise Road Plans to reflect the 2040 General Plan, including changes in land use and level of service requirements, and a shift in priority from vehicular travel to travel by all modes through complete streets.
- TR-1.1E. Work with local school districts to implement pedestrian crossing enhancements like stop signs within neighborhoods around schools, encourage activities like a walking school bus, and create educational programs that teach students bicycle safety.
- TR-1.2A. Actively support and pursue access to high-speed rail.
- TR-1.2B. Support the San Joaquin Regional Transportation District's Regional Bus Service, Altamont Commuter Express (ACE), and AMTRAK's San Joaquin intercity rail service, and pursue and support other regional transit programs and projects, such as:
    - ACE plans to bypass existing bottlenecks (e.g., the Union Pacific railyards in South Stockton);
    - Connecting to the BART system;
    - Extending ACE service south to Merced; and

    - Proposing rail between Stockton and Sacramento along the California Traction and other rail corridors.
- TR-2.1A. Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, and shopping and office centers, along with showers and lockers for major employment sites.
- TR-2.1B. Maintain and implement the City of Stockton Bicycle Master Plan.
- TR-2.1C. Maintain and implement the City of Stockton Safe Route to School Plan.
- TR-2.2A. Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.
- TR-2.2B. Obtain input from community residents, non-profit organizations, and local and regional transit operators on major new development projects, and support transit operators by ensuring major projects are designed to support transit and provide fair share funding of the cost of adequate transit service and access.
- TR-2.2C. Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, with the assistance of new development funding.
- TR-2.2D. Support efforts to electrify buses.
- TR-2.3A. Develop and maintain bikeways on separate rights-of-way (e.g., Calaveras River, East Bay Municipal Utility District easement, French Camp Slough, and Shima Tract Levee).
- TR-2.3B. Require dedication of adequate right-of-way for bicycle use in new arterial and collector streets, and where feasible, in street improvement projects.
- TR-3.1A. Limit street widths to the minimum necessary to adequately carry the volume of anticipated traffic, while allowing for safe bicycle and pedestrian facilities, emergency access, and large vehicle access.
- TR-3.1B. Where feasible and appropriate, reduce the width of existing streets using bulb-outs, medians, pedestrian islands, shade tree landscaping, appropriate signage, and similar methods, while not jeopardizing emergency response.
- TR-3.1C. Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage.
- TR-3.2A. Amend the parking requirements in the Development Code to encourage shared parking, require preferential parking for rideshare vehicles, and allow reduced parking requirements to support transit, bicycling, and walking.
- TR-3.2B. Require commercial, retail, office, industrial, and multifamily residential development to provide charging stations and prioritized parking for electric and alternative fuel vehicles.
- TR-3.2C. Respond to the implications and opportunities associated with connected vehicles and autonomous vehicles by monitoring technological advances and adjusting roadway infrastructure and parking standards to accommodate autonomous vehicle technology and parking needs.

- TR-3.2D. Continue to coordinate with the San Joaquin Council of Governments to increase opportunities for additional park and ride facilities, consistent with the San Joaquin County Regional Park and Ride Lot Master Plan.
- TR-4.2A. To evaluate the effects of new development and determine mitigation measures and impact fees, require projects to evaluate per capita VMT and impacts to transit, bicycle, and pedestrian modes.
- TR-4.2B. Amend the City's Transportation Impact Analysis Guidelines to include alternative travel metrics and screening criteria.

ACTIONS: SAFETY ELEMENT

- SAF-4.1A. Require the construction and operation of new development to implement best practices that reduce air pollutant emissions, including:
    - Use of low-emission and well-maintained construction equipment, with idling time limits.
    - Development and implementation of a dust control plan during construction.
    - Installation of electrical service connections at loading docks, where appropriate.
    - Installation of Energy Star-certified appliances.
    - Entering into Voluntary Emissions Reduction Agreements with the San Joaquin Valley Air Pollution Control District.
- SAF-4.1B. Use the results of the Health Risk Assessments required by the California Air Toxics "Hot Spots" Act to establish appropriate land use buffer zones around any new sources of toxic air pollutants that pose substantial health risks.
- SAF-4.1C. Require the use of electric-powered construction and landscaping equipment as conditions of project approval when appropriate.
- SAF-4.1D. Limit heavy-duty off-road equipment idling time to meet the California Air Resources Board's idling regulations for on-road trucks.
- SAF-4.2D. Provide information and conduct marketing and outreach to major existing and new employers about the transportation demand management (TDM) program facilitated by the San Joaquin Council of Governments.
- SAF-4.3A. Distribute educational materials from the San Joaquin Valley Air Pollution Control District on the City's website and at its Permit Center.
- SAF-4.3B. Coordinate review of development project applications with the San Joaquin Valley Air Pollution Control District to ensure that air quality impacts are consistently identified and mitigated during CEQA review.

POLICIES: COMMUNITY HEALTH

- CH-5.1A. Upon the next revision of the City's Local Hazard Mitigation Plan, conduct a comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies, and incorporate them into the Safety Element, in accordance with SB 379.

- CH-5.1B. Maintain and implement the City of Stockton Climate Action Plan (CAP) and update the CAP to include the following:
    - Updated communitywide GHG emissions inventory;
    - 2030 GHG emissions reduction target, consistent with SB 32;
    - Estimated 2030 GHG emissions reduction benefits of State programs;
    - Summary of the City's progress toward the 2020 local GHG emissions reduction target;
    - New and/or revised GHG reduction strategies that, when quantified, achieve the 2030 reduction target and continue emission reductions beyond 2030; and
    - New or updated implementation plan for the CAP.
- CH-5.1C. Accommodate a changing climate through adaptation and resiliency planning and projects.
- CH-5.2A. Use recycled materials and products for City projects and operations where economically feasible, and work with recycling contractors to encourage businesses to use recycled products in their manufacturing processes and encourage consumers to purchase recycled products.
- CH-5.2B. Continue to require recycling in private and public operations, including construction/demolition debris.
- CH-5.2C. Expand educational and outreach efforts to promote recycling by occupants of multi-family housing, businesses, and schools.

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents.

AIR QUALITY PLANNING

The U.S. EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the State Implementation Plans (SIP). California's adopted 2007 State Strategy was submitted to the U.S. EPA as a revision to its SIP in November 2007.[2] More recently, in October 2018, the CARB adopted the 2018 Updates to the California State Implementation Plan.

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment.

[2] Note that the plan was adopted by CARB on September 27, 2007; California Air Resources Board. 2007. California Air Resources Board's Proposed State Strategy for California's 2007 State Implementation Plan.

To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and $PM_{2.5}$ and the California AAQS for PM_{10} in the SJVAB (for California CAA compliance)[3] The following describes the air plans prepared by the SJVAPCD, which are incorporated by reference per CEQA Guidelines Section 15150.

1-HOUR OZONE PLAN

Although U.S. EPA revoked its 1979 1-hour ozone standard in June 2005, many planning requirements remain in place, and SJVAPCD must still attain this standard before it can rescind CAA Section 185 fees. The SJVAPCD's most recent 1-hour ozone plan, the 2013 Plan for the Revoked 1-hour Ozone Standard, demonstrated attainment of the 1-hour ozone standard by 2017. However, on July 18, 2016, the U.S. EPA published in the Federal Register a final action determining that SJVAB has attained the 1-hour ozone NAAQS based on the 2012 to 2014 three-year period allowing nonattainment penalties to be lifted under federal Clean Air Act section 179b (SJVAPCD, 2015).

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The plan projects that the valley will achieve the 8-hour ozone standard for all areas of the SJVAB no later than 2023. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end of 2031.[4,5]

PM_{10} PLAN

Based on PM_{10} measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM_{10} standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM_{10} Maintenance Plan and Request for Redesignation. This plan demonstrates that the valley will continue to meet the PM_{10} standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM2.5 PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018.[6] This plan addresses the U.S. EPA federal 1997 annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour

[3] SJVAPCD, 2012. 2012 $PM_{2.5}$ Plan, December 20.

[4] SJVAPCD. Ozone Plans. http://www.valleyair.org/ Air_Quality_Plans/Ozone_Plans.htm, accessed March 3, 2020.

[5] SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed March 3, 2020.

[6] SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed March 9, 2020.

$PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable (SJVAPCD, 2020).

All of the above-referenced plans include measures (i.e., federal, state, and local) that would be implemented through rule making or program funding to reduce air pollutant emissions in the SJVAB. Transportation control measures are part of these plans.

SJVAPCD RULES AND REGULATIONS

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NOx) and PM_{10} emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include any one of the following:

- 50 residential units.
- 2,000 square feet of commercial space.
- 25,000 square feet of light industrial space.
- 100,000 square feet of heavy industrial space.
- 20,000 square feet of medical office space.
- 39,000 square feet of general office space.
- 9,000 square feet of educational space.
- 10,000 square feet of government space.
- 20,000 square feet of recreational space.
- 9,000 square feet of space not identified above.
- Transportation/transit projects with construction exhaust emissions of two or more tons of NOx or two or more tons of PM_{10}.
- Residential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, regardless of the number of tract maps, and has the capability of accommodating more than 50 residential units.
- Nonresidential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, and has the capability of accommodating development projects that emit two or more tons per year of NOx or PM_{10} during project operations.

The rule requires all subject, nonexempt projects to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Off-site emissions reduction fees (off-site fee) are required for projects that do not achieve the required emissions reductions through on-

site emission reduction measures. Phased projects can defer payment of fees in accordance with an Off-site Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: on-site exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources).28 Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on their air quality management plans, to reach attainment for ozone and particulate matter:

Construction Equipment Emissions

The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

- 20 percent of the total NOx emissions
- 45 percent of the total PM_{10} exhaust emissions

Mitigation measures may include those that reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

Operational Emissions

- NOx Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NOx emissions over a period of 10 years as quantified in the approved AIA.
- PM_{10} Emissions. Applicants shall reduce of 50 percent of the project's operational baseline PM_{10} emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emission reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM_{10} Prohibitions

SJVAPCD controls fugitive PM_{10} through Regulation VIII, Fugitive PM_{10} Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- Regulation VIII, Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site.

- Regulation VIII, Rule 8031 applies to the outdoor handling, storage, and transport of any bulk material.
- Regulation VIII, Rule 8041 applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- Regulation VIII, Rule 8051 applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas, and contains at least 1,000 square feet of disturbed surface area.
- Regulation VIII, Rule 8061 applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- Regulation VIII, Rule 8071 applies to any unpaved vehicle/equipment traffic area.
- Regulation VIII, Rule 8081 applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measure to be implemented before, during, and after any dust-generating activity. For sites smaller than those listed above, the project is still required to notify SJVAPCD a minimum of 48 hours prior to commencing earthmoving activities.

National Emission Standards for Hazardous Air Pollutants

Rule 4002 applies in the event an existing building will be renovated, partially demolished or removed (National Emission Standards for Hazardous Air Pollutants); this rule applies to all sources of Hazardous Air Pollutants.

Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, "a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property."

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NOx, ROG, and particulate matter (PM_{10} and $PM_{2.5}$). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip

Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with air quality if it will:

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

CRITERIA POLLUTANT EMISSIONS MODELING

California Emission Estimator Model (CalEEMod)™ (v.2016.3.2), developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project construction was assumed to be completed in 2040 over several phases. This may prove to be a conservative estimate, because criteria pollutant emission rates are reduced over time (due to state and federal mandates) and would be expected to be even lower than reported in this analysis, should Project construction be completed after 2040.

The assumptions for the modeling were selected on a best-fit basis, and are consistent with Table 2.0-2 in Chapter 2.0: Project Description. The land uses modeled include: Commercial – Regional Shopping Center (140,350 square feet); Industrial – General Light Industry (6,091,550 square feet); Parking – Other Asphalt Surfaces (18.2 acres); Parking – Other Non-Asphalt Surfaces (41 acres); Recreational -- City Park (54 acres). Vehicle trip rates estimated in the modeling are consistent with the vehicle trips rates included in the modeling developed by Fehr & Peers. The construction phase includes site preparation, grading, building construction, paving, and architectural coating phases. See Appendix B.2 for further detail.

IMPACTS RELATED TO PROJECT-GENERATED POLLUTANTS OF HUMAN HEALTH CONCERN

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704) (hereafter referred to as the Friant Ranch Decision). The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Friant Ranch Project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin. The Court found that the air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The Court's decision clarifies that the agencies authoring environmental documents must make reasonable efforts to connect a Project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

All criteria pollutants that would be generated by the Project are associated with some form of health risk (e.g., asthma). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and lead (Pb) are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (ROG and NO_x) and PM (including Diesel PM). The SJVAPCD does not currently have a methodology that would correlate the expected air quality emissions of Projects to the likely health consequences of the increased emissions.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. Appendix B.1 contains a table that summarizes many of these tools, identifies the analyzed pollutants, describes their intended application and resolution, and analyzes whether they could be used to reasonably correlate project-level emissions to specific health

consequences. As provided in Appendix B.1, while there are models capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment cannot be estimated with a high degree of accuracy.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the SJVAPCD and South Coast Air Quality Management District (SCAQMD), who provided amici curiae briefs for the Friant Ranch legal proceedings. In its brief, SJVAPCD (2015) acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task." The air district further notes that emissions solely from the Friant Ranch Project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information," and that any such information should not be "accurate when applied at the local level." SCAQMD presents similar information in their brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels"[7].

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the Project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale without speculation, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

Models and Tools to Correlate Project-generated Criteria Pollutant Emissions to Health Impacts

Although available tools to correlate Project-generated criteria pollutant emissions to health impacts are designed to be used at the national, state, regional, and/or city-levels rather than the

[7] For example, SCAQMD's analysis of their 2012 Air Quality Attainment Plan showed that modeled NO_x and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD's Rule 1315 showed that emissions of NO_x and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absence (South Coast Air Quality Management District, 2015).

project level, this impact analysis includes CalEEMod modeling to identify criteria pollutant emissions that affect health. The higher the emissions generated by a project, the higher the chance that a given individual's health would be affected by the development of a particular project.

The impact analysis does not directly evaluate airborne lead. Neither construction nor future operations would generate quantifiable lead emissions because of regulations that require unleaded fuel and that prohibit lead in new building materials.

TAC emissions associated with Project construction that could affect surrounding areas are evaluated qualitatively. The potential for the Project operations to expose residents to TAC emissions that would exceed applicable health standards is analyzed quantitatively, and provided in Appendix B.5 (see the Health Risk Assessment).

Lastly, the SJVPACD recommends that odor impacts be addressed in a qualitative manner. Such an analysis must determine if the Project would result in excessive nuisance odors, as defined under the SJVAPCD's Rule 4102 and California Code of Regulations, Health and Safety Code Section 41700, Air Quality Public Nuisance.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Project operations would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Significant and Unavoidable)

The SJVAPCD is tasked with implementing programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. In that capacity, the SJVAPCD has prepared plans to attain Federal and State ambient air quality standards. To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions in their *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015). Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan".

The proposed Project would be both a direct and indirect source of air pollution. Direct sources of pollution include area, energy, and water and waste sources, due to development of the on-site buildings and associated infrastructure. Indirect sources of pollution would be due to the generation of VMT of from vehicles traveling to and from the Project site. As provided in the Traffic Impact Assessment for the proposed Project, the proposed Project would increase daily VMT by approximately 13.4% when compared to the Baseline City of Stockton Travel Demand Model.

CalEEMod™ (v.2016.3.2) was used to model operational emissions of the proposed Project. Table 3.3-6 shows proposed Project emissions as provided by CalEEMod. The SJVAPCD provides a list of applicable air quality emissions thresholds.

TABLE 3.3-6: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	CO	NOX	ROG	SOX	PM_{10}	$PM_{2.5}$
THRESHOLD	100	10	10	27	15	15
EMISSIONS	39.4	114.7	33.0	0.5	24.6	7.0
EXCEEDS THRESHOLD?	**N**	**Y**	**Y**	**N**	**Y**	**N**

SOURCES: CALEEMOD (V.2016.3.2)

The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO, 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year particulate matter of 10 microns or less in size (PM_{10}), and 15 tons per year particulate matter of 2.5 microns or less in size ($PM_{2.5}$). If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible.

As shown in Table 3.3-6 above, operational emissions would exceed the SJVACPD thresholds of significance for NOx, ROG, and PM_{10}. Therefore, the proposed Project is required to implement all feasible mitigation to reduce criteria pollutant emissions to below the applicable SJVAPCD thresholds of significance. Therefore, the proposed Project would be required to implement Mitigation Measure 3.3-1. This measure would ensure that individual Projects within the footprint of the proposed Project would reduce emissions to less the applicable SJVAPCD thresholds of significance.

It should be noted that the emissions of ozone precursors such as ROG and NO_x attributable to the proposed Project would not be substantial enough on a regional basis for the City to be able, with currently available technical tools, to predict how the emissions of such pollutants would translate into either physical environmental changes, such as measurable effects on ambient ozone concentrations within the air basin, or health effects, such as increased respiratory problems, within any discrete population within the City or the region. Such an analysis is not reasonably feasible within the meaning of CEQA because it would require a level of speculation.

PROJECT EFFECTS ON PUBLIC HEALTH

San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. The SJVAPCD developed these Project-level thresholds based on the emissions that would exceed a CAAQS or contribute substantially to an existing or Projected violation of a CAAQS. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

As shown in the table provided in Appendix B.1 of this EIR, almost all tools available to measure criteria pollutant emissions were designed to be used at the national, state, regional, and/or city-

levels. These tools are not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Accordingly, they are not recommended by the SJVAPCD for CEQA analyses. Instead, the following analysis of health effects is presented qualitatively.

Ozone

O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2019b).

The Project would generate emissions of ROG and NO_x during Project operational activities, as shown in Table 3.3-6. Although the exact effects of Project-level emissions on local health are not precisely known, it is likely that the increases in ROG and NO_x generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the proposed Project in comparison to San Joaquin County as a whole. Instead, the increases in ROG and NO_x generated by the proposed Project when combined with the existing ROG and NO_x emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms,

aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2019c).

The Project would generate emissions of PM during Project operational activities, as shown in Table 3.3-6. Although the exact effects of such emissions on local health are not known, it is likely that the increases in PM generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison the San Joaquin County as a whole. Instead, the increases in PM generated by the proposed Project when combined with the existing PM emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

Discussion

The magnitude and locations of any potential changes in ambient air quality, and thus health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure), as well as the variabilities in the receptors that reside in a particular area. Additionally, SJVAPCD has not established any methodology or thresholds (quantitative or qualitative) for assessing the health effects from criteria pollutants. From a qualitative perspective, it is well documented from scientific studies that criteria pollutants can have adverse health effects. The federal and state governments have established the NAAQS or CAAQS as an attempt to regionally, and cumulatively, assess and control the health effects that criteria pollutants have within Air Basins. It is anticipated that public health will continue to be affected by the emission of criteria pollutants, especially by those with impaired respiratory systems in the City of Stockton and the surrounding region so long as the region does not attain the CAAQS or NAAQS. However, the increases of these pollutants generated by the proposed Project are not on their own

likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison to the San Joaquin County as a whole. Instead, the increases in criteria pollutants generated by the proposed Project when combined with the existing criteria pollutants emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

CONCLUSION

With implementation of Mitigation Measures 3.3-1, the Project's operational emissions would be reduced. Mitigation Measure 3.3-1 requires individual projects to reduce emissions to below the applicable SJVAPCD thresholds through on- and off-site mitigation measures, where applicable. However, even with implementation of all feasible mitigation, it may not be feasible for all individual Projects within the Project site to reduce operational emissions at full Project buildout below the applicable thresholds. Therefore, the Project's criteria pollutant emissions would be considered to have a ***significant and unavoidable*** impact.

MITIGATION MEASURES

Mitigation Measure 3.3-1: *Prior to the approval of individual phases of development (i.e. final maps, improvement plans, site plan review, etc.), each project applicant shall coordinate with the SJVAPCD to ensure compliance with Rule 9510 for both operational and construction emissions. The intent is that each phase of development would demonstrate that the individual project does not exceed the applicable SJVAPCD criteria pollutant thresholds for project operations or construction. If the SJVAPCD criteria pollutant thresholds for an individual project is exceeded, the project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term air quality impacts to below the applicable SJVAPCD thresholds of significance. This may consistent of fee payments to the SJVAPCD for their use in funding offsite mitigation strategies. Each off-site mitigation strategy shall be developed with, and approved by, the SJVAPCD and the City of Stockton. Each offsite mitigation strategy is subject to the review and approval of the Air District and the City of Stockton on a project-by-project basis, and is intended to be in addition to offsets that are obtained through any on-site mitigation measures. The City of Stockton is required to verify each offsite mitigation strategy and its associated reductions to ensure that the associated air quality impacts are reduced to the maximum extent feasible (i.e. to below the applicable SJVAPCD thresholds of significance, at minimum). Examples of off-site mitigation strategies may include (but are not limited to) transportation demand management (TDM) measures and/or financial incentives for project employees to utilize alternative transportation options such as buses, bicycles, or electric vehicles.*

Impact 3.3-2: Proposed Project construction activities would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Significant and Unavoidable)

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless

be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related activities would result in Project-generated emissions from site preparation, grading, paving, building construction, and architectural coatings. CalEEMod™ (v.2016.3.2) was used to estimate construction emissions for the proposed Project. Table 3.3-11, below, provides the maximum construction criteria pollutant emissions associated with implementation of the proposed Project.

TABLE 3.3-7: CONSTRUCTION PROJECT GENERATED EMISSIONS (TONS PER YEAR) - MITIGATED

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
MAXIMUM ANNUAL EMISSIONS	20.3	22.3	5.8	0.1	7.1	2.0
EXCEEDS THRESHOLD?	**N**	**Y**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2016.3.2)

If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions. As shown in Table 3.3-7, Project annual NOx construction emissions would exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. Implementation of the Mitigation Measure 3.3-2 through 3.3-5 would further reduce proposed Project construction related emissions to the extent possible.

CONCLUSION

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the mitigation measures provided by the SJVAPCD for construction-related PM_{10} emissions, including those provided in Mitigation Measure 3.3-2 through 3.3-5. Furthermore, the proposed Project would implement Mitigation Measure 3.3-1, which requires the Project to demonstrate that individual projects that are part of the proposed Project demonstrate that the individual projects do not exceed the applicable SJVAPCD criteria pollutant thresholds for construction activities, or, if the SJVAPCD criteria pollutant thresholds for an individual project is exceeded, the project applicant must develop a reasonably feasible offsite mitigation strategy or pay the SJVAPCD to fund offsite mitigation. However, even with implementation of all feasible mitigation, it may not be feasible for all individual projects within the Project site may to reduce operational emissions at full Project buildout below the applicable thresholds. Therefore, the Project's criteria pollutant emissions would be considered to have a ***significant and unavoidable*** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-2: *Prior to the commencement of construction activities for each phase of the Project, the Project proponent shall prepare and submit a Dust Control Plan that meets all of the*

applicable requirements of APCD Rule 8021, Section 6.3, for the review and approval of the APCD Air Pollution Control Officer.

Mitigation Measure 3.3-3: *During all construction activities, the Project proponent shall implement dust control measures, as required by APCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less. Dust control measures shall include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules.*

Mitigation Measure 3.3-4: *During all construction activities, the Project proponent shall implement the following dust control practices identified in Tables 6-2 and 6-3 of the GAMAQI (2002).*

a. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.*
b. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
c. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.*
d. *When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.*
e. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.*
f. *Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
g. *Limit traffic speeds on unpaved roads to 5 mph; and*
h. *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

Mitigation Measure 3.3-5: *Asphalt paving shall be applied in accordance with APCD Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.*

Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts. (Less than Significant)

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels could increase the risk of such incidences.

The Project site is located in a State attainment area and a federal attainment-unclassified area for carbon monoxide. In addition, CO emissions under Project operation are below the applicable significance threshold promulgated by the SJVAPCD. Therefore, no project-level conformity analysis is necessary for CO. Increases in proposed Project VMT would increase concentrations of carbon monoxide (CO) along streets and intersections that provide access to the Project site. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources), and can form local elevated concentrations under specific conditions. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations (i.e., hotspots), therefore, are usually only found near areas of very high traffic volume and congestion.

Several factors combine to make substantial concentrations of carbon monoxide unlikely. Existing physical constraints such as high-density, high-profile buildings or other obstructions that could prevent dispersion of carbon monoxide are largely absent. Predominant weather conditions in the area include air movement that would help facilitate carbon monoxide dispersion. Congested traffic conditions that otherwise could result in concentration of carbon monoxide would be of short duration. Further, under existing regulatory and legislative mandates, emissions volumes from all vehicle classes will continue to decline. Given these factors, substantial concentrations of carbon monoxide are not expected at or along any affected roadways or intersections.

CONCLUSION

This Project is located in an area that is designated attainment and attainment-unclassified for carbon monoxide. No Project-level conformity analysis is necessary for CO. Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Impacts associated with carbon monoxide hotspots would be ***less than significant,*** and no additional mitigation is required.

Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants. (Less than Significant)

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that

may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, the U.S. EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 U.S. EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 3.3-8 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

There are no traditional sensitive receptors such as residences, hospitals, or schools that are proposed as part of the proposed Project. However, the Project is located in a community that is identified as having a CalEnviroScreen 3.0 score in the 90-95% percentile. CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. Such a score identifies the general area in and around the Project site is generating a high pollution burden on nearby receptors.

TABLE 3.3-8: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

SOURCE CATEGORY	*ADVISORY RECOMMENDATIONS*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.[1]
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

Heavy-duty trucks are a common source of Diesel Particulate Matter (DPM), in contrast to passenger vehicles (such as light-duty cars and trucks). The inhalation of DPM generates cancer and non-cancer health risks, especially where concentrations are chronically elevated for long periods of time, and for younger sensitive receptors. Additionally, TRUs are expected to be in use on approximately 15% of the heavy-duty trucks that travel to and from the Project site.

The SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD, 2015) includes procedures for evaluating hazardous air pollutants. The GAMAQI states that projects where significant numbers of diesel powered vehicles will be operating such as truck stops, transit centers, and warehousing may create risks from toxic diesel particulate emissions. These facilities and vehicles are not subject to District permit and so may need mitigation measures adopted by the Lead Agency to reduce this impact. Measures such as limiting idling, electrifying truck stops to power truck auxiliary equipment, use of diesel particulate filters, and use of alternative fuel heavy-duty trucks have been required by some jurisdictions.

The GAMAQI states that Lead Agencies should consider both of the following situations when evaluating hazardous air pollutants:

1) a new or modified source of hazardous air pollutants is proposed for a location near an existing residential area or other sensitive receptor, and

2) a residential development or other sensitive receptor is proposed for a site near an existing source of hazardous air pollutants.

For the first scenario, the GAMAQI indicates that the Lead Agency should consult with the SJVAPCD regarding anticipated hazardous air pollutant emissions, potential health impacts, and control measures. The GAMAQI states that, "preparation of the environmental document should be closely coordinated with the SJVAPCD review of the facility's permit application when timing allows." The SJVAPCD's policies and regulations for implementing AB 2588 designate facilities as significant when they have a carcinogenic risk in excess of 20 in one million or a non-cancer risk Hazard Index of greater than one (if prescribed so by California's Office of Environmental Health Hazard Assessment). The second scenario is not applicable to the proposed Project because the proposed Project does not include the construction of a residential development or other sensitive receptor. Therefore, a health impact analysis has been prepared for the proposed Project to analyze the Project changes to truck routes. The source of TACs for this type of Project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs).

A health risk analysis was conducted utilizing Lakes Environmental Software AERMOD and the ARB's Hotspots Analysis Reporting Program Version 2 (HARP 2) Air Dispersion, Modelling, and Risk Tool (ADMRT). Truck idling, truck on-site mobile, and TRU diesel particulate matter (DPM) emissions were calculated. The residential (70-year exposure) cancer, workplace (40-year exposure) cancer, chronic (non-cancer), and acute (non-cancer) risks were assessed and compared to SVJAPCD thresholds. See Appendix B.5 for full model inputs. Table 3.3-9 summarizes the results of the analysis.

TABLE 3.3-9: SUMMARY OF MAXIMUM HEALTH RISKS

RISK METRIC	*MAXIMUM RISK*	*SIGNIFICANCE THRESHOLD*	*IS THRESHOLD EXCEEDED?*
Residential Cancer Risk (70-year exposure)	1.09	20 per million	No
Workplace Cancer Risk (40-year exposure)	0.14	20 per million	No
Chronic (non-cancer)	<0.01	Hazard Index ≥1	No
Acute (non-cancer)[1]	<0.01	Hazard Index ≥1	No

SOURCES: AERMOD (LAKES ENVIRONMENTAL SOFTWARE, 2022); AND HARP-2 AIR DISPERSION AND RISK TOOL.

As shown in Table 3.3-9 above, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds. Therefore, implementation of the proposed Project would cause a ***less than significant*** impact relative to this topic.

Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people (Less than Significant)

The following text addresses odors. Other emissions (including criteria pollutants and TACs) are addressed in Impacts 3.3-1 through 3.3-4.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The general nuisance rule (Health and Safety Code §41700) is the basis for the threshold.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant.

If a project proposes to locate receptors and known odor sources in proximity to each other, further analysis may be warranted. However, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The proposed Project does not include new industrial uses that are not already present in the vicinity of the Project site. Air district Rule 402 prohibits any mobile or stationary source generating an objectionable odor, with the exception of odors emanating from certain agricultural operations. The California Health and Safety Code §41700 and Air District Rule 402 prohibit emissions of air contaminants from any source that cause nuisance or annoyance to a considerable number of people or that present a threat to public health or cause property damage. Compliance with these rules would preclude land uses proposed under the proposed Project from emitting objectionable odors.

CONCLUSION

The proposed Project does not propose sensitive receptors that would be exposed to odors in the vicinity; nor does it propose uses that would create new odors that would expose substantial numbers of people. Therefore, operation of the proposed Project would not result in significant objectionable odors. Impacts associated with exposure to odors would be ***less than significant.***

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This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the entire site to an urban use. This section is based in part on the following: Envision Stockton 2040 General Plan (2018), Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR (City of Stockton, 2018), City of Stockton Municipal Code (2020), as well as site specific surveys and analysis.

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Sierra Club, Delta-Sierra Group (October 27, 2020). The portion of the comment letter related to this topic is addressed within this section. Full comments received are included in Appendix A.

3.4.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

The City of Stockton is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just south and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The City of Stockton is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous of the ten bioregions in the State, with an estimated 2 million people. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the State's top agricultural producing region with the abundance of fertile soil.

LOCAL SETTING

Location

The Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. The Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site.

The Project also includes off-site sewer improvements located along and adjacent to existing Project area roadways. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection).

Topography

The Project site is relatively flat with a natural gentle slope increased from north to south. Topographic features within the Project site include level fields, farm roads, French Camp Slough, and irrigation ditches. Elevation ranges from approximately 14 to 40 feet above mean sea level.

Climate

The City of Stockton is located in the northern portion of the San Joaquin Valley, which has a Mediterranean climate that is subject to cool, wet winters (often blanketed with fog) and hot, dry summers. The average annual precipitation is approximately 13.81 inches. Precipitation occurs as rain most of which falls between the months of November through April, peaking in January at 2.85 inches. The average temperatures range from December lows of 37.5 F to July highs of 94.3 F.

Vegetation

Vegetation on the Project site consists of agricultural, ruderal, and landscaping. Because of the active agricultural use, there is very limited natural vegetation on the Project site with the exception of the perimeter of the agricultural fields. Common plant species observed in these areas include: wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), softchess (*Bromus hordeaceus*) alfalfa (*Medicago sativa*), Russian thistle (Salsola tragus), Italian thistle (*Carduus pycnocephalus*), rough pigweed (*Amaranthus retroflexus*), sunflower (*Helianthus annuus*), tarragon (*Artemisia dracunculus*), coyote brush (*Baccharis pilularis*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), sow thistle (*Sonchus asper*), telegraph weed (*Heterotheca grandiflora*), barley (*Hordeum* sp.), mustard (*Brassica niger*), and heliotrope (*Heliotropium curassavicum*).

Wildlife

Agricultural and ruderal vegetation found on the Project site provides habitat for both common and a few special-status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus),* American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

The California Wildlife Habitat Relationships (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

Figure 3.4-1 shows the CWHR designations in the Project site. Table 3.4-1 summarizes the designations in the Project site.

TABLE 3.4-1: CWHR LAND COVER TYPES

LAND COVER TYPE	*ACRES WITHIN THE PROJECT SITE*
Annual Grassland	8.2
Orchard – Deciduous	32.8
Cropland	25.8
Dryland Grain Crops	67.5
Irrigated Crops – Grain/Row/Field/Hayfield	280.6
Vineyard	0.2
Fresh Emergent Wetland	3.1
Valley Foothill Riparian	0.7
Riverine	2.9
Urban	0.4

SOURCES: CALFIRE FVEG15_1, 2015; FRESNO COUNTY; CITY OF FRESNO. MAP DATE: SEPTEMBER 23, 2020.

Below is a brief description of these CWHR habitats.

DEVELOPED COVER TYPES

Orchard – Deciduous are typically open single species tree dominated habitats. Within the Project Site, there are 32.8 acres of Orchard – Deciduous habitat. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Trees range in height at maturity for many species from 15 to 30 feet, but may be 10 feet or less depending on the species. Crowns usually touch, and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Deciduous orchards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Although some deciduous orchards are non-irrigated, most are irrigated. Some flat soils are flood irrigated, but many deciduous orchards are sprinkler irrigated. Large numbers of orchards are irrigated by drip or trickle irrigation systems. Most deciduous orchards are in valley or foothill areas, with a few, such as, apples and pears, up to 3,000 feet elevation.

Croplands are located on flat to gently rolling terrain. Within the Project site, there are 25.8 acres of Cropland habitat. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is either dry farmed or irrigated by sprinklers. Soils often dictate the crops grown. Corn requires better soils than barley, which can grow on poor quality soils, and rice does well on clay soils not suitable for other crops. Leaching can remove contaminants in areas of high salt or alkali levels, making the soils highly productive. This has occurred extensively in the San Joaquin and Imperial Valleys. Climate also influences the type of crops grown. Only hardy crops such as potatoes, barley, and wheat do well in the short growing season in Klamath Basin; whereas, in the Imperial Valley, a variety of crops grow over an eleven month, frost-free growing season.

Irrigated Crops – Grain/Row/Field/Hayfield include a variety of sizes, shapes and growing patterns. Within the Project site, there are 280.6 acres of Irrigated Crops – Grain/Row/Field/Hayfield habitat. Field corn can reach ten feet tall while dry beans are only several inches tall. Most irrigated grain and seed crops are grown in rows. Some may form 100 percent canopy while others may have significant bare areas between rows. All seed and grain crops are annuals. They are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months) or they may be irrigated, and then harvested in the late spring.

Vineyards are composed of single species planted in rows, usually supported on wood and wire trellises. Most vineyards are in valley or foothill areas. Within the Project site, there are 0.2 acres of Vineyard habitat. Vines are normally intertwined in the rows but open between rows. Rows under the vines are usually sprayed with herbicides to prevent growth of herbaceous plants. Between rows of vines, grasses and other herbaceous plants may be planted or allowed to grow as a cover crop to control erosion. Vineyards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. All are irrigated. Most vineyards are sprinkler irrigated. Large numbers of vineyards are irrigated by drip or trickle irrigation systems. .

Dryland Grain Crops are composed of vegetation in the dryland (nonirrigated) grain and seed crops habitat includes seed producing grasses, primarily barley, cereal rye, oats, and wheat. Within the Project site, there are 67.5 acres of Dryland Grain Crop habitat. These seed and grain crops are annuals. They are usually planted by drilling in rows which produce solid stands, forming 100 percent canopy at maturity in good stands. They are normally planted in fall and harvested in spring. However, they may be planted in rotation with other irrigated crops and winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in late spring.

Urban habitats are not limited to any particular physical setting. Within the Project site, there are 0.4 acres of Urban habitat. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

HERBACEOUS COVER TYPES

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. Within the Project site, there are 8.2 acres of Annual Grassland habitat. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to 300 days. Annual precipitation is highest in northern California.

Fresh Emergent Wetland habitats occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. Within the Project site, there are 3.1 acres of Fresh Emergent Wetland habitat. However, they are most common on level to gently rolling topography. They are found in various landscape depressions or at the edge of rivers or lakes. Fresh emergent wetland vegetation zones characteristically occur as a series of concentric rings which follow basin contours and reflect the relative depth and duration of flooding. If the bottom of the wetland is very uneven, vegetation zones may be present in a patchy configuration rather than the classic concentric ring pattern. Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed). In some areas organic soils (peat) may constitute the primary growth medium. Climatic conditions are highly variable and range from the extreme summer heat of Imperial County to the Great Basin climate of Modoc County where winter temperatures often are well below freezing.

TREE COVER TYPE

Valley Foothill Riparian habitat is found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. Within the Project site, there are 0.7 acres of Valley Foothill Riparian habitat. They are generally associated with low velocity flows, flood plains, and gentle topography. Valleys provide deep alluvial soils and a high water table. The substrate is coarse, gravelly or rocky soils more or less permanently moist, but probably well aerated. Average

precipitation ranges from six to 30 inches, with little or no snow. The growing season is 7 to 11 months. Frost and short periods of freezing occur in winter (200 to 350 frost-free days). Mean summer maximum temperatures are 75 to 102 F, mean winter minima are 29 to 44 F. These habitats are characterized by hot, dry summers, mild and wet winters. Coastal areas have a more moderate climate than the interior and receive some summer moisture from fog. Potential evaporation during the warmest months is often greater than precipitation. Low rainfall and streamflow result in water scarcity in many parts of the area. AQUATIC COVER TYPE

Riverine habitats can occur in association with many terrestrial habitats. Within the Project site, there are 2.9 acres of Riverine habitat. Riverine habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. This habitat requires intermittent or continually running water generally originating at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease, and the bottom will change from rocky to muddy.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service's (USFWS) records of listed endangered and threatened species from the IPAC database. The background search was regional in scope and focused on the documented occurrences within the 9-quadrangle (approximately 10 miles) region for the Project site. Table 3.4-2 provides a list of special-status plants and Table 3.4-3 provides a list of special-status animals. Figure 3.4-2 presents the documented occurrences within a one-mile radius of the Project site.

TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Alkali milk-vetch *Astragalus tener var. tener*	--/--/1B.2/Yes	Eastern San Francisco Bay region, the Delta, and western San Joaquin Valley south to the lower Salinas and San Benito valleys	Grassy alkaline flats and vernally moist meadows at elevations below 500 ft. March-June	Not Present. Not observed during field survey. No appropriate habitat.
Big tarplant *Blepharizonia plumosa*	--/--/1B.1/No	San Francisco Bay area with occurrences in Alameda, Contra Costa, San Joaquin, Stanislaus, and Solano Counties	Valley and foothill grassland; 30-505 m. July-Oct.	Not Present. Not observed during field survey. No appropriate habitat.
Delta button-celery *Eryngium racemosum*	--/E/1B.1/Yes	San Joaquin River delta floodplains and adjacent Sierra Nevada foothills: Calaveras, Merced, San Joaquin, and Stanislaus Counties	Riparian scrub, seasonally inundated depressions along floodplains on clay soils; below 75 m. June-August.	Not Present. Not observed during field survey. No appropriate habitat.
Delta tule pea *Lathyrus jepsonii var. jepsonii*	--/--/1B.2/Yes	Found mainly in the Sacramento-San Joaquin Delta and has been documented in Contra Costa, Sacramento, San Joaquin, Solano, Napa, and Alameda Counties	Marshes and swamps. In freshwater and brackish marshes. Often found with Typha, Aster lentus, Rosa californica, Juncus spp., Scirpus, etc. Usually on marsh and slough edges. 0-5 m. May-Jul(Aug-Sep)	Not Present. Not observed during field survey. No appropriate habitat.
Greene's tuctoria *Tuctoria greenei*	E/R/1B.1/ Yes	Butte, Fresno, Glenn, Madera, Merced, Modoc, Shasta, San Joaquin, Stanislaus, Tehama, and Tulare Counties	Vernal pools. Vernal pools in open grasslands. 25-1325 m. May-Jul(Sep)	Not Present. Not observed during field survey. No appropriate habitat.
Heartscale *Atriplex cordulata var. cordulata*	--/--/1B.2/Yes	Central Valley and interior valleys of the Coast Range from Butte to Kern counties.	Saline or alkaline sandy soils in grassland or saltbush scrub. March-October	Not Present. Not observed during field survey. No appropriate habitat.
Mason's lilaeopsis *Lilaeopsis masonii*	--/R/1B.1/Yes	Sacramento-San Joaquin River Delta and nearby shores of San Francisco Bay	Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m. Apr-Nov.	Not Present. Not observed during field survey. No appropriate habitat.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Palmate-bracted bird's-beak *Chloropyron palmatum*	E/E/1B.1/Yes	Scattered locations in Fresno and Madera counties in the San Joaquin Valley, San Joaquin, Yolo, and Colusa counties in the Sacramento Valley, and the Livermore Valley area of Alameda County	Saline-alkaline soils in seasonally-flooded lowland plains and basins at elevations of less than 500 feet. May-October	Not Present. Not observed during field survey. No appropriate habitat.
Recurved larkspur *Delphinium recurvatum*	--/--/1B.2/Yes	Central Valley from Colusa to Kern Counties	Alkaline soils in saltbush scrub, cismontane woodland, valley and foothill grassland; 3-750 m. March-May.	Not Present. Not observed during field survey. No appropriate habitat.
Saline clover *Trifolium hydrophilum*	--/--/1B.2/No	Eastern and Northern San Francisco Bay region, the Delta, western San Joaquin Valley, southern San Jose	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), and Vernal pools. April-June	Not Present. Not observed during field survey. No appropriate habitat.
San Joaquin spearscale *Extriplex joaquinana*	--/--/1B.2/Yes	Delta region, central valley and central coast	Alkaline. Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland. April-October	Not Present. Not observed during field survey. No appropriate habitat.
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2/Yes	Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, and Yuba Counties	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-Oct(Nov)	Not Present. Not observed during field survey. No appropriate habitat.
Slough thistle *Cirsium crassicaule*	--/--/1B.1/Yes	San Joaquin Valley: Kings, Kern, and San Joaquin Counties	Freshwater sloughs and marshes; 3-100 m. May-August.	Not Present. Not observed during field survey. No appropriate habitat.
Suisun Marsh aster *Symphyotrichum lentum*	--/--/1B.2/Yes	Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo Counties	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, Scirpus, blackberry, Typha, etc. 0-15 m. (Apr)May-Nov	Not Present. Not observed during field survey. No appropriate habitat.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Watershield *Brasenia schreberi*	--/--/2B.3/No	Butte, Calaveras, El Dorado, Fresno, Kern, Lake, Lassen, Mendocino, Merced, Nevada, Plumas, Sacramento, Shasta, Sierra, Siskiyou, San Joaquin, Sonoma, Sutter, Tehama, Trinity, Tulare, and Tuolumne Counties	Freshwater marshes and swamps. Aquatic known from water bodies both natural and artificial in California. 1-2180 m. Jun-Sep	Not Present. Not observed during field survey. No appropriate habitat.
Woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	--/--/1B.2/No	Central Valley of California, as well as populations in eastern North America	All along the waterways of the Delta. June-September	Not Present. Not observed during field survey. No appropriate habitat.
Wright's trichocoronis *Trichocoronis wrightii* var. *wrightii*	--/--/2.1/Yes	Scattered locations in the Central Valley; southern coast of Texas	Floodplains, moist places, on alkaline soils; below 450 m. May-September.	Not Present. Not observed during field survey. No appropriate habitat.

SOURCES: CNDDB, 2021; DE NOVO PLANNING GROUP, 2021.

NOTES: CNPS = CALIFORNIA NATIVE PLANT SOCIETY
SJMSCP = SAN JOAQUIN MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL CALIFORNIA ENDANGERED SPECIES ACT.
R = RARE UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

CALIFORNIA NATIVE PLANT SOCIETY

1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.
2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.
3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.
4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST
.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).
.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).
.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED).

TABLE 3.4-3: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
INVERTEBRATES				
An andrenid bee *Andrena subapasta*	--/--/No	El Dorado, Placer, Sacramento, and San Joaquin Counties	Collects pollen primarily from Arenaria californica but also *Orthocarpus erianthus* and *Lasthenia* spp.	Not Present. Appropriate habitat is not present.
California linderiella *Linderiella occidentalis*	--/--/No	Ranges from near Redding in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin Rivers	Natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities	Not Present. No appropriate habitat.
Midvalley fairy shrimp *Branchinecta mesovallensis*	--/--/Yes	Have been found in Sacramento, Solano, Yolo, Contra Costa, San Joaquin, Madera, Merced and Fresno counties. The increase of known locations lends additional support to the idea that the range and distribution of midvalley fairy shrimp is greater than the distribution of known occurrences.	Shallow ephemeral pools, vernal swales, and various artificial ephemeral wetland habitats.	Not Present. No appropriate habitat.
Molestan blister beetle *Lytta molesta*	--/--/Yes	Distribution of this species is poorly known.	Annual grasslands, foothill woodlands or saltbush scrub.	Not Present. No appropriate habitat.
Vernal pool fairy shrimp *Branchinecta lynchi*	T/--/Yes	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; they are also found in sandstone rock outcrop pools.	Not Present. No appropriate habitat.
Vernal pool tadpole shrimp *Lepidurus packardi*	E/--/Yes	Shasta County south to Merced County	Vernal pools and ephemeral stock ponds.	Not Present. No appropriate habitat.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Western bumble bee *Bombus occidentalis*	--/CE/No	Western North America, ranging from the tundra region in Alaska and Yukon south along the west coast to southern British Columbia to central California, Arizona and New Mexico and east into southern Saskatchewan and northwestern Great Plains	Open coniferous, deciduous and mixed-wood forests, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones, and along roadsides in taiga adjacent to wooded areas, urban parks, gardens and agricultural areas, subalpine habitats and more isolated natural areas	Not Present. No appropriate habitat.
AMPHIBIANS				
California tiger salamander *Ambystoma californiense (A. tigrinum c.)*	T/SSC/Yes	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	Not Present. No appropriate upland estivation habitat. Adequate aquatic habitat along French Camp Slough, but low lowlihood of breeding due to predator populations. Not documented on the Project site. Project is subject to the SJMSCP which will require obtaining coverage for this species.
western spadefoot *Spea hammondii*	--/SSCC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	Not Present. No appropriate upland estivation habitat. Adequate aquatic habitat along French Camp Slough. Not documented on the Project site. Project is subject to the SJMSCP which will require obtaining coverage for this species.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
BIRDS				
Burrowing owl *Athene cunicularia*	BCC/SSC/Yes	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows	Potentially Present. Foraging habitat is present on the Project site. No nests were located on the Project site.
Least Bell's vireo *Vireo bellii pusillus*	E/E/No	Central Valley of California and other low-elevation river valleys.	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak.	Potentially Present. Appropriate habitat is associated with the French Camp Slough. This species was not observed during the field surveys.
Loggerhead shrike *Lanius ludovicianus*	BCC/SSC/Yes	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Potentially Present. Foraging habitat is present on the Project site. No nests were located on the Project site.
Song sparrow (Modesto Population) *Melospiza melodia*	BCC/SSC/Yes	Restricted to California, where it is locally numerous in the Sacramento Valley, Sacramento–San Joaquin River Delta, and northern San Joaquin Valley. Exact boundaries of range uncertain.	Found in emergent freshwater marshes dominated by tules (Scirpus spp.) and cattails (Typha spp.) as well as riparian willow (Salix spp.) thickets. They also nest in riparian forests of Valley Oak (Quercus lobata) with a sufficient understory of blackberry (Rubus spp.), along vegetated irrigation canals and levees, and in recently planted Valley Oak restoration sites.	Potentially Present. Appropriate habitat is associated with the French Camp Slough. This species was not observed during the field surveys.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Swainson's hawk *Buteo swainsoni*	BCC/T/Yes	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields	Potentially Present. Foraging habitat is present on the Project site. Nests are known within the regional vicinity, although none were located on the Project site.
Tricolored blackbird *Agelaius tricolor*	BCC/C (SSC)/Yes	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony	Potentially Present. Appropriate habitat is associated with the French Camp Slough. This species was not observed during the field surveys.
White-tailed kite *Elanus leucurus*	--/FP/Yes	Gulf Coast in Texas and Mexico and in the valley and coastal regions of central and southern California	Grasslands, marshes, row crops and alfalfa, where they hover while foraging for rodents and insects.	Potentially Present. Foraging habitat is present on the Project site. No nests were located on the Project site.
Yellow-headed blackbird *Xanthocephalus xanthocephalus*	--/SSC/Yes	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	Nests only where large insects such as odonatan are abundant, nesting timed with maximum emergence of aquatic insects.	Potentially Present. Appropriate habitat is associated with the French Camp Slough. This species was not observed during the field surveys.
FISH				
Delta smelt *Hypomesus transpacificus*	T/T/Yes	Primarily in the Sacramento–San Joaquin Estuary but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay.	Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand.	Not Present. No appropriate habitat.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Longfin smelt *Spirinchus thaleichthys*	--/SSC/Yes	Occurs in estuaries along the California coast. Adults concentrated in Suisun, San Pablo, and North San Francisco Bays.	Prior to spawning, these fish aggregate in deepwater habitats available in the northern Delta, including, primarily, the channel habitats of Suisun Bay and the Sacramento River. Spawning occurs in fresh water on the San Joaquin River below Medford Island and on the Sacramento River below Rio Vista.	Not Present. No appropriate habitat.
Steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	T/--/No	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	Aquatic, flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not Present. No appropriate habitat.
MAMMALS				
Pallid bat *Antrozous pallidus*	--/SSCC/No	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	Potentially Present. Highly mobile species, can occupy a variety of natural and manmade habitat. The Project site does not provide roosting habitat. This species may forage onsite at times.
Riparian brush rabbit *Sylvilagus bachmani riparius*	E/E/Yes	Limited to San Joaquin County at Caswell State Park near the confluence of the Stanislaus and San Joaquin Rivers and Paradise Cut area on Union Pacific right-of-way lands	Native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees	Not Present. No appropriate habitat. No recorded observations in the records.
REPTILES				
Giant garter snake *Thamnophis couchi gigas*	T/T/Yes	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; they are also found in irrigation ditches and rice	Potentially Present. Adequate habitat along French Camp Slough. Not observed during the May

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
			fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	field surveys (November surveys were during the dormant period). Not documented on the Project site. Project is subject to the SJMSCP which will require obtaining coverage for this species.
Northern California legless lizard *Anniella pulchra*	--/SSCC/No	This lizard is common in suitable habitats in the Coast Ranges from Contra Costa County south to the Mexican border, but only has a spotty occurrence throughout the rest of its range, which includes the San Joaquin Valley to the west slope of the southern Sierra, the Tehachapi Mountains west of the desert and in the mountains of southern California.	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Not Present. No appropriate habitat. No recorded observations in the records.

SOURCES: CNDDB, 2021; DE NOVO PLANNING GROUP, 2021.

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PE = PROPOSED FOR ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.
D = DELISTED FROM FEDERAL LISTING STATUS.
BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE STATE ENDANGERED SPECIES ACT.
FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the Central Valley Regional Water Quality Control Board (CVRWQCB). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or

saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the CVRWQCB. To obtain the water quality certification, the CVRWQCB must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code §2050-2097 – California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 – California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate

native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 – Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code §21000 - California Environmental Quality Act

CEQA identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines § 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy.” The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and fresh water replenishment. Major issues and the general conditions of existing beneficial uses in the SJR are as follows:

- Water Supply: The City's water supplies include purchased water, surface water, and groundwater. The surface water component of the water supply comes from Delta water at the DWSP intake facility, from the San Joaquin River. The City's water rights application addressed a long-term planning horizon through the year 2050, requesting an ultimate diversion of 160 million gallons per day (mgd) (125,900 AFY). The State Water Resources Control Board (SWRCB) divided the water rights application into two separate applications, Application 30531A and 30531B. Application 30531A covers the initial phase of the DWSP up to 30 mgd (33,600 AFY) and the place of use is confined to the current 1990 General Plan boundary. The initial phase was granted a water right under California Water Code Section 1485. The City has a permit from the SWRCB issued on March 8, 2006 for a 33,600 AFY supply

from the Sacramento/San Joaquin Delta. The DWSP intake and water treatment plant was operational in 2012 with an initial capacity of 30 mgd (33,600 AFY). The projected capacity of the DWSP by 2035 is 90 mgd with an annual production of approximately 50,000 AFY. The DWSP will expand as needed up to 120 mgd provided water rights are granted. The City's supply from the San Joaquin River is curtailed annually from February through June of each year due to U.S. Department of Fish and Wildlife Service and Department of Fish and Game restrictions. California Water Code (CWC) Section 1485 Water Rights allows the City to take out of the Delta as much water as the City's wastewater treatment plant discharges into the Delta. This quantity, which fully covers the 33,600 AFY, is not restricted as long as the same amount of wastewater is discharged into the Delta. Section 1485 water may be subject to pumping restriction in some months due to fish protection.

- Agricultural Supply: Extensive use is made of SJR and Delta waters for agricultural purposes. Annual water diversions from the Delta by the State Water Project (SWP) and the Central Valley Project (CVP) for agriculture are estimated to reach 4.3 million acre-feet (MAF) per year by 2030. In addition, about 2,000 privately owned agricultural water supply diversions are scattered throughout the Delta, generally consisting of riverside pumping stations.
- Recreation: Water-dependent recreation uses of the SJR and the Delta include swimming, wading, waterskiing, sport fishing, and a variety of other activities that involve contact with the water. Noncontact (water-enhanced) recreation uses include picnicking, camping, pleasure boating, hunting, bird watching, education, and aesthetic enjoyment.
- Groundwater Recharge: Water from the SJR and the Delta recharges the San Joaquin Valley groundwater basin. Recharge serves to maintain salt balance in the soil column, prevent saltwater intrusion into freshwater aquifers, and provide for water supplies. Groundwater is replenished through deep percolation of streamflow, precipitation, and applied irrigation water. Groundwater quality is generally adequate throughout the San Joaquin Valley and the Delta, although at shallow depths within the Delta the water is often saline and contains high levels of total dissolved solids (TDS) and dissolved minerals. Enforceable TDS standards do not exist for drinking water. The need for treatment generally depends on consumer acceptance.
- Fish and Wildlife: The SJR and the waterways of the Delta provide important habitat for a diverse variety of aquatic life and terrestrial wildlife. This includes temporary habitat and migration routes for anadromous and other migratory species, as well as permanent habitat for resident species. Fish dependent on the Delta as a migration corridor, nursery, or permanent residence include Chinook salmon, steelhead, delta smelt, Sacramento splittail, striped bass, American shad, sturgeon, catfish, largemouth bass, and numerous other estuary and freshwater species. The amount and quality of water flowing through the Delta greatly influences the overall productivity of the area on an annual basis. A large assemblage of wildlife uses the Delta either seasonally or year round, including waterfowl; migratory and resident songbirds; mice, rabbits, and other small mammals; water dependent mammals, such as beaver and muskrat; and predators such as skunk, raccoon, northern harrier, and coyote.

LOCAL

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. An approved HCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under FESA during development activities.

A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. An approved NCCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under CESA during growth and development activities.

BACKGROUND

The key purpose of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA); providing and maintaining multiple-use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

San Joaquin County's past and future (2001-2051) growth has affected and will continue to affect 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 1,400+ square miles and 900,000+ acres, which include 43% of the Sacramento-San Joaquin Delta's Primary Zone. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". In addition, the SJMSCP provides some compensation to offset the impacts of open space land conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial Open Space uses.

The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Manteca, Lodi, Manteca, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the

San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP. In addition, 5,340 acres is allocated for anticipated projects (e.g., annexations, general plan amendments)

The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed).

IMPLEMENTATION

The SJMSCP is administered by a Joint Powers Authority consisting of members of the San Joaquin County Council of Governments (SJCOG), the CDFW, and the USFWS. Development project applicants are given the option of participating in the SJMSCP as a way to streamline compliance with required local, State and federal laws regarding biological resources, and typically avoid having to approach each agency independently. According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

Applicants pay mitigation fees on a per-acre basis, as established by the Joint Powers Authority according to the measures needed to mitigate impacts to the various habitat and biological resources. Different types of land require different levels of mitigation; i.e., one category requires that one acre of a similar land type be preserved for each acre developed, while another type requires that two acres be preserved for each acre developed. The entire County is mapped according to these categories so that land owners, project proponents and project reviewers are easily aware of the applicable SJMSCP fees for the proposed development.

The appropriate fees are collected by the City and remitted to SJCOG for administration. SJCOG uses the funds to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Development occurring on land that has been classified under the SJMSCP as “no-pay” would not be required to pay a fee. This category usually refers to already urbanized land and infill development areas. Although the fees are automatically adjusted on an annual basis, based on the construction cost index, they often cannot keep pace with the rapidly rising land prices in the Central Valley.

The vast majority of the Project site is designated as Category C/Pay Zone B. This zone consists of “Agricultural Habitat Lands”, as described in Chapter 2.2 of the SJMSCP. Portions of the Project site located along French Camp Slough are designated as Category A/No Pay Zone. This zone consists of “Urban Lands”, as described in Chapter 2.2 of the SJMSCP.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to biological resources. General Plan policies and actions applicable to the Project are identified below:

POLICIES: LAND USE ELEMENT

- LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development.
- LU-5.3. Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

ACTIONS: LAND USE ELEMENT

- LU-5.2A. Continue to coordinate with the San Joaquin Council of Governments and comply with the terms of the Multi-Species Habitat Conservation and Open Space Plan to protect critical habitat areas that support endangered, threatened, and special-status species.
- LU-5.2B. For projects on or within 100 feet of sites that have the potential to contain special-status species or critical or sensitive habitats, including wetlands, require preparation of a baseline assessment by a qualified biologist following appropriate protocols, such as wetland delineation protocol defined by the US Army Corps of Engineers. If such sensitive species or habitats are found to be present, development shall avoid impacting the resource, and if avoidance is not feasible, impacts shall be minimized through project design or compensation identified in consultation with a qualified biologist.
- LU-5.2C. Require new development to implement best practices to protect biological resources, including incidental take minimization measures and other federal and State requirements and recommendations that are consistent with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

POLICY: SAFETY ELEMENT

- SAF-2.3. Protect the community from potential flood events.

ACTIONS: SAFETY ELEMENT

- SAF-2.3A. Coordinate with appropriate State, federal, and local flood control agencies to develop a flood protection plan for the levee systems protecting the city that:
    - Identifies the levees protecting the city and the entities responsible for the operation and maintenance of the levees;
    - Determines the flood levels in the waterways and the level of protection offered by the existing levees along the waterways;
    - Identifies a long-term plan to upgrade the system as necessary to provide at least a 100-year level of flood protection to the city, and 200-year level of flood protection, where feasible;

- Encourages multi-purpose flood management projects that, where feasible, incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the city's streams, creeks, and lakes; and
- Includes provisions for updates to reflect future State or federally mandated levels of flood protection.

City of Stockton Municipal Code

The Stockton Municipal Code, Title 16 Development Code protects Heritage Oak Trees through permit requirements. Section 16.130.020 provides the Director with Review Authority for permits to remove heritage trees. The decision of the Director is subject to an appeal to the Council in compliance with Chapter 16.100 (Appeals). (Ord. 015-09 C.S., eff. 12-3-09). Section 16.130.030 provides the permit requirements, and describes the process for approval or denial of a permit application. Section 16.130.040 establishes fines for violation of this requirement. Section 16.130.050 provides exemptions under emergencies. Section 16.130.060 establishes the replacement requirements.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on biological resources if it will:

- 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 Wildlife or U.S. Fish and Wildlife Service;
- 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 Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.4-1: The proposed Project would not have a direct or indirect effect on special-status invertebrate species (Less than Significant)

There are seven special-status invertebrates that are documented within the nine-quadrangle region for the Project site according to the CNDDB, including: An andrenid bee (*Andrena subapasta*), California linderiella (*Linderiella occidentalis*), Midvalley fairy shrimp (*Branchinecta mesovallensis*), Molestan blister beetle (*Lytta molesta*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Vernal pool tadpole shrimp (*Lepidurus packardi*), and Western bumble bee (*Bombus occidentalis*) (Refer to Table 3.2-4).

Field surveys and habitat evaluations for the entire Project site were performed on May 4, and November 9, 2020. (De Novo Planning Group, 2020). No special-status invertebrates were observed within the Project site during field surveys and none are expected to be affected by the proposed Project based on the lack of appropriate habitat.

The Midvalley fairy shrimp, Molestan blister beetle, Vernal pool fairy shrimp, and Vernal pool tadpole shrimp are covered species under the SJMCP.

Midvalley fairy shrimp have been found in Sacramento, Solano, Yolo, Contra Costa, San Joaquin, Madera, Merced and Fresno counties. The increase of known locations lends additional support to the idea that the range and distribution of midvalley fairy shrimp is greater than the distribution of known occurrences. They are commonly found in shallow ephemeral pools, vernal swales, and various artificial ephemeral wetland habitats. Midvalley fairy shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not enough adequate vernal pool habitat on the Project site.

Molestan blister beetle has a poorly known geographic distribution. They are commonly found in annual grasslands, foothill woodlands or saltbush scrub. Molestan blister beetle is not anticipated to be directly affected by any individual phase or component of the proposed Project because there in not appropriate grassland, woodland, or scrub habitat on the Project site.

Vernal pool fairy shrimp is a federal threatened invertebrate found in the Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. They are commonly found in vernal pools and in sandstone rock outcrop pools. Vernal pool fairy shrimp are not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not enough adequate vernal pool habitat on the Project site.

Vernal pool tadpole shrimp is a federal endangered invertebrate found in vernal pools and stock ponds from Shasta County south to Merced County. Vernal pool tadpole shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not enough adequate vernal pool habitat on the Project site.

Essential habitat for andrenid bee, California linderiella, or Western bumble bee is not adequate enough on the Project site to support the species and none were found on the project site during

the aforementioned field surveys (De Novo Planning Group, 2020). These species have not been documented on the Project site, nor is there appropriate habitat on the Project site.

Overall, the proposed Project would have a ***less than significant*** impact on special-status invertebrate species.

Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species (Less than Significant with Mitigation)

There are two special-status amphibians and two special-status reptiles that are documented within the nine-quadrangle area for the Project site according to the CNDDB, including: Giant garter snake (*Thamnophis couchi gigas*), Northern California legless lizard (*Anniella pulchra*), California tiger salamander (*Ambystoma californiense*), and western spadefoot (*Spea hammondii*). The Giant garter snake, California tiger salamander, and western spadefoot are covered species under the SJMCP; Northern California legless lizard is not covered.

Giant garter snake: This species is a state and federal threatened species. The nearest CNDDB occurrence for this species is located approximately 6.5 miles northwest of the Project site. The Project site contains adequate habitat for giant garter snake along French Camp Slough. It is noted that this species was not observed during the May field surveys (November surveys were during the dormant period) (De Novo Planning Group, 2020) and has not been documented on the Project site. It is noted that the project is subject to the SJMSCP which will require obtaining coverage for the Project. This would mean that the SJCOG, under authorization from the USFWS and CNDDB would review the project and issue incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. Therefore, with full coverage under the SJMSCP (Mitigation Measure 3.4-1), the proposed Project would have a **less than significant** impact on this special-status species.

Northern California legless lizard: This species is a Species of Special Concern. The nearest CNDDB occurrence for this species is located approximately 14.6 miles southeast of the Project site. The Project site does not contain adequate habitat for Northern California legless lizard. This species was not observed during the field surveys and has not been documented on the Project site. Based on field surveys, this species is not present. Therefore, the proposed Project would have a **less than significant** impact on this special-status species.

California tiger salamander: This species is a Species of Special Concern and federal threatened species. The nearest CNDDB occurrence for this species is located approximately 6.6 miles northwest of the Project site. The Project site does not contain adequate estivation habitat for this species because of the frequency of disturbance associated with the agricultural activities. The French Camp slough could be breeding habitat, although the likelihood is low considering the number of predators that live within this water feature (i.e., salmon, steelhead, striper, etc.). This species was not observed during the field surveys (De Novo Planning Group, 2020) and has not been documented on the Project site. This species is not anticipated to be present due to the lack of adequate habitat.

It is noted that the project is subject to the SJMSCP which will require obtaining coverage for the Project. This would mean that the SJCOG, under authorization from the USFWS and CNDDB would review the project and issue incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. Therefore, with full coverage under the SJMSCP (Mitigation Measure 3.4-1), the proposed Project would have a **less than significant** impact on this special-status species.

Western spadefoot: This species is a Species of Special Concern. The nearest CNDDB occurrence for this species is located approximately 3.7 miles northwest of the Project site. The Project site contains appropriate and adequate habitat for western spadefoot along French Camp Slough. This species was not observed during the field surveys (De Novo Planning Group, 2020) and has not been documented on the Project site. It is noted that the project is subject to the SJMSCP which will require obtaining coverage for the Project. This would mean that the SJCOG, under authorization from the USFWS and CNDDB would review the project and issue incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. Therefore, with full coverage under the SJMSCP (Mitigation Measure 3.4-1), the proposed Project would have a ***less than significant*** impact on this special-status species.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1*: Prior to commencement of any grading activities, the Project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*

Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species (Less than Significant with Mitigation)

There are eight special-status birds that are documented in the CNDDB within the nine-quadrangle area for the Project site according to the CNDDB, including: Burrowing owl (*Athene cunicularia*), Least Bell's vireo (*Vireo bellii pusillus*), Loggerhead shrike (*Lanius ludovicianus*), Song sparrow (Modesto Population) (*Melospiza melodia*), Swainson's hawk (*Buteo swainsoni*), Tricolored blackbird (*Agelaius tricolor*), White-tailed kite (*Elanus leucurus*), and Yellow-headed blackbird (*Xanthocephalus xanthocephalus*). All of these bird species, except for Least bell's vireo, are covered species under the SJMSCP. These species were not observed during the field surveys (De Novo Planning Group, 2020).

Potential nesting habitat is present in a variety of trees located within the Project site and in the vicinity. There is also the potential for other special-status birds that do not nest in this region and represent migrants or winter visitants to forage on the Project site.

Year-round birds: Special-status birds that can be present in the region throughout the year include: burrowing owl (*Athene cunicularia*), loggerhead shrike *(Lanius ludovicianus*), song sparrow (Modesto population) (*Melospiza melodia*), tricolored blackbird *(Agelaius tricolor*), and Least Bell's vireo (*Vireo bellii pusillus*), among others. Some of these species are migratory, but also reside year-round in California.

Summering Birds: The only special-status bird listed in the CNDDB search that is only present in the region in the spring and summer months is Yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Nesting Raptors (Birds of Prey): All raptors (owls, hawks, eagles, falcons), including species and their nests, are protected from take pursuant to the Fish and Game Code of California Section 3503.5, and the federal Migratory Bird Treaty Act, among other federal and State regulations. Special-status raptors that are known to occur in the region include: Swainson's hawk *(Buteo swainsoni*) and white-tailed kite *(Elanus leucurus*), among others.

Analysis: Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land represents potentially suitable nesting habitat for some ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB currently contains records for Swainson's hawk, burrowing owl, and tricolored blackbird in the vicinity of the Project site. In addition to the species described above, common raptors, may nest in or adjacent to the Project site.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the agricultural areas on the Project site, which serve as potential foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires participation in the SJMSCP. As part of the SJMSCP, SJCOG requires preconstruction surveys for projects that occur during the avian breeding season (March 1 – August 31). When active nests are identified, the biologists develop buffer zones around the active nests as deemed appropriate until the young have fledged. SJCOG also uses the fees to purchase habitat as compensation for the loss of foraging habitat. Implementation of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special status birds are reduced to a ***less than significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.4-1**.*

Impact 3.4-4: The proposed Project would not result in direct or indirect effects on special-status mammal species (Less than Significant)

There are two special-status mammals that are documented within the nine-quadrangle area for the Project site, including: Riparian brush rabbit (*Sylvilagus bachmani riparius*) and Pallid bat (*Antrozous pallidus*). Riparian brush rabbit is a covered species under the SJMSCP, while Pallid bat is not.

Riparian brush rabbit: This species is a state and federal endangered species. The Project site does not contain appropriate habitat for riparian brush rabbit. This species was not observed during the field surveys and has not been documented on the Project site (De Novo Planning Group, 2021). The nearest CNDDB occurrence for this species is located approximately 4.7 miles southwest of the Project site. Regardless, the project is subject to the SJMSCP which will require obtaining coverage for the Project. This would mean that the SJCOG, under authorization from the USFWS and CNDDB would review the project and issue incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species. Therefore, with full coverage under the SJMSCP (Mitigation Measure 3.4-1), the proposed Project would have a ***less than significant*** impact on this special-status species.

Pallid bat (and other bats): The Pallid bat is a Species of Special Concern, that is less common to the region. Other bats known to the region include: Greater western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), small-footed myotis/bat (*Myotis ciliolabrum*), long-eared myotis/bat (*Myotis evotis*), fringed myotis/bat (*Myotis thysanodes*), long-legged myotis/bat (*Myotis volans*), and Yuma myotis/bat (*Myotis yumanensis*). These species are not Federal or State listed; however, they are considered CDFW species of special concern and/or are tracked by the CNDDB. These bats species are highly mobile species that can occupy a variety of habitats, both natural and manmade. The most sensitive habitat type for these species is roosting habitat, including maternal roosts, as well as non-maternal day or night roosting habitat.

The Project site does not provide roosting habitat for bats, although roosting habitat is found throughout the region. The nearest CNDDB occurrence for the Pallid bat is located approximately 12.7 miles east of the Project site, although it is anticipated that there may be numerous undocumented individuals throughout the region.

Development of the Project site would eliminate foraging habitat for special status bats by removing the open agricultural areas. With the exception of Pallid bat, these bat species are covered species under the SJMCP and participation in the SJMSCP will provide the coverage for the incidental take of a species if it were to occur. SJCOG, Inc. as administrator of the SJMSCP will impose appropriate avoidance and minimization measures as part of the incidental take permit. Mitigation Measure 3.4-1, previously listed, will ensure coverage under the SJMSCP. Therefore, this impact would be ***less than significant***.

Impact 3.4-5: The proposed Project would not result in direct or indirect effects on candidate, sensitive, or special-status plant species (Less than Significant)

There are 17 special-status plants that are documented within the nine-quadrangle area for the Project site, including: Alkali milk-vetch (*Astragalus tener var. tener*), Big tarplant (*Blepharizonia plumosa*), Delta button-celery (*Eryngium racemosum*), Delta tule pea (*Lathyrus jepsonii var. jepsonii*), Greene's tuctoria (*Tuctoria greenei*), Heartscale (*Atriplex cordulata var. cordulata*), Mason's lilaeopsis (*Lilaeopsis masonii*), Palmate-bracted bird's-beak (*Chloropyron palmatum*), Recurved larkspur (*Delphinium recurvatum*), Saline clover (*Trifolium hydrophilum*), San Joaquin spearscale (*Extriplex joaquinana*), Sanford's arrowhead (*Sagittaria sanfordii*), Slough thistle (*Cirsium crassicaule*), Suisun Marsh aster (*Symphyotrichum lentum*), Watershield (*Brasenia schreberi*), Woolly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*).

Of the 17 documented species, there are two federal listed species (endangered), four state listed species (endangered and rare), 15 CNPS 1B listed species, and two CNPS 2 listed species (including 2B.3 and 2.1). Four of the 17 plant species are not covered by the SJMSCP (Big tarplant, Saline clover, Watershield, and Woolly rose-mallow), while the remaining 13 species are covered.

Field surveys and habitat evaluations for the entire Project site were performed on May 4, and November 9, 2020 (De Novo Planning Group, 2021). The collection of field surveys included one survey that coincided with the blooming period for special many status plants known to occur within the region. It is noted, however, that the conditions of the Project site are highly disturbed due to the active agricultural operations and there is very little potential for any vegetation growth outside the agriculturally planted vegetation. No special-status plants were observed within the Project site during field surveys. Implementation of the individual phases, and the proposed Project as a whole, will have a ***less than significant*** impact on special status plants.

Impact 3.4-6: The proposed Project would not affect protected wetlands and jurisdictional waters (Less than Significant)

French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. The Project would include creation of 54 acres of open space along and surrounding the Slough in order to avoid disturbance and other urban activities. However, an outfall from a proposed storm drain basin to French Camp Slough would be constructed as part of the Project.

According to the Impacts to Aquatic Resources figures (see Figure 3.4-3) (Madrone Ecological Consulting, 2019), the proposed outfall would impact 0.036 acres of perennial creek and 0.007 acres of roadside ditch, for a total of 0.043 acres of impacts to aquatic resources.

The USACE has regulatory responsibility for navigable waters as well as "all other waters such as...streams ...wetlands...and natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce" (33 CFR 323.2) under Section 404 of the Clean Water Act. A

formal jurisdictional determination must be made by the USACE relative to the wetlands delineated on the Project site. Additionally, a Nationwide Permit would be required from the USACE. Further, the project will be subject to the RWQCB permit activities for controlling pollution during construction and operational activities under a NPDES permit. The Project site is an active agricultural operation that is composed of mostly orchards and crops. Compliance with existing RWQCB and USACE procedures and regulations would ensure the impact is ***less than significant***.

Impact 3.4-7: The proposed Project would not result in adverse effects on riparian habitat or a sensitive natural community (Less than Significant)

The CNDDB record search revealed documented occurrences of one sensitive habitat within the nine-quadrangle area for the Project site: Valley Oak Woodland. This sensitive natural community does not occur within the Project site.

The Project site contains riparian habitat along French Camp Slough. However, with the exception of the proposed outfall, the proposed Project would not develop or otherwise disturb this riparian habitat. The Project includes approximately 54 acres of open space areas in order to avoid French Camp Slough. As shown in Figure 2.0-7 in Chapter 2.0, Project Description, the proposed open space area would buffer the Slough on both sides. The width of the buffer would vary depending on the location. Therefore, implementation of the proposed Project would have a ***less than significant*** impact on riparian habitats or natural communities.

Impact 3.4-8: The proposed Project would not result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. Within the site, French Camp Slough provides movement corridors given its more natural condition. This watercourse provides adequate water, sufficient emergent vegetation, but generally lacks appropriate and adequate undisturbed upland habitat. However, this area is considered to be quality habitat for movement of fish species, especially anadromous fish such as the Chinook salmon and steelhead. There are a variety of birds that utilize this area for movement mostly for foraging the abundance of insects that live within this aquatic environment. Upland species such as mammals would also find refuge along the banks of the aquatic feature give the abundance of cover, food, and water resources. As noted above, the Project includes approximately 54 acres of open space areas in order to avoid French Camp Slough. Although an outfall would be constructed along the Slough, the proposed Project would not develop or otherwise disturb this riparian habitat and any use of this area for wildlife movement is not anticipated to be disrupted because the habitat will remain intact. As shown in Figure 2.0-7 in Chapter 2.0, Project Description, the proposed open space area would buffer the Slough on both sides.

Through compliance with the various regulatory permitting activities (including ITMMs) described above and required by the SJMSCP, work buffers and construction setbacks will be established for French Camp Slough within the Project area consistent with the boundary identified to be preserved

as open space. The contractor will be required to install an orange protective fencing at the boundary to ensure that construction equipment does not enter the 54 acres of open space during construction. Additionally, the management of water quality through BMPs and NPDES permit requirements is intended to ensure that water quality does not degrade to levels that would interfere or impede fish or wildlife. Implementation of these required measures would ensure that this potential impact is reduced to a ***less than significant*** level.

Impact 3.4-9: The proposed Project would not conflict with an adopted Habitat Conservation Plan (Less than Significant)

The proposed Project is subject to the SJMSCP. The proposed Project does not conflict with the SJMSCP. Therefore, the proposed Project would have a ***less than significant*** impact relative to this topic. Mitigation Measure 3.4-1 requires participation in the SJMSCP.

Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant with Mitigation)

The Land Use and Safety Elements of the General Plan establish numerous policies and implementation measures related to biological resources as listed below:

LAND USE ELEMENT POLICIES

LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development.

- ***Consistent****: There are no known cultural or historic resources on site which would be encroached on or destroyed by the proposed Project. Nevertheless, Section 3.5, Cultural and Tribal Resources, of this EIR includes mitigation measures to be followed should cultural resources be found on-site during construction. Natural resources areas, habitat, and agricultural lands are found on-site. Specifically, French Camp Slough, foraging and nesting habitat for birds, and row crops and orchards are located on the Project site. As noted previously, French Camp Slough would be maintained as open space as part of the proposed Project. Additionally, this section includes mitigation measures to reduce the potential impacts to special-status birds to a less-than-significant level. Further, the Project would be subject to the City and County Right-to-Farm ordinances, which would ensure that the Project does not encroach or destroy agricultural operations in the area.*

LU-5.3. Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

- ***Consistent****: The Project site is located in the southern portion of the City adjacent to SR 99 and the Stockton Airport. The site was anticipated for development of Industrial and other urban uses as part of the City's General Plan. As noted previously, the Project would include creation of 54 acres of open space along and surrounding the Slough in order to avoid disturbance and other urban activities. This scenic open space area would be preserved as part of the Project. However,*

the remaining agricultural areas on the site would be converted to urban uses as part of the Project. As discussed in Section 3.2, Agricultural Resources, of this EIR, the Envision Stockton 2040 General Plan EIR anticipated development of the Project site as part of the overall evaluation of the buildout of the City. The General Plan EIR determined that impacts associated with the conversion and loss of Important Farmland would be significant and unavoidable. According to the General Plan EIR, although the General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, it designates approximately 16,160 acres of farmlands of concern under CEQA for non-agricultural uses. Because these farmland areas are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. The only way to mitigate this impact would be to prohibit any development on farmland of concern. CEQA does not require that the project be changed in order to avoid an impact, and no additional mitigation is available, resulting in a significant and unavoidable impact.

SAFETY ELEMENT POLICY

SAF-2.3. Protect the community from potential flood events.

- ***Consistent**: Impacts associated with potential flood events are discussed in Section 3.9, Hydrology and Water Quality, of this EIR. As discussed, a majority of the Project size is located in FEMA designated Zone AO, where flood depths can reach one or more feet deep. The Hydrologic and Hydraulic Assessment completed for the Project included an analysis to determine potential impacts to the floodplain from placing fill to bring the finished floor elevation to three feet above highest adjacent grade. The Assessment determined that there are no offsite impacts which would cause an increase in water surface greater than 0.05 feet due to Project implementation. (KSN, December 2020). Additionally, the Hydrologic and Hydraulic Assessment also included an evaluation of the proposed flood control system for the Project to determine if the proposed flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from a 100-year flood event. According to the Assessment, the results of the analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin (KSN, December 2020). Therefore, the Hydrologic and Hydraulic Assessment notes the applicant shall apply for a CLOMR-F based upon the effective FEMA floodplains, as required by Mitigation Measure 3.9-3. With implementation of this mitigation measure, all potential flood impacts would be less than significant.*

MUNICIPAL CODE

The Stockton Municipal Code, Title 16 Development Code protects Heritage Oak Trees through permit requirements. Section 16.130.020 provides the Director with Review Authority for permits to remove heritage trees. The decision of the Director is subject to an appeal to the Council in compliance with Chapter 16.100 (Appeals). (Ord. 015-09 C.S., eff. 12-3-09). Section 16.130.030 provides the permit requirements, and describes the process for approval or denial of a permit application. Section 16.130.040 establishes fines for violation of this requirement. Section

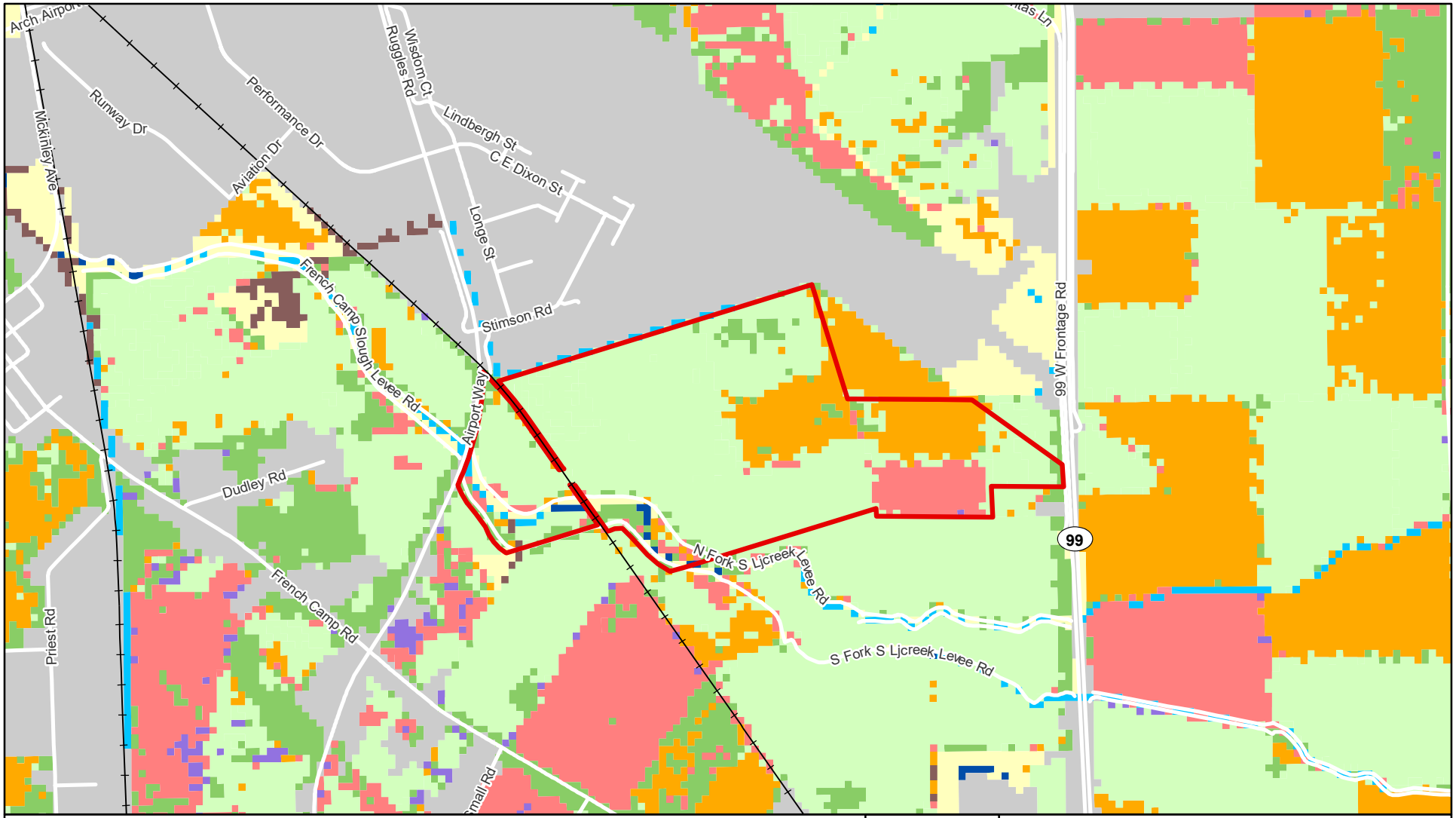
16.130.050 provides exemptions under emergencies. Section 16.130.060 establishes the replacement requirements.

The Project site contains numerous orchard trees in the agricultural areas, and shade trees along French Camp Slough. It may be possible for specific trees to be incorporated into the final design of the development once the more detailed engineering effort begins. For example, the proposed open space areas along French Camp Slough will result in preservation of the shade trees along the Slough. Nevertheless, any Heritage Trees that cannot remain in the final design must be replaced in accordance with Chapter 16.130 of the Municipal Code if deemed applicable at the time of removal. A "Heritage Tree" is defined as: "Any *Quercus lobata* (commonly known as "Valley Oak"), *Quercus agrifolia* (Coast Live Oak), and *Quercus wislizenii* (Interior Live Oak) tree which is located on public or private property within the limits of the City, and which has a trunk diameter of 16 inches or more, measured at 24 inches above actual grade. For Oak trees of the species mentioned above, with multiple trunks, the combined total trunk diameter shall be used for all trunks measuring six (6) inches or greater measured at 24 inches above actual grade."

The following mitigation measures would require compliance with the Stockton Municipal Code for removal and replacement of Heritage Oak Trees. With the implementation of the following mitigation measures, the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2*: Should the Improvement Plans or Building Plans call for the removal of a Heritage Tree (as defined in the Stockton Municipal Code), the applicant shall comply with the City's Heritage Tree Permit requirements outlined in Chapter 16.130 of the City's Municipal Code.*



LEGEND

- Project Boundary

Land Cover Type (Acres Onsite)

- Annual Grassland (8.2 ac)
- Pasture
- Orchard - Deciduous/Evergreen (32.8 ac)
- Cropland (25.8 ac)
- Dryland Grain Crops (67.5 ac)
- Irrigated Crops - Grain/Row/Field/Hayfield (280.6 ac)
- Vineyard (0.2 ac)
- Fresh Emergent Wetland (3.1 ac)
- Valley Foothill Riparian (0.7 ac)
- Riverine (2.9 ac)
- Urban (0.4 ac)

N

0 500 1,000
Feet

Source: San Joaquin County GIS; FVEG15_1, 2015. Map date: September 23, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.4-1. Land Cover Types

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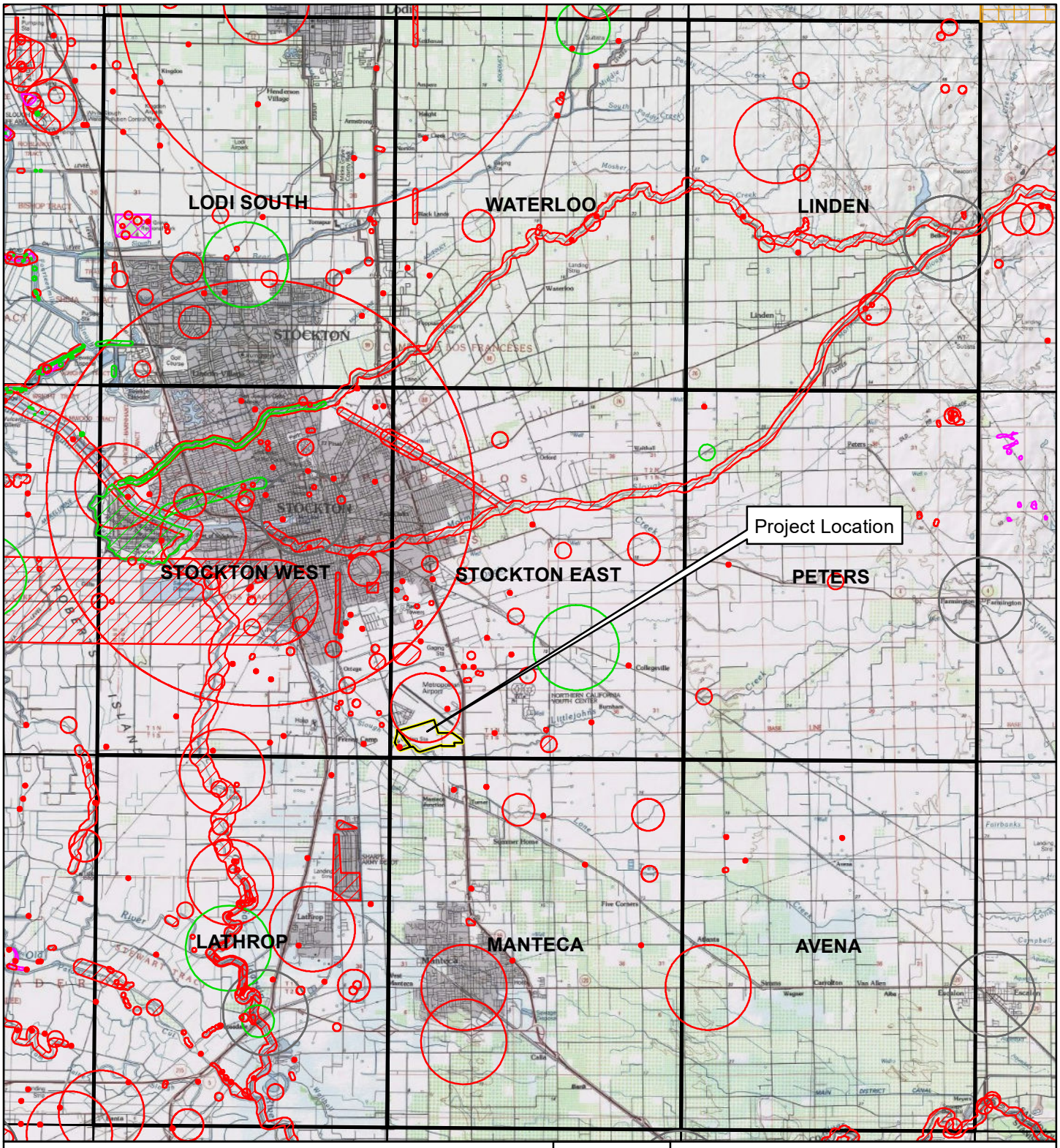

LEGEND

- Project Boundary
- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Multiple (specific)
- Multiple (circular)
- Sensitive Environmental Occurrence

0 1 2
Miles

Sources: ArcGIS OnlineTopographic Map Service; CNDDB version 08/2020. Map date: September 23, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.4-2. California Natural Diversity Database

9-Quad Search

Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

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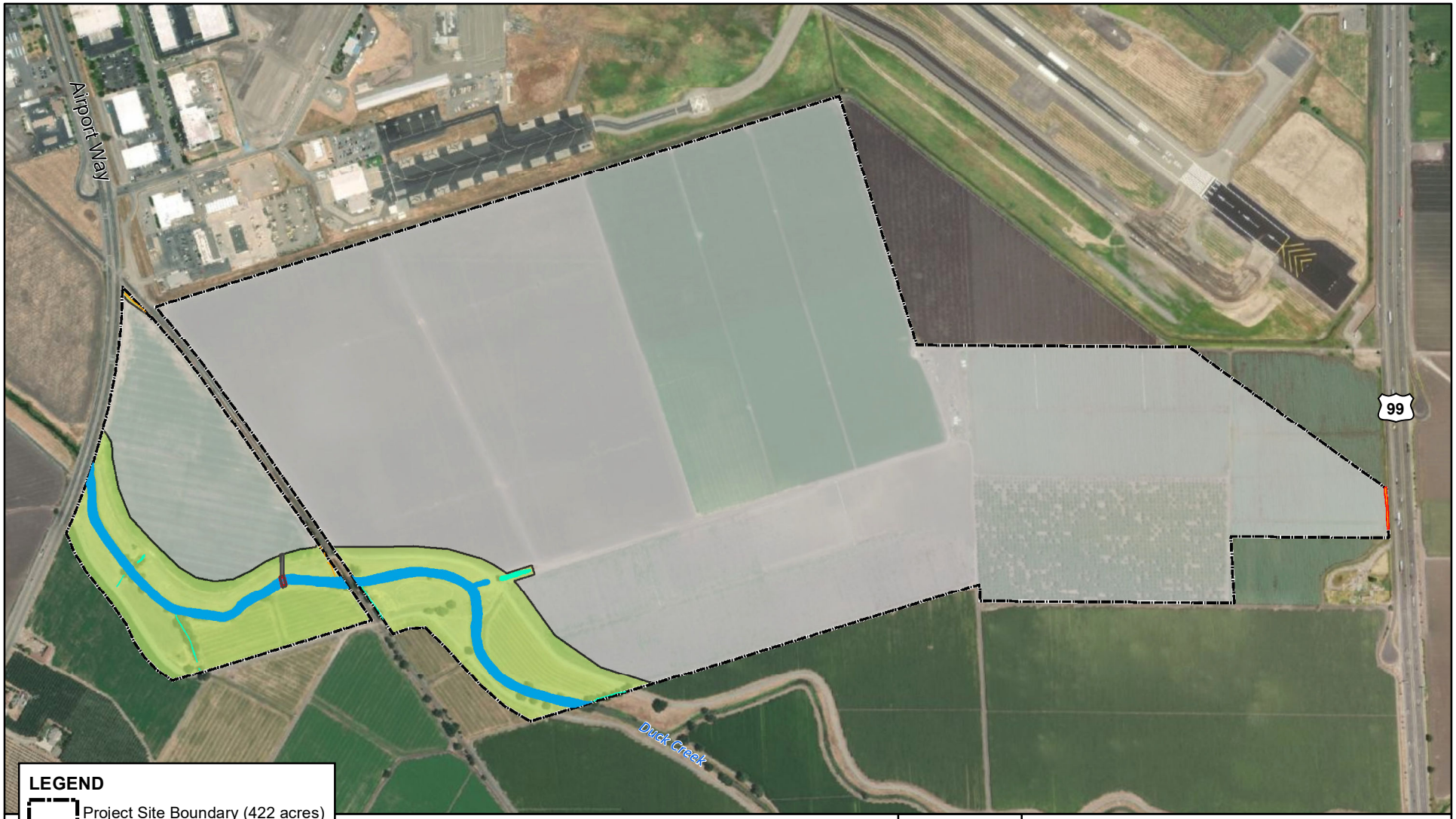

LEGEND

- Project Site Boundary (422 acres)
- Development Area (374 acres)
- Avoided Area (48 acres)

Aquatic Resources

Other Waters

- Irrigation Ditch
- Perennial Creek
- Roadside Ditch
- Impacted Aquatic Resources

Waters Type	Impacted	Avoided	Total Acres
Other Waters			
Irrigation Ditch	0.000	0.210	0.210
Perennial Creek	0.036	5.623	5.659
Roadside Ditch	0.007	0.021	0.028
Total	0.043	5.854	5.897

N

0 250 500

Feet

Source: Madrone Ecological Consulting, Impacts to Aquatic Resources, April 25, 2019. Map date: April 9, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.4-3.
Impacts to Aquatic Resources

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This section provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the Determination of Eligibility and Effect for the South Stockton Commerce Center Project (Peak & Associates, Inc., 2020).

Comments were received during the public review period or scoping meeting for the Notice of Preparation (NOP) regarding this topic from the following: Native American Heritage Commission (NAHC) (September 30, 2020) and Northern Valley Yokuts Tribe and Nototomne Cultural Preservation (October 3, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

KEY TERMS

The following key terms are used throughout this section to describe cultural and tribal resources and the framework that regulates them:

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Ethnography. The study of contemporary human cultures.

3.5.1 ENVIRONMENTAL SETTING

PROJECT SETTING

Project Site

The proposed Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. The Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level.

The Project also includes off-site sewer improvements located along and adjacent to existing Project area roadways. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north. The off-site sewer improvements would be located within the Airport

Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection).

Surrounding Uses

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton Airport. These uses are located within the County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks (French Camp Slough).
- West – The UPPR, Airport Way, and agricultural lands.

Project Site Soils

The Project site has two soil series, Jacktone clay and Stockton clay. Jacktone clay is primarily in the northern portion of the Project site with Stockton clay to the south. Both soil series cover about one-half of the Project site. Jacktone clay and Stockton clay are both derived from alluvial sources. They share similar structural characteristics with both being a clay to clay loam about 42 to 60 inches thick and both rest upon a cemented layer.

Jacktone clay soils were deposited sometime between 2,000 to 4,000 years before present in a series of depositional events. Stockton clay was deposited sometime during the previous 2,000 period. Jacktone clay is considered to have high sensitivity and Stockton clay very high sensitivity for the potential to possess buried cultural material given the time period in which they were deposited.

The southwestern portion of the Project site is transected by French Camp Slough. French Camp Slough flows northwest from the Project site about three and one-half miles until it joins Walker Slough and then reaches the San Joaquin River about one-mile further west. The topographic profile of French Camp Slough within, and west of, the Project site shows a gradual decline in elevation of roughly five feet every mile to mile and one-half. There are no elevated areas of higher terrain located within the Project site adjacent to, or near, French Camp Slough.

Both soil series present within the Project site were deposited during a period when there was human activity; as such, both have the potential to possess buried deposits of cultural material. With French Camp Slough located in the far southwestern portion of the Project site, surface water was present that would have enabled some form of temporary or more permanent encampment by prehistoric peoples.

CULTURAL BACKGROUND

Prehistory

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data.

In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality where survey and excavation studies were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmiller Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some cremations present. During the Middle Horizon, there is a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis* sp. rather than red *Haliotis* sp. Other characteristic artifacts include perforated and canid teeth; asymmetrical and "fishtail" charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked clay.

The Hotchkiss Culture (Late Horizon) burial pattern retains the use of the flexed mode. There is wide spread evidence of cremation, and lesser use of red ocher, heavy sue of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clam shell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnesite (Moratto 1984:181-183). The characteristics noted are not all-inclusive, but cover the more important traits.

Schulz (1981), in an extensive examination of the central California evidence for the use of acorns, used the terms Early, Middle and Late Complexes, but the traits attributed to them remain generally the same. While it is not altogether clear, Schulz seemingly uses the term “Complex” to refer to the particular archeological entities (above called “Horizons”) as defined in this region. Ragir's (1972) cultures are the same as Schulz's complexes.

Bennyhoff and Hughes (1984) have presented alternative dating schemes for the Central California Archeological Sequence. The primary emphasis is a more elaborate division of the horizons to reflect what is seen as cultural/temporal changes within the three horizons and a compression of the temporal span.

There have been other chronologies proposed, including Fredrickson (1973), and because it is correlated with Bennyhoff's (1977) work, it does merit discussion. The particular archeological cultural entities Fredrickson has defined, based upon the work of Bennyhoff, are patterns, phases and aspects. Bennyhoff's (1977) work in the Plains Miwok area is the best definition of the Cosumnes District, which likely conforms to Fredrickson's pattern. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities. It corresponds with Willey and Phillips' (1958) earlier “tradition”, although it is tied more specifically to the archeological record in California.

Ethnography

The Project site lies within the northern portion of the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Latta 1949). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Yokuts held portions of the San Joaquin Valley from the Tehachapi’s in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, and on the west by the Saclan or Bay Miwok and Costonoan peoples. Although neighbors were often from distinct language families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus, the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways and village sites were normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from three to 18 meters (Wallace 1978:470).

Historic Period

MEXICAN PERIOD

The Project site lies on a portion of the Rancho Campo de los Franceses, the ranch named for the early camp first occupied by French-Canadian trappers employed by the Hudson's Bay Company in 1832. The site of the present-day location of French Camp was the terminus of the Oregon Trail used by the trappers between 1832 and 1845. Charles M. Weber stopped at French Camp in 1841 as part of the Bidwell-Bartelson party, the first of many American wagon trains to enter California. Weber was impressed with the fertility of the land near the San Joaquin River. Moving on to Pueblo de San Jose, Weber became partners with William Gulnac, a French-Canadian (possibly one of the Hudsons Bay Company trappers) who had married a Mexican woman and become a naturalized Mexican citizen. In 1843, Gulnac with Charles Weber, later founder of Stockton, organized a company of 12 men for the purpose of forming an agricultural colony at French Camp. Gulnac filed for a land grant, and was awarded a large tract of land including French Camp and the later site of Stockton by the Mexican government.

Disease, primitive living conditions and less than anticipated agricultural return also discouraged the settlers and Gulnac, who sold his interest in the Rancho to Weber for $60, the amount of an outstanding grocery bill. Weber, in turn, gave away almost all of the Rancho land in order to attract more settlers (Hoover, Rensch and Rensch 1970:369).

In 1847, with California under American control, Weber laid out the town of Tuleburg, the forerunner of Stockton. Tuleburg was to be the commercial and shipping center for this region. This eventually came to pass with the establishment and success of Stockton, but in 1847 there was little reason to think that any such venture would succeed.

GOLD RUSH AND EARLY AGRICULTURE

Immediately after the Marshall gold discovery in 1848, Weber organized the Stockton Mining and Trading Company and conducted extensive mining on Weber Creek, south of Placerville. Before the Gold Rush fully started, Weber saw that Tuleburg was well situated to be the gateway to the

southern mining district. He returned to the town and in the spring of 1849 had it resurveyed and renamed it Stockton. A year later, the once isolated village had a population of over a thousand, not counting transient miners, and was the County seat of the newly created San Joaquin County. As the population of the mines continued to grow, Stockton became a staging and freighting center and a shipping point for agricultural produce and cattle.

French Camp also became an important staging and freighting station in the early 1850s. Boats landed at the terminus of French Camp Slough, and goods destined for the mining camps were unloaded and freighted up the French Camp Road. In 1850, Major Hammond laid out a town on the site of the camp for Weber, calling it Castoria ("place of beavers"). Noble and Stevinson built an adobe hotel at the site and sold lots (Hoover, Rensch and Rensch 1970).

The decline of mining after the Gold Rush was accompanied by a realization of the rich agricultural potential of the Central Valley. In a short time, ranchers and farmers had drained the lakes and marshes, channelized the sloughs and established controlled irrigation systems to replace the annual flooding that formerly supported the rich valley vegetation. The valley floor of today bears little resemblance, for the most part, to its pre-contact condition. The oak groves are gone and the lakes are dry. The vast marshes, once the refuge for enormous flocks of water fowl, no longer exist. The grazing lands of the elk and the antelope have become cultivated fields, producing a wide variety of crops. The native faunal community, with the exception of burrowing animals, has been replaced by domestic livestock.

RAILROADS

Lathrop first was a station on the Central Pacific, established in 1869 when the last stretch of the transcontinental railroad was built from Sacramento through this region, and crossing the San Joaquin River at Mossdale to reach the Bay Area.

The site of Lathrop was first known as Wilson's Station, and included a store and a schoolhouse on land belonging to Thomas A. Wilson. Due to conflicts in the City of Stockton that infuriated Leland Stanford, the Central Pacific Railroad switched many operations to Wilson's Station, later re-named for Charles Lathrop, brother-in-law of Leland Stanford. The town drew significant commerce away for the City of Stockton. The railroad's machine shops and roundhouse were built here, and the town became an important division point and major stop on the railroad line beginning in 1871. The Visalia Division of the Stockton of the Southern Pacific Railroad was completed at that time, serving the San Joaquin Valley. Lathrop became an important shipping point for agricultural products.

The Tidewater Southern Railway Company began with the consolidation of the Tidewater and Southern Railroad Company, building a line from Stockton southward to Modesto beginning in 1910, and the Tidewater and Southern Transit Company, building in Merced in 1912. John A. Mehling was the promoter and trustee for the early years of the railroad, and worked on land acquisition. In 1912, the electric interurban line opened between Stockton and Modesto, a total of 32 miles. The electric service was abandoned the same year, but retained through the streets of Modesto. An extension was built to Turlock in July 1916. The section was operated with both

electric and steam power, with the first steam power in 1917. The last interurban train ran on this route in May 1932 (Fickewirth 1992: 152).

EARLY OWNERSHIP OF THE PROJECT SITE

The land of the Project site included portions of holdings of three individuals in 1895: P.G. Sharp to the north in sections 26 and 38, J.T. Salmon in sections 27 and 39, and the estate of Cutler Salmon on the east side of the property. In 1890, Cutler Salmon had a holding of 1,006 acres, and he was noted for being the first to discover gas in 1883 under his property while drilling for water.

In 1914, the USGS topographic map indicates no buildings on the Project site, and the only manmade feature was a north-south ditch.

SHARPE ARMY DEPOT

In 1942, the Lathrop Holding and Reconsignment Point was established in the Project vicinity on what had previously been a sheep ranch, holding supplies for shipment through Bay Area ports. As many as 450 railroad cars would be loaded and unloaded each day. The facility has gone through many changes with the changing needs of the military during times of conflict. After the end of World War II, the Depot went through administrative and supply mission changes, and a new name was applied in 1948: Sharpe General Depot. The conflict in Korea brought a demand for increased services as the staffing, shipments, and missions doubled during the three years of the war. The Army curtailed supply operations, and the Sharpe site began providing medical supplies and subsistence items on a larger scale. In 1962, the facility became the Sharpe Army Depot.

In 1965, with the escalation of the war in Vietnam, Sharpe became the major conduit for supplies moving to Southeast Asia. The Sharpe facility has continued to operate with a large part of the staffing switched to the Tracy facility beginning in 1999.

STOCKTON AIRPORT

The area now occupied by Stockton Metropolitan Airport was a typical agricultural area prior to World War I, but the interest in aviation generated by the war soon had an effect on this rural area. By 1925, the area was part of a large agricultural and stock raising operation, the Wilber Salmon Ranch.

In 1926, the City of Stockton was looking for a site for a municipal air field. The Salmon Ranch site was chosen because it was already popular with pilots, it was near the Tidewater and Southern Railroad, and the land was relatively cheap due to the rural location (Stockton Record, July 11, 1964). The City took over Salmon's lease on 23 acres owned by Fred P. Clark and purchased the land two years later. The City graded the runway and built a shed hanger and an office.

The first commercial operation at the airport was the Allen-Lane Flying Service, run by Bert Lane and C. C. Allen. They sold rides around Stockton, charter flights to other cities, ran a flight school and organized air shows. The partners went on to other pursuits in 1929, but a successor company, Pathfinder Flying Service, was formed by former pilots of Allen-Lane. This company, owned first by

Edward Nightingale and John Knox, then by Edward Wagner, then by Wagner and Henry von Berg, continued to operate out of Stockton Municipal until it was taken over by the military (Bastian 1975:3-5).

With the purchase of the original 23 acres of airport land in 1928, the City built a fifty-foot beacon tower and another hanger. Shortly after that, the City bought two more parcels from Fred Clark to accommodate the hoped-for expansion of commercial ventures at the airport. The Great Depression ended any hope for rapid development of private industry at the airport. Nevertheless, the City continued to look to the future and took advantage of lower prices to purchase an additional 147 acres in 1936, more than doubling the area of the airport. The runway was extended and oiled, sewers and storm drains were installed, and a large adobe hanger was built through initiation of a project under the Work Projects Administration (Bastian 1975:5).

The City's plans for a major municipal airport at the site were temporarily shelved in 1940 when the Army Air Corps took over the airport and began construction of an advanced pilot training school. Plates 1 and 2 show the site of the airport in 1940 before military construction began at the site. Pathfinder Flying Service, still the only major commercial aviation venture located at the airport, moved to Oranges Field, north of town.

The Army required more land for its planned facility. The City was not financially capable of the purchase, so the County took a half interest in the existing property and helped purchase the additional land in a joint venture with the City. At the termination of the lease, the property was to revert to the City/County partnership. The Army immediately razed all of the existing buildings on the property except for the adobe hanger and the Salmon House. The latter was moved off of the property, and the hanger was used by the military (Bastian 1975:8).

The Army Air Corps built three runways in a triangular shape, one of them later widened to 800 feet to allow multiple landings. By 1943, the Stockton Field facility included a road system, about twenty earthen revetments for protecting the aircraft, and 368 buildings and structures. The base was completely mapped by the Office of the Post Engineer.

KNOWN CULTURAL RESOURCES

A summary of the record search, Native American consultation, and field survey that was performed for the Project site is included below.

Record Search

The purpose of the cultural records search is to identify all previously recorded cultural resources (prehistoric and historic archaeological sites, historic buildings, structures, objects, or districts) within the Project site. A record search was conducted for the Project site and a 0.125-mile radius at the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS) on June 16, 2020 (Record Search File No.: 11422L; Appendix 2 of Appendix C).

According to the CCIC CHRIS results, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site.

Native American Consultation

The NAHC was requested to check the Sacred Lands files and provide a list of suitable contacts for further information. Their reply indicated that there are no properties listed in the Sacred Lands files. The NAHC provided a list of individuals and groups to contact regarding the property. Letters were sent to the groups and individuals listed on August 21, 2020. The contacts identified for the Project include: Kathy Perez, North Valley Yokuts Tribe; Timothy Perez, North Valley Yokuts Tribe; and Corrina Gould, The Confederated Tribes of Lisjan.

On August 24, 2020, an email reply was received from Kathy Perez, representing the Northern Valley Yokuts and the Nototomne Cultural Preservation corporation, providing mitigation measures to assist and minimize the impact of inadvertent discoveries during ground disturbance. A second response from Kathy Perez, representing the Northern Valley Yokuts and the Nototomne Cultural Preservation corporation, was received on October 3, 2020. The second response letter requested to observe and participate in all cultural resource surveys, and requested the results of any record searches for the Project. The letter also notes that, if cultural resources are identified within the Project area, their policy requires a tribal monitor present for all ground disturbing activities. Finally, the letter requests that tribal cultural resources be preserved in place and avoided whenever possible. All consultation letters and response letters are included in Appendix 3 of Appendix C.

Copies of all communication may be found in Appendix 3 of Appendix C. Any responses received after the completion of the Determination of Eligibility and Effect for the South Stockton Commerce Center Project will be submitted to the City of Stockton for transmittal to the appropriate agencies/individuals.

Field Assessment

Peak & Associates completed a field survey of the Project site in July and August 2020. Survey of portions of the property were limited by the active agricultural use for an orchard and alfalfa crops.

At time of survey, the Project site contained alfalfa fields, a walnut orchard, small areas of fallow field, and natural landscape. The alfalfa fields were planted in rotation, allowing recently mowed sections to be available for survey at regular intervals. The single walnut orchard was flood-irrigated regularly but allowed to dry thoroughly between floods, making survey possible. The landform is predominantly flat and likely leveled for agriculture. Low berms line both sides of French Camp Slough, which runs through the parcel from the southeast boundary at South Airport Way to the southwest boundary. Several dirt and gravel roads cross the Project site or run along the boundaries.

Soil types noted are mostly silty loam, but some areas are a finer clay-loam, mostly within fifty meters of French Camp Slough. This soil is uniform in a medium-dark brown color and shade. Occasional alluvial deposit pebbles were observed in the fields, but angular and rounded stones used as ballast for the railroad line have been spread widely on both sides of the track. Most of the ballast is of basalt, which can often mimic worked tool-stone. Careful inspection of all rock encountered took place in order to abate misinterpretation. Also used as ballast was a greenish crypto-crystalline silicate, which also was manufactured by a crushing method, resulting in a product which resembles tool-stone. Careful inspection resulted in no observed artifacts.

Survey visibility was good for all areas of the parcel. Mowing and grooming of the fields and orchard, as well as disking of the non-planted areas along the slough provided a clear view of the soil. Soil disturbance was moderate, with few or no rodent dens observed, but plowing and road maintenance allowed for some subsurface inspection. Aside from crops, vegetation includes a sparse riparian zone tight against the slough consisting of tule sedges, occasional oak trees, and other bushes and grasses and trees.

Three-meter-wide transects were used to achieve complete coverage along French Camp Slough, and the southern portion of the Project site. The remainder of the Project site was covered with transects varying in width from 10 to 30 meters.

SURVEY RESULTS

There is no evidence of prehistoric period cultural resources within the Project site. One historic site is present: a section of the Tidewater Southern Railroad, recorded as P-39-000015/CA-SJO-256H.

The resource is a standard gauge railroad now operated by Union Pacific Railway Company. It is located on a corridor established in 1912 for the Tidewater Southern, part of a 39-mile-long interurban railway linking the cities of Modesto and Stockton. The railway was converted into a freight carrying system in the 1930s with the modern track and trestle crossing built during the 1960s and 1970s. The line is still in use.

Approximately 2,800 feet of the railroad line is within the current Project area. This railroad line segment was recorded by Jensen and Associates in 2000. Jensen prepared a site form describing the various elements present in this section of the rail line, with several other sections of the system previously recorded. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the National Register of Historic Places (NRHP).

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the NRHP. The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

National Register of Historic Places

The eligibility criteria for the NRHP are as follows (36 CFR 60.4):

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and*
>
> *(A) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or*
> *(B) that are associated with the lives of persons significant in our past; or*
> *(C) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *(D) that have yielded, or may be likely to yield, information important in prehistory or history.*

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE

California Register of Historic Resources

The CRHR was established in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1.

Cultural resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR if it:

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines §15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and PRC §§21083.2 and 21084.1.

CEQA also provides for the protection of Native American human remains (CCR §15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within

their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC §21083.2, it may still be treated as a significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- it has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. The CEQA Guidelines (Section 15064.5) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended §65040.2, §65092, §65351, §65352, and §65560, and added §65352.3, §653524, and §65562.5 to the Government Code; also requires the Governor's Office of Planning and Research to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Assembly Bill 978

In 2001, AB 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR;
    B) Included in a local register of historical resources as defined in PRC Section 5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a "non-unique archaeological resource" as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

LOCAL

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to cultural and tribal resources. General Plan policies and actions applicable to the Project are identified below:

POLICIES: LAND USE ELEMENT

- LU-3.1. Ensure that exterior remodels and the siting, scale, and design of new development are compatible with surrounding and adjacent buildings, public spaces, and cultural and historic resources.
- LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development.

ACTIONS: LAND USE ELEMENT

- LU-3.1E. Maintain and periodically update the City's historical resources inventory and adopt a priority list to protect the most important resources.
- LU-5.2D. Require the following tasks by a qualified archaeologist or paleontologist prior to project approval:
    - Conduct a record search at the Central California Information Center located at California State University Stanislaus, the University of California Museum of Paleontology at Berkeley, and other appropriate historical or archaeological repositories.
    - Conduct field surveys where appropriate.
    - Prepare technical reports, where appropriate, meeting California Office of Historic Preservation or other appropriate standards.
    - Where development cannot avoid an archaeological or paleontological deposit, prepare a treatment plan in accordance with appropriate standards, such as the Secretary of the Interior's Standards for Treatment of Archaeological Sites.
- LU-5.2E. Continue to consult with Native American representatives, including through early coordination, to identify locations of importance to Native Americans, including archaeological sites and traditional cultural properties.
- LU-5.2F. If development could affect a tribal cultural resource, require the developer to contact an appropriate tribal representative to train construction workers on appropriate avoidance and minimization measures, requirements for confidentiality and culturally appropriate treatment, other applicable regulations, and consequences of violating State laws and regulations.
- LU-5.2G. Comply with appropriate State and federal standards to evaluate and mitigate impacts to cultural resources, including tribal, historic, archaeological, and paleontological resources.

City of Stockton Municipal Code

Section, 16.36.050, Cultural Resources, of the Stockton Municipal Code notes that if a historical or archaeological resource or human remains may be impacted by a development project requiring a discretionary land use permit, the Secretary of the Cultural Heritage Board (Board) shall be notified, any survey needed to determine the significance of the resource shall be conducted, and the proper environmental documents shall be prepared. In addition:

A. Historical Resources. Resources that have been identified as a landmark or part of a historic district in compliance with Chapter 16.220 (Cultural Resources) shall require a certificate of appropriateness (Section 16.220.060) if any exterior changes to the resource are proposed.
B. Archaeological Resources. In the event that archaeological resources are discovered during any construction, construction activities shall cease, and the Community Development Department (Department) shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may occur in compliance with State and federal law.
C. Human Remains. In the event human remains are discovered during any construction, construction activities shall cease, and the County Coroner and Director shall be notified immediately in compliance with CEQA Guidelines 15064.5 (d). A qualified archaeologist shall be contacted to evaluate the situation. If the human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify the most likely descendent of the Native American to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project is considered to have a significant impact on cultural or tribal resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- 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:
    - 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);
    - 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project implementation would not cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5 (Less than Significant)

The Project site encompasses approximately 422.22 acres of undeveloped land previously used for agricultural purposes. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection). There are no buildings or structures located on-site. A CHRIS search was requested from the CCIC, which included the Project site and a 0.125-mile radius (CCIC File #11422L). According to the CCIC CHRIS results, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site.

The resource is a standard gauge railroad now operated by Union Pacific Railway Company. It is located on a corridor established in 1912 for the Tidewater Southern, part of a 39-mile-long interurban railway linking the cities of Modesto and Stockton. The railway was converted into a freight carrying system in the 1930s with the modern track and trestle crossing built during the 1960s and 1970s. The line is still in use.

Approximately 2,800 feet of the railroad line is within the current Project area. The proposed Project mostly avoids any impact to the railroad line. The proposed grade-separated overpass of the UPRR line effectively avoids any direct impact at that location. The only location where there is an effect on the railroad is the location where the project proposed to add a railroad spur line, which would extend east from the UPRR along the Project site's northern edge providing rail access to the project parcels.

This railroad line segment was recorded by Jensen and Associates in 2000. Jensen prepared a site form describing the various elements present in this section of the rail line, with several other sections of the system previously recorded. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the NRHP. As such, the Project site does not contain a "historical resource" as defined in CEQA Guidelines Section 15064.5. Construction of a railroad spur, as well as the railroad overpass, would have a ***less than significant*** impact on historical resources.

Impact 3.5-2: Project implementation has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074 (Less than Significant with Mitigation)

The section of French Camp Slough within the Project site is not associated with any other salient feature such as raised topography and is located over four miles inland from the San Joaquin River. Given the age of the sediment and presence of French Camp Slough within the southwestern portion of the Project site, there is a moderate potential for encountering buried prehistoric period resources for the portion of the Project site bordering or within about 500 feet from French Camp Slough. There is a low potential for encountering buried prehistoric period resources for the reaming portion of the Project site.

The Project site is located in an area known to have archaeological, cultural, and tribal cultural resources. As noted above, a CHRIS search was requested from the CCIC, which included the Project site and a 0.125-mile radius (CCIC File #11422L). The results indicated that the Project site does not contain any recorded prehistoric resources. Additionally, a letter was sent to the NAHC requesting a check of the Sacred Lands files. The Sacred Lands file check failed to reveal any resources on the Project site. The NAHC also provided a list of individuals and tribal groups to contact regarding the site.

As noted previously, letters were sent to the groups and individuals listed on August 21, 2020. The contacts identified for the Project include: Kathy Perez, North Valley Yokuts Tribe; Timothy Perez, North Valley Yokuts Tribe; and Corrina Gould, The Confederated Tribes of Lisjan.

On August 24, 2020, an email reply was received from Kathy Perez, representing the Northern Valley Yokuts and the Nototomne Cultural Preservation corporation, providing mitigation measures to assist and minimize the impact of inadvertent discoveries during ground disturbance. A second response from Kathy Perez, representing the Northern Valley Yokuts and the Nototomne Cultural Preservation corporation, was received on October 3, 2020. The second response letter requested to observe and participate in all cultural resource surveys, and requested the results of any record searches for the Project. The letter also notes that, if cultural resources are identified within the Project area, their policy requires a tribal monitor present for all ground disturbing activities. Finally, the letter requests that tribal cultural resources be preserved in place and avoided whenever possible. All consultation letters and response letters and are included in Appendix 3 of Appendix C.

As with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown archaeological resources and cultural resources, including prehistoric or historic artifacts. Implementation of Mitigation Measures 3.5-1 through 3.5-3 would ensure that the potential impact to archaeological, cultural, and tribal resources is ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *Prior to any ground-disturbing activities on the Project site, a qualified archaeologist shall conduct pre-construction worker cultural resources sensitivity training. The training session shall focus on the recognition of the types of historical and cultural, including Native American, resources that could be encountered, procedures to be followed if resources are found, and pertinent laws protecting these resources.*

Mitigation Measure 3.5-2: *If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, are found during grading and construction activities during any phase of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s).*

Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.

If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the Project applicant's expense.

Mitigation Measure 3.5-3: *If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:*

- *The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.*
- *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:*
    - *The Native American Heritage Commission is unable to identify a descendent.*
    - *The descendant identified fails to make a recommendation.*

- *The City of Stockton or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

Impact 3.5-3: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries (Less than Significant with Mitigation)

Indications suggest that humans have occupied San Joaquin County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains are documented on or near the Project site, implementation of the following mitigation measure would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. The following mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.5-3.***

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following:

- *Envision Stockton 2040 General Plan* (City of Stockton, December 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, June 2018);
- *California Geological Survey (CGS) Information Warehouse: Regulatory Maps* (California Department of Conservation, 2020);
- *City of Stockton Municipal Code; Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2020);
- *Custom Soils Report for San Joaquin County, California* (NRCS, 2020); and
- *Interactive Fault Map provided by the U.S. Geological Survey* (USGS, 2020).

Comments were received during the public review period or scoping meeting for the Notice of Preparation. One comment was received regarding this topic from the California Geologic Energy Management Division (October 10, 2020), which is addressed within this section. Full comments received are included in Appendix A.

As discussed in in the Initial Study prepared for the proposed Project, the proposed Project would connect to the municipal sewer system for wastewater disposal. Septic tanks or septic systems are not proposed as part of the Project. Additionally, there are no significant deposits of mineral resources located on the Project site, as delineated by the Mineral Resources and Mineral Hazards Mapping Program (MRMHMP). The Project site is not designated as a Mineral Resource Zone (MRZ). As such, these CEQA topics will not be further discussed.

3.6.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Regional Geology

The Project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is located in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough (or basin) about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west. The northern and southern portions of the Great Valley are referred to as the Sacramento Valley and San Joaquin Valley, respectively; with the Sacramento River draining areas to the north and the San Joaquin River draining areas to the south.

The San Joaquin Valley (Valley) is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. This geologic unit is commonly referred to as the Great Valley Sequence. Large alluvial fans have developed on each side of the Valley. The larger and more

gently sloping fans are on the east side of the Valley, and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Sediments deposited in the vicinity of Stockton were derived from Sierra Nevada bedrock, and from volcanic activity that occurred in the Sierra Nevada region during the Holocene to Tertiary periods (3 to 38 million years ago). These Tertiary-aged sediments form the principal groundwater aquifers of the Central Valley. The most recent deposits in the area are floodplain deposits consisting of clay, silt, and some sand (City of Stockton, 2007).

Local Setting

The proposed Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Sough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level. The Project site is comprised of active agricultural fields. The agricultural lands on the Project site have been used historically for intensive agricultural purposes. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The Project site is adjacent to other agricultural land to the east, south, and west, as well as the Army National Guard and Stockton Airport to the north.

The Project also includes off-site sewer improvements located along and adjacent to existing Project area roadways. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection).

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. The NRCS Soils Map provided in Figure 3.2-1 in Section 3.2, Agricultural Resources, identifies the type and range of soils found in the Project site, which is summarized below in Table 3.6-1.

TABLE 3.6-1: PROJECT SITE SOILS

UNIT SYMBOL	*NAME*	*ACRES IN AOI*	*PERCENT OF AOI*
173	Hollenbeck silty clay, 0 to 2 percent slopes	0.2	0.05%
250	Stockton clay, 0 to 2 percent slopes	158.4	37.90%
180	Jacktone clay, 0 to 2 percent slopes	259.3	62.05%

NOTE: THIS TABLE DOES NOT INCLUDE THE 4.3 ACRES OF WATER WITHIN THE AOI.

SOURCE: NRCS CUSTOM SOIL SURVEY 2020.

Hollenbeck silty clay. This series consists of moderately well drained soils on basin rims and interfan basins. These soils are deep to a hardpan and are formed in alluvium derived from mixed rock sources. Slopes range from 0 to 2 percent. As shown in Table 3.6-1, 0.05 percent of the site soils are Hollenbeck silty clay soils. This soil type is located in small portion south of North Fork South Ljcreek Levee Road along the southern boundary of the Project site.

Jacktone clay. This series consists of somewhat poorly drained soils in basins. These soils are artificially drained and are moderately deep to a hardpan. Slopes range from 0 to 2 percent. This series is characterized as poorly drained, slow runoff, high shrink/swell potential, and permeability is slow. As shown in Table 3.6-1, 62.05 percent of the site soils are Jacktone clay soils. This soil type is located throughout the northern portion of the Project site, except in portions of the northeastern corner of the site.

Stockton clay. This series consists of somewhat poorly drained soils in basins. These soils are artificially drained and are deep to a hardpan. Stockton clay is formed in alluvium derived from mixed rock sources. Slope ranges from 0 to 2 percent. This series is characterized as poorly drained, slow runoff, high shrink/swell potential, and permeability is slow. As shown in Table 3.6-1, 37.9 percent of the site soils are Stockton clay soils. This soil type is located throughout the southern portion and northeastern corner of the Project site, except in portions of the southwestern corner of the site.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.6-2 presents the California fault activity rating system.

TABLE 3.6-2: FAULT ACTIVITY RATING

FAULT ACTIVITY RATING	*GEOLOGIC PERIOD OF LAST RUPTURE*	*TIME INTERVAL (YEARS)*
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

Figure 3.6-1 provides a map of known area faults. No known faults traverse through the Stockton Planning Area; however, the Project does lie within a seismically active region. The U.S. Geological Survey identifies the potential seismic source within 32.2 kilometers (20 miles) of the Project site. Three of the closest known faults classified as active by the California Geological Survey include the Vernalis Fault east of the Tracy, located approximately 10 miles to the southwest of the site, the San Joaquin Fault southeast of Tracy, located approximately 18.8 miles southwest of the site, and the Great Valley Thrust Fault System south of Tracy, located approximately 19.5 miles southwest of the site. Other faults that could potentially affect the proposed Project include the Midway Fault, the Midland Fault, the Black Butte Fault, Corral Hollow-Carnegie Fault, the Greenville Fault, and the Foothills Fault System.

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault. The partition of moment and the weights for multiple models are given in the following summary.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking. Table 3.6-3 provides a description and a comparison of intensity and magnitude.

TABLE 3.6-3: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
0.1 – 0.9	I	Earthquake shaking not felt
1.0 – 2.9	II	Shaking felt by those at rest.
3.0 – 3.9	III	Felt by most people indoors, some can estimate duration of shaking.
4.0 – 4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6 – 4.9	V	Felt by everyone indoors, many can estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle and glasses clink. Doors open, close and swing.
5.0 – 5.5	VI	Felt by all who estimate duration of shaking. Sleepers awaken, liquids spill, objects are displaced, and weak materials crack.
5.6 – 6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes and glass are broken. Weak chimneys break. Plaster, loose bricks and parapets fall.
6.5 – 6.9	VIII	Difficult to stand. Waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0 – 7.4	IX	General fright as people are thrown down, hard to drive. Trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5 – 7.9	X	General panic. Ground cracks, masonry and frame buildings destroyed. Bridges destroyed, railroads bent slightly. Dams, dikes and embankments damaged.

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
8.0 – 8.4	XI	Large landslides, water thrown, general destruction of buildings. Pipelines destroyed, railroads bent.
8.5 +	XII	Total nearby damage, rock masses displaced. Lines of sight/level distorted. Objects thrown into air.

SOURCE: UNITED STATES GEOLOGICAL SURVEY

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, San Joaquin County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong.

Alquist-Priolo Special Study Zone

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site. The Project site is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Greenville fault zone, is located approximately 26 miles southwest of the Project site.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the Project site is expected during the life of the proposed Project. Therefore, all structures will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated.

Liquefaction

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. Liquefaction can cause foundation failure of buildings and other facilities due to the reduction of foundation bearing strength. The potential for liquefaction depends on the duration and intensity of earthquake shaking, particle size distribution of the soil, density of the soil, and elevation of the groundwater. Areas at risk of liquefaction are typified by a high groundwater table and underlying loose to medium-dense, granular sediments, particularly younger alluvium and artificial fill. Clayey type soils are generally not subject to liquefaction.

According to the Envision Stockton 2040 General Plan Update EIR, the Stockton Planning Area is identified as having a low liquefication potential due to much of the shallow sediments beneath the Planning Area being dominated by clays and clay-rich deposits. Additionally, the California Geological Survey (CGS) has not mapped any seismically-induced liquefication hazard zones in the Stockton Planning Area. Therefore, the probability of soil liquefaction taking place at the Project site is considered to be a low hazard, due the composition of clayey soils on-site and distance from active fault zones.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it 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. Since the potential for liquefaction is low, the potential for lateral spreading is present. According to the Envision Stockton 2040 General Plan Update EIR, the Stockton Planning Area does not appear to be located atop unstable geologic materials that are prone to lateral spreading. Therefore, the potential for lateral spreading at the Project site is also low.

Landslides

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e., cut and fill). The potential for landslides is considered remote in the San Joaquin Valley floors due to the lack of significant slopes. Additionally, the Envision Stockton 2040 General Plan Update EIR identifies the landslide potential in the Stockton Planning Area as very low due to the gentle topography and lack of steep s lopes. For this reason, the probability of landslides occurring on the Project site is low. The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level.

NON-SEISMIC HAZARDS

Expansive Soils

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by

expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. According to the NRCS Web Soil Survey, the soils in the Project site have a high shrink-swell potential due to their clayey composition. The NRCS Web Soil Survey indicated that near surface soils within the Project site have medium plasticity, and the expansion potential of the soils would respond to fluctuations in moisture content.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e., rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover. Based on the soils on-site, it is anticipated that the Project site would be susceptible to only water erosion.

The NRCS Web Soil Survey identified the erosion potential for the soils in the Project site, including the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf varies from 0.2 to 0.28, which is considered a low to moderate potential for erosion. Furthermore, because the Project site is essentially flat, the erosion potential is slight.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Stockton General Plan as an issue in the Stockton area. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

Subsidence

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. Subsidence has been identified in the Stockton General Plan as an issue in the Stockton area given the location near the Delta; however, clayey soils, such as Jacktone clay and Stockton clay, are not prone to subsidence. Therefore, the probability of subsidence occurring on the Project site is low.

PALEONTOLOGICAL RESOURCES

Paleontological resources consist of the fossilized remains of plants and animals, including vertebrates (animals with backbones) and invertebrates (e.g., starfish, clams, ammonites, and coral). Fossils of microscopic plants and animals, or microfossils, are also considered in this analysis. The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. The geologic formations containing the majority of fossils in the county are considered geologically young; the oldest fossil-bearing formation dates to the Paleocene epoch (65 million years old). Most of the fossil-bearing geologic units in the county were formed in ancient marine environments such as inland embayments, coastal areas, and extensive inland seas.

Paleontological resources in the San Joaquin Region are most prevalent in geologic formations located along the western margin of the San Joaquin Valley, miles away from the Project site. These formations include the marine sandstone, mudstone, siltstone, and shale of the San Pablo Formation, various undivided conglomerate, sandstone, and siltstone units, and the Moreno Formation. The Moreno Formation, which is present along the western margin of the Great Valley as an elongated and continuous, northwest-trending unit, consists of shale, sandstone, and siltstone that were once deposited in a deep-marine environment. According to the Envision Stockton 2040 General Plan Update EIR, a search of the database of the UC Museum of Paleontology at Berkeley identified over 800 documented fossil localities within San Joaquin County; however, only a handful were identified within the Stockton Planning Area.

3.6.2 REGULATORY SETTING

FEDERAL

Uniform Building Code

The purpose of the Uniform Building Code (UBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. UBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

The State of California has established a variety of regulations and requirements related to seismic safety and structural integrity, including the California Building Code, the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

California Building Standards Code

The CBSC is included in Title 24 of the California Code of Regulations (CCR) and includes the California Building Code. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

The CBSC is a compilation of three types of building criteria from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Building Code

The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design, Chapter 17 addresses structural tests and special inspections, and Chapter 18 addresses soils and foundations. Section 1610 provides structural design standards for foundation walls and retaining walls to ensure resistance to lateral soil loads. Section 1613 provides structural design standards for earthquake loads. Section 1704.7 requires special inspections for existing site soil conditions, fill placement and load-bearing requirements during the construction as specified in Table 1704.7 of this section. Sections 1704.8 through 1704.16 provide inspection and testing requirements for various foundation types, and construction material types. Section 1803.1.1.1 requires each city and county enact an ordinance which requires a preliminary soil report and that the report be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code. Section 1803.5.3 defines expansive soils and specifies that in areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Section 1803.5.4 specifies that a subsurface soil investigation must be performed to determine whether the existing ground-water table is above or within 5 feet (1524 mm) below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation. Section 1803.5.8 provides specific standards where shallow foundations will bear on compacted fill material more

than 12 inches (305 mm) in depth. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Section 1804 provides standards and requirements for excavation, grading, and fill. Section 1808, 1809, and 1810 provides standards and requirements for the construction of varying foundations.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

- Cities and Counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.

- The State Mining and Geology Board provides additional regulations, policies, and criteria, to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

Caltrans Seismic Design Criteria

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. Memo 20-1 outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components and seismic design practices that collectively make up Caltrans' seismic design methodology.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The Regional Water Quality Control Board (RWQCB) issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The California State Water Resources Control Board (SWRCB) issues general permits for stormwater runoff from construction sites statewide.

Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

In accordance with the NPDES General Construction Permit requirements, a Storm Water Pollution Prevention Plan (SWPPP) is required for projects that disturb at least one acre of soil. The SWPPP must be submitted to the RWQCB.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

LOCAL

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the following policy that is relevant to geotechnical aspects of the proposed Project:

POLICY: SAFETY ELEMENT

- SAF-2.2. Prepare sufficiently for major events to enable quick and effective response.

City of Stockton Municipal Code

Title 15 of the Stockton Municipal Code, Building and Construction, provides minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, installation, quality of materials, use and occupancy, location and maintenance of all buildings and structures within this jurisdiction, and certain equipment. Chapter 15.40 of this title adopts the 2019 California Building Code.

Chapter 15.48 of the Municipal Code, Grading and Erosion Control, establishes requirements for clearing and grubbing, grading, filling and excavation of land to minimize damage to surrounding property, public right-of-way, and degradation of water quality; controlling the discharge of sediments and pollutant turnoff from construction related activities to municipal separate storm drains, and reducing pollutants in stormwater discharges to the maximum extent practicable. The ordinance requires any development project resulting in the excavation of 50 cubic yards of soil or more to obtain a grading and erosion control permit. Grading and erosion control permits, and amendments thereto, are subject to the requirements of the California Environmental Quality Act (CEQA) if they have not been addressed in a previous environmental document. Individual project applicants are required to furnish a copy of the permit application to the City for review and approval. The City reviews all grading and erosion control permits and geotechnical studies and reports in accordance with the Ordinance to ensure geologic and soil stability have been properly addressed.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on geology and soils if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - 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;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- 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; and/or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, or landslides (Less than Significant)

As previously mentioned, the Project site is comprised of active agricultural fields that have been historically used for intensive agricultural purposes, including watermelon and walnut production. The off-site sewer improvements would be located within the Airport Way right-of-way, and adjacent to the roadway in certain limited areas (such as northeast of the Airport Way and Arch Airport Road intersection, and northeast of the Airport Way and Boeing Way intersection). The proposed Project would subdivide the approximately 422.22-acres of agricultural land into 13 development lots, two basin lots, two one open space lots, one sewer pump station lot, and off-site sewer improvements. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses. The following describes the potential for the loss, injury, or death due to ground rupture, strong ground shaking, liquefication, or landslides on the Project site.

GROUND RUPTURE

The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. As shown on Figure 3.6-1, the Project site is not within an Alquist-Priolo Special Study Zone and no faults are located within the Stockton Planning Area.

As previously discussed, the U.S. Geological Survey identifies potential seismic sources within 32.2 kilometers (20 miles) of the Project site. The nearest earthquake fault zoned as active by the State of California Geological Survey is the Vernalis Fault Zone, located approximately 10 miles to the southwest of the site. Therefore, because no faults are located on the Project site, the potential for ground rupture (cracking or breaking of the ground during an earthquake) would be less than significant.

GROUND SHAKING

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, Stockton is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. As a result of these factors the California Geological Survey has defined the entire county as a seismic hazard zone. The Uniform Building Code places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

To reduce the impact of seismic ground shaking on the development, the Project would be required to be constructed using standard engineering and seismic safety design techniques of the California Building Code. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

LIQUEFACTION

To date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Stockton or in the Project site. Furthermore, the Envision Stockton 2040 General Plan Update EIR identifies the Stockton Planning Area is at low risk for liquefaction. Therefore, the probability of soil liquefaction taking place at the Project site is considered to be a low hazard due the composition of clayey soils on-site and distance from active fault zones, resulting in a less than significant impact.

LANDSLIDES

The Project site relatively flat; therefore, the potential for a landslide in the Project site is non-existent. Some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements Additionally, according to the CGS Information Warehouse: Regulatory Maps, the site is not located within a Landslide and Liquefication Zone. As a result, the probability of landslides causing substantial adverse effects on people or structures is less than significant.

CONCLUSION

The City, as with virtually all sites within the State of California, will always be subject to potential ground shaking caused by seismic activity anywhere in California, including the Project site. Seismic activity could come from a known active fault such as the Vernalis Fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these state requirements, which have been adopted by the City of Stockton, include design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 specifically provides structural design standards for earthquake loads. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design

Categories in accordance with Section 1613. Additionally, the City of Stockton has adopted Design and Construction Standards and incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level. Because all development in the Project site must be designed in conformance with these state and local standards and policies, any potential impact would be considered ***less than significant***.

Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil (Less than Significant with Mitigation)

The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover; thus, there is the potential for erosion associated with construction activities or through the operational phase of a project.

The Project site contains high clay content surface soils; therefore, the Project site would potentially be subject to water erosion. As previously mentioned, a Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program, which identified the erosion factor K for on-site soils. Within the Project site, the erosion factor Kf varies from 0.20 to 0.28, which is considered a low potential for erosion. Furthermore, because the Project site is essentially flat, the erosion potential is slight. Regardless of the potential for erosion, there is always the potential for human caused erosion associated with construction activities or through the operational phase of a project. However, grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. Additionally, there is the potential for erosion associated with stormwater runoff throughout the operational phase of the project. The potential for erosion is associated with the design of the improvements, structures, and landscaping.

The proposed Project would be subject to the provisions of the City's Grading and Erosion Control Ordinance (Chapter 15.48 of the Stockton Municipal Code. The purpose of this Ordinance includes the regulation of grading activity on all property within the City of Stockton that results in the excavation of 50 cubic yards of soil. The Ordinance establish requirements for clearing and grubbing, grading, filling and excavation of land to minimize damage to surrounding property, public right-of-way, and degradation of water quality; controlling the discharge of sediments and pollutant turnoff from construction related activities to municipal separate storm drains; and reducing pollutants in stormwater discharges to the maximum extent practicable. Compliance with all applicable erosion control measures outlined in the City's Grading and Erosion Control Ordinance would assist in minimizing any impacts related to top soil erosion.

Additionally, in accordance with the NPDES Stormwater Program, projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include:

temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. Mitigation Measure 3.9-1 in Section 3.9, Hydrology and Water Quality, requires an approved SWPPP for the Project designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

Overall, compliance with the City's Grading and Erosion Control Ordinance coupled with the implementation of Mitigation Measure 3.9-1 would ensure that the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.9-1**.*

Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant with Mitigation)

LANDSLIDE AND LIQUEFACTION

As discussed in Impact 3.6-1, the Project site is relatively flat and, to date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction or landslide zones in the City of Stockton, including the Project site. Furthermore, the Envision Stockton 2040 General Plan Update EIR identifies the Stockton Planning Area, including the Project site, is at low risk for liquefaction and landslides. Therefore, the probability of a landslide or liquefication on the Project sites is low.

LATERAL SPREADING

Lateral spreading typically occurs on the surface of a slope and is oftentimes directly associated with areas of liquefaction. As stated, the Project site is relatively flat and there are no slopes on-site or within the surrounding area. Further, the Project site is not located within an area identified as having the potential for liquefaction. According to the Envision Stockton 2040 General Plan Update EIR, the Stockton Planning Area does not appear to be located atop unstable geologic materials that are prone to lateral spreading. Therefore, the potential for lateral spreading at the Project site is also low.

COLLAPSIBLE SOILS

Collapsible soils or soil collapse occurs when any unsaturated soils go through a radical rearrangement of particles and greatly decreases in volume upon wetting, additional loading, or both. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. As stated, the Project site is relatively flat and is located in the valley floor away from the bases of mountain ranges. Further, collapsible soils have not been identified as an issue in the Stockton area. According to the Envision Stockton 2040 General Plan Update EIR, the Stockton Planning Area does not appear to be located atop unstable geologic materials that are prone to collapsible soils. Therefore, the potential for soil collapse at the Project site is also low.

SUBSIDENCE

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. Subsidence has not been identified as an issue in the Stockton area. According to the Envision Stockton 2040 General Plan Update EIR, the Stockton Planning Area does not appear to be located atop unstable geologic materials that are prone to subsidence. Therefore, the potential for subsidence at the Project site is also low.

CONCLUSION

Based on the analysis above, the Project site does not have a significant risk of becoming unstable as a result landslide, liquefication, subsidence, or soil collapse; however, the potential does still exist. Mitigation Measure 3.6-1 requires the preparation of a final geotechnical evaluation of soils at a design-level, consistent with the requirements of the CBC. Implementation of this mitigation measure would ensure that all on-site fill soils are properly compacted and comply with the applicable safety requirements established by the CBC to reduce risks associated with unstable soils and excavations and fills, and that any issues associated with unstable soils are addressed at the design level. Therefore, implementation of Mitigation Measure 3.6-1 would ensure the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1*: Prior to earthmoving activities for each phase of the Project, a certified geotechnical engineer, or equivalent, shall be retained to perform a final geotechnical evaluation of the soils at a design-level as required by the requirements of the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or lateral spreading. The grading and improvement plans, as well as the storm drainage and building plans*

for each phase of the Project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.

Impact 3.6-4: The proposed Project has the potential for expansive soils to create substantial risks to life or property (Less than Significant with Mitigation)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of certain varieties of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

According to the NRCS Web Soil Survey, the soils in the Project site have a high shrink-swell potential due to their clayey composition. The NRCS Web Soil Survey indicated that near surface soils within the Project site have medium plasticity, and the expansion potential of the soils would respond to fluctuations in moisture content. Therefore, measures to reduce potentially significant impacts related to expansive site soils would be necessary.

As discussed in Impact 3.6-3, the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. The City of Stockton also requires a final geotechnical evaluation to be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations. Mitigation Measure 3.6-1, presented above, provides the requirement for a final geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and improvement plans, as well as the storm drainage and building plans, are required to be designed in accordance with the recommendations provided in the final geotechnical evaluation. With the implementation of Mitigation Measure 3.6-1 (requiring a final Geotechnical Evaluation, and site recommendations) the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.6-1**.*

Impact 3.6-5: The proposed Project has the potential to directly or indirectly destroy a unique geological feature or paleontological resource (Less than Significant with Mitigation)

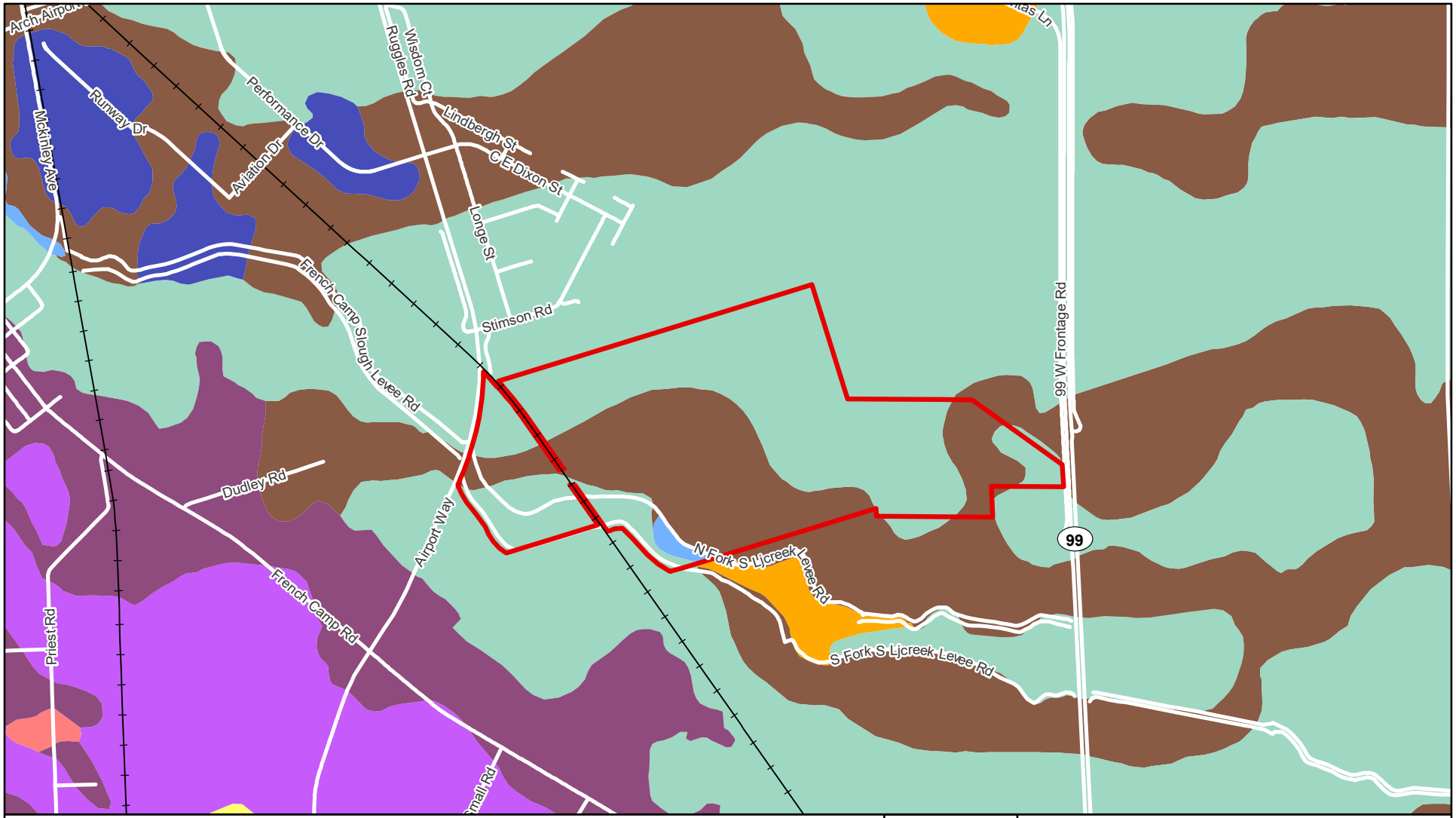
The Project site is located in an area known to have paleontological resources. As previously mentioned, the Envision Stockton 2040 General Plan Update EIR included a search of the database of the UC Museum of Paleontology at Berkeley, which identified over 800 documented fossil localities within San Joaquin County. While only a handful were identified within the Stockton Planning Area, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities from development of the Project site.

Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.6-2 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-2: *If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find.*

Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology.



LEGEND

- Project Boundary

NRCS Soil Description (Acres Onsite)

- Delhi loamy sand, 0 to 2 percent slopes, MLRA 17
- Dumps
- Galt clay, 0 to 1 percent slopes, MLRA 17
- Hollenbeck silty clay, 0 to 2 percent slopes (0.2 ac)
- Honcut sandy loam, 0 to 2 percent slopes
- Jacktone clay, 0 to 2 percent slopes (259.3 ac)
- Stockton clay, 0 to 2 percent slopes (158.4 ac)
- Tinnin loamy coarse sand, 0 to 2 percent slopes
- Veritas fine sandy loam, 0 to 2 percent slopes
- Water (4.3 ac)

N

0 500 1,000
Feet

Source: San Joaquin County GIS; NRCS Soils Database. Map date: September 23, 2020. Revised: December 29, 2020; January 20, 2021; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.6-1. Soils

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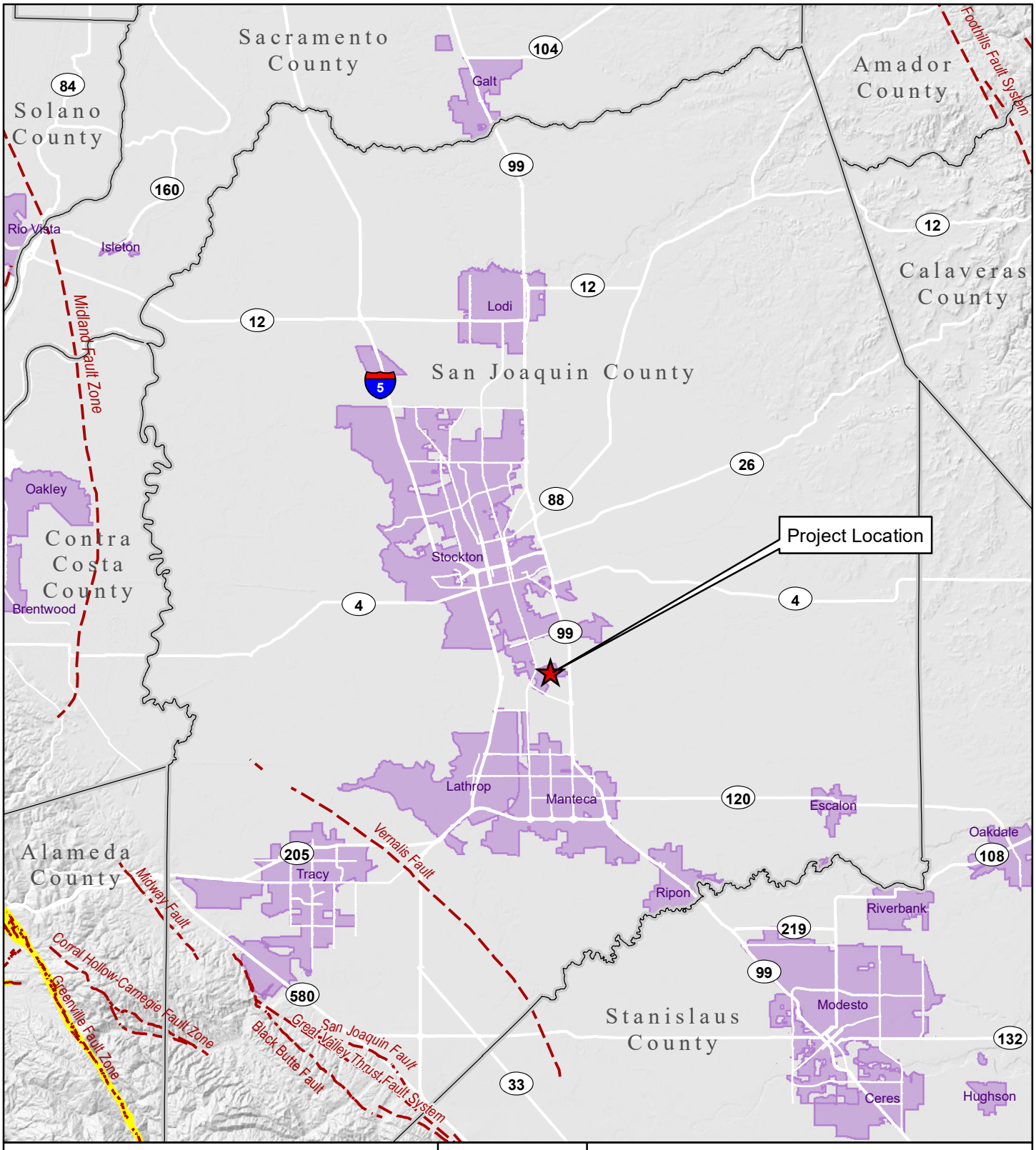

LEGEND

- Quaternary Fault
- Alquist Priolo Fault Zone

0 2½ 5
Miles

Source: San Joaquin County GIS; USGS; California State GeoPortal. Map date: September 23, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.6-2. Earthquake Fault Map

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the entire site to urban uses. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the proposed Project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed Project. Disclosure and discussion of the Project's estimated energy usage and greenhouse gas emissions are provided.

Four comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Sierra Club (October 27, 2020), State of California Department of Justice (November 24, 2021), California Air Resources Board (November 17, 2020), and the San Joaquin Valley Air Pollution Control District (SJVAPCD) (October 30, 2020). The SJVAPCD commenter pointed out that the SJVAPCD has the *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* (March 19, 2015) as a technical guidance for the review of air quality impacts from proposed projects within the boundaries of the District. Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased

coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70%

to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large of wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60%

to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity generated from renewable resources by 2020, 60 percent by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under AB 100).

Overall, in 2018, California's per capita energy usage was ranked fourth-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e., fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles, results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. In 2016, more than one-fourth of the electricity supply comes from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2020a). In 2016, approximately 50 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 25 percent of the State's utility-scale net electricity generation came from non-hydroelectric renewable technologies, such as solar, wind, geothermal, and biomass. Another 14 percent of the State's utility-scale net electricity generation came from hydroelectric generation, and nuclear energy powered an additional 11 percent. The amount of electricity generated from coal negligible (approximately 0.2 percent) (U.S.

EIA, 2020a). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2019, electricity consumption in San Joaquin County was 5,583 GWh (California Energy Commission, 2020).

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the State's transportation energy needs.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission, 2012). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the San Joaquin County area. In 2018, natural gas consumption in San Joaquin County was 259 million therms (California Energy Commission, 2020).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor National Ambient Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS

were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

On April 2, 2007, in the court case of *Massachusetts et al. vs. the USEPA et al*. (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and

highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, State, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

In 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions all across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB "Scoping Plans" intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that "[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to

implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Statute Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

In 2002, the Legislature enacted Senate Bill 1078 (Stats. 2002, ch. 516), which established the Renewables Portfolio Standard program, requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. (See Pub. Utilities Code, Section 399.11 et seq. [subsequently amended].) The legislation set a target by which 20 percent of the State's electricity would be generated by renewable sources. (Pub. Utility Code, Section 399.11, subd. (a) [subsequently amended].) As described in the Legislative Counsel's Digest, Senate Bill 1078 required "[e]ach electrical corporation … to increase its total procurement of

eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet an annual target, the electrical corporation would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall, if funds are made available as described. An electrical corporation with at least 20 percent of retail sales procured from eligible renewable energy resources in any year would not be required to increase its procurement in the following year."

In 2006, the Legislature enacted Senate Bill 107 (Stats. 2006, ch. 464), which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. (Pub. Utility Code, Section 399.11, subd (a) [subsequently amended].)

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set even more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State's electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].)

SB 350, discussed above, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) Of equal significance, Senate Bill 350 also embodies a policy encouraging a substantial increase in the use of electric vehicles. As noted earlier, Section 740.12(b) of the Public Utilities Code now states that the PUC, in consultation with CARB and the CEC, must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Executive Order, B-16-12, issued in 2012, embodied a similar vision of a future in which zero-emission vehicles (ZEV) will play a big part in helping the State meet its GHG reduction targets. Executive Order B-16-12 directed State government to accelerate the market for in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be "ZEV ready";
- By 2020, the State will have established adequate infrastructure to support 1 million ZEVs in California;
- By 2025, there will be 1.5 million ZEVs on the road in California; and
- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

In summary, California has set a statutory goal of requiring that, by the 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity intended to sufficient to allow the mass conversion of the statewide vehicle fleet from petroleum-fueled vehicles to electrical vehicles and/or other ZEVs. By 2045, all electricity must come from renewable resources and other carbon-free resources. Former Governor Brown had an even more ambitious goal for the State of achieving carbon neutrality as soon as possible and by no later than 2045. The Legislature is thus looking to California drivers to buy electric cars, powered by green energy, to help the State meet its aggressive statutory goal, created by SB 32, of reducing statewide GHG emissions by 2030 to 40 percent below 1990 levels. Another key prong to this strategy is to make petroleum-based fuels less carbon-intensive. A number of statutes in recent years have addressed that strategy. These are discussed immediately below.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 ("Pavley Bill") (Stats. 2002, ch. 200), which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the "Pavley standards." In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are commonly known as the "Pavley II standards." (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell

electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

Cap and Trade Program

In 2011, CARB adopted the final cap-and-trade program for California (See California Code of Regulations, Title 17, Sections 95801-96022.) The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is intended to regulate more than 85 percent of California's emissions and staggers compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012); (2) fuel combustion and transportation (2015).

According to 2012 CARB guidance, "[t]he Cap-and-Trade Program will reduce GHG emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The statewide cap for GHG emissions from major sources, which is measured in metric tons of carbon dioxide equivalent (MTCO2e), will commence in 2013 and decline over time, achieving GHG emission reductions throughout the program's duration. Each covered entity will be required to surrender one permit to emit (the majority of which will be allowances, entities are also allowed to use a limited number of CARB offset credits) for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits."

The guidance goes on to say that "[s]tarting in 2012, major GHG-emitting sources, such as electricity generation (including imports), and large stationary sources (e.g., refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants) that emit more than 25,000 $MTCO_2e$ per year will have to comply with the Cap-and-Trade Program. The program expands in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels, and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase." In early April 2017, the Third District Court of Appeal upheld the lawfulness of the cap-and-trade program as a "fee" rather than a "tax." (See *California Chamber of Commerce et al. v. State Air Resources Board et al.* (2017) 10 Cal.App.5th 604.)

AB 398 (Stats. 2017, ch. 135) extended the life of the existing Cap and Trade Program through December 2030.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035. Each of California's metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed which demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

AB 32 SCOPING PLAN

In 2008, CARB adopted the Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) CO_2e, or approximately 22 percent from the State's projected 2020 emission level of 545 MMT of CO_2e under a business-as-usual scenario This is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 MMT CO_2e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008. The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State GHG inventory. CARB estimates the largest reductions in GHG emissions would be by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (26.1 MMT CO_2e);
- the Low Carbon Fuel Standard (15.0 MMT CO_2e);
- energy efficiency measures in buildings and appliances (11.9 MMT CO_2e); and
- renewable portfolio and electricity standards for electricity production (23.4 MMT CO_2e).

In 2011, CARB adopted a cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period. Enforceable compliance obligations started in 2013. The program applies to facilities that comprise 85 percent of the State's GHG emissions.

With regard to land use planning, the Scoping Plan expects that reductions of approximately 3.0 MMT CO_2e will be achieved through implementation of Senate Bill (SB) 375, which is discussed further below.

2014 SCOPING PLAN UPDATE

CARB revised and reapproved the Scoping Plan, and prepared the First Update to the 2008 Scoping Plan in 2014 (2014 Scoping Plan). The 2014 Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 MMT of CO_2e emissions, or approximately 16 percent, from the State's projected 2020 emission level of 507 MMT of CO_2e under the business-as-usual scenario defined in the 2014 Scoping Plan. The 2014 Scoping Plan also includes a breakdown of the amount of GHG reductions CARB recommends for each emissions sector of the State's GHG inventory. Several strategies to reduce GHG emissions are included: the Low Carbon Fuel Standard, the Pavley Rule, the ACC program, the Renewable Portfolio Standard, and the Sustainable Communities Strategy.

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provides additional direction for developing the scoping plan. In response, CARB adopted an updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks.
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2019 Title 24 standards. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. The California Energy Commission updates the standards every three years.

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

CEQA Direction

In 2008, the Office of Planning and Research (OPR), issued Guidance regarding assessing significance of GHGs in California Environmental Quality Act (CEQA) documents; that Guidance stated that the adoption of appropriate significance thresholds was a matter of discretion for the lead agency. The OPR Guidance states:

> "[T]he global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked the CARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis."

Determine Significance

- When assessing a project's GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project's impacts are significant.
- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact," individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).
- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project.

The OPR Guidance did not require Executive Order S-3-05 to be used as a significance threshold under CEQA. Rather, OPR recognized that, until the CARB establishes a statewide standard, selecting an appropriate threshold was within the discretion of the lead agency.

In 2010, the California Natural Resources Agency added Section 15064.4 to the CEQA Guidelines, providing new legal requirements for how agencies should address GHG-related impacts in their CEQA documents. As amended in 2019, Section 15064.4 provides as follows:

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> (1) Quantify greenhouse gas emissions resulting from a project; and/or
>
> (2) Rely on a qualitative analysis or performance-based standards.

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Section 15126.4, subdivision (c), provides guidance on how to formulate mitigation measures addressing GHG-related impacts:

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of

mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

(1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

(2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;

(3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;

(4) Measures that sequester greenhouse gases;

(5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

California Supreme Court Decisions

THE "NEWHALL RANCH" CASE

On November 30, 2015, the California Supreme Court released its opinion on *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (hereafter referred to as the Newhall Ranch Case).

Because of the importance of the Supreme Court as the top body within the California Judiciary, and because of the relative lack of judicial guidance regarding how GHG issues should be addressed in CEQA documents, the opinion provides very important legal guidance to agencies charged with preparing EIRs.

The case involved a challenge to an EIR prepared by the California Department of Fish and Wildlife (CDFW) for the Newhall Ranch development project in Los Angeles County, which consists of approximately 20,000 dwelling units as well as commercial and business uses, schools, golf courses, parks and other community facilities in the City of Santa Clarita.

In relation to GHG analysis, the Newhall Ranch Case illustrates the difficulty of complying with statewide GHG reduction targets at the local level using CEQA to determine whether an individual project's GHG emissions will create a significant environmental impact triggering an EIR, mitigation, and/or statement of overriding consideration. The EIR utilized compliance with AB 32's GHG reduction goals as a threshold of significance and modelled its analysis on the CARB's business-as-usual (BAU) emissions projections from the 2008 Scoping Plan. The EIR quantified the project's

annual emissions at buildout and projected emissions in 2020 under a BAU scenario, in which no additional regulatory actions were taken to reduce emissions. Since the Scoping Plan determined a reduction of 29 percent from BAU was needed to meet AB 32's 2020 reduction goal, the EIR concluded that the project would have a less-than-significant impact because the project's annual GHG emissions were projected to be 31 percent below its BAU estimate.

The Supreme Court concluded that the threshold of significance used by the EIR was permissible; however, the BAU analysis lacked substantial evidence to demonstrate that the required percentage reduction from BAU is the same for an individual project as for the entire State. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the Supreme Court determined that the EIR's GHG analysis was not sufficient to support the conclusion that GHG impacts would be less than significant.

In addition, the Supreme Court provided the following guidance regarding potential alternative approaches to GHG impact assessment at the project level for lead agencies:

1. The lead agency determination of what level of GHG emission reduction from business-as-usual projection that a new land development at the proposed location would need to achieve to comply with statewide goals upon examination of data behind the Scoping Plan's business-as-usual emission projections. The lead agency must provide substantial evidence and account for the disconnect between the Scoping Plan, which dealt with the State as a whole, and an analysis of an individual project's land use emissions (the same issues with CEQA compliance addressed in this case);

2. The lead agency may use a project's compliance with performance based standards – such as high building energy efficiency – adopted to fulfill a statewide plan to reduce or mitigate GHG emissions to assess consistency with AB 32 to the extent that the project features comply with or exceed the regulation (See Guidelines Section 15064.4(a)(2), (b)(3); see also Guidelines Section 15064(h)(3)). A significance analysis would then need to account for the additional GHG emissions – such as transportation emissions – beyond the regulated activity. Transportation emissions are in part a function of the location, size, and density or intensity of a project, and thus can be affected by local governments' land use decision making. Additionally, the lead agency may use a programmatic effort including a general plan, long range development plan, or a separate plan to reduce GHG emissions (such as Climate Action Plan or a SB 375 metropolitan regional transportation impact Sustainable Communities Strategy) that accounts for specific geographical GHG emission reductions to streamline or tier project level CEQA analysis pursuant to Guidelines 15183.5(a)-(b) for land use and Public Resources Code Section 21155.2 and 21159.28 and Guidelines Section 15183.5(c) for transportation;

3. The lead agency may rely on existing numerical thresholds of significance for GHG emissions (such as the Bay Area Air Quality Management District's proposed threshold of significance of 1,100 MT CO_2E in annual emission for CEQA GHG emission analysis on new land use projects). The use of a numerical value provides what is "normally" considered significant

but does not relieve a lead agency from independently determining the significance of the impact for the individual project (See Guidelines Section 15064.7).

THE SANDAG CASE

In *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497 (*SANDAG)*, the Supreme Court addressed the extent to which, if any, an EIR for a Regional Transportation Plan (RTP) with a Sustainable Communities Strategy (SCS) must address the proposed project's consistency with the 2050 target set forth in Executive Order S-03-05 (i.e., 80 percent below 1990 levels). The Court held that SANDAG did not abuse its discretion by failing to treat the 2050 GHG emissions target as a threshold of significance. The Court cautioned, however, that its decision applies narrowly to the facts of the case and that the analysis in the challenged EIR should not be used as an example for other lead agencies to follow going forward. Notably, the RTP itself covered a planning period that extended all the way to 2050.

The Court acknowledged the parties' agreement that "the Executive Order lacks the force of a legal mandate binding on SANDAG[.]" (*Id*. at p. 513.) This conclusion was consistent with the Court's earlier decision in *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015, which held the Governor had acted in excess of his executive authority in ordering the furloughing of State employees as a money-saving strategy. In that earlier case, which is not mentioned in the *SANDAG* decision, the Court held that the decision to furlough employees was legislative in character, and thus could only be ordered by the Legislature, and not the Governor, who, under the State constitution, may only exercise executive authority. In *SANDAG*, the Court thus impliedly recognized that Governors do not have authority to set statewide legislative policy, particularly for decades into the future. Even so, however, the Court noted, and did not question, the parties' agreement that "the Executive Order's 2050 emissions reduction target is grounded in sound science." (3 Cal.5th at p. 513.) Indeed, the Court emphasized that, although "the Executive Order 'is not an adopted GHG reduction plan' and that 'there is no legal requirement to use it as a threshold of significance,'" the 2050 goal nevertheless "expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate.

This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan." (*Id*. at p. 515.) Towards the end of the decision, the Court even referred to "the state's 2050 climate goals" as though the 2050 target from E.O. S-03-05 had some sort of standing under California law. (*Id*. at p. 519.) The Court seemed to reason that, because the Legislature had enacted both AB 32 and SB 32, which followed the downward GHG emissions trajectory recommended in the Executive Order, the Legislature, at some point, was also likely to adopt the 2050 target as well: "SB 32 … reaffirms California's commitment to being on the forefront of the dramatic greenhouse gas emission reductions needed to stabilize the global climate." (*Id*. at p. 519.) Finally, the Court explained that "planning agencies like SANDAG must ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes." (*Ibid*.)

In sum, the Court recognized that the Executive Order did not carry the force of law, but nevertheless considered it to be part of "state climate policy" because the Legislature, in enacting both AB 32 and

SB 32, seems to be following both the IPCC recommendations for reducing GHG emissions worldwide and evolving science. Nothing in the decision, however, suggests that all projects, regardless of their buildout period, must address the 2050 target or treat it as a significance threshold.

LOCAL

Envision Stockton 2040 General Plan

The following policies and actions of the Stockton General Plan related to GHGs, climate change, and energy are applicable to the proposed Project:

POLICIES: LAND USE ELEMENT

- LU-1.1. Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.
- LU-2.5. Promote Downtown Stockton as a primary transit node that provides multi-modal connections throughout the city and region.
- LU-3.2. Retain narrower roadways and reallocate right-of-way space to preserve street trees and mature landscaping and enhance the pedestrian and bicycle network within and adjacent to residential neighborhoods.
- LU-6.2. Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
- LU-6.4: Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).
- LU-TR-1.1. Ensure that roadways safely and efficiently accommodate all modes and users, including private, commercial, and transit vehicles, as well as bicycles and pedestrians and vehicles for disabled travelers.

ACTIONS: LAND USE ELEMENT

- LU-1.1A. Require renovated and new mixed-use projects to be planned and designed to contribute to the corridor's identity through appropriate public spaces, gateways, streetscapes, pedestrian walkways, setbacks, edge treatments, and other design features.
- LU-1.1B. Evaluate the City's parking policies, and amend the Development Code to provide more flexibility as appropriate to facilitate mixed-use redevelopment.
- LU-1.1D. Encourage the redevelopment of struggling underutilized commercial strips into multi-family housing opportunities.
- LU-2.5A. Improve transit, bicycle, and pedestrian connectivity between the Downtown and local colleges and universities.
- LU-2.5B. Study the possible one-way to two-way conversions of streets in the Downtown (e.g., El Dorado/Center, Park/Oak, and Main/Market) in order to improve pedestrian and bicycle safety, slow traffic speeds, and support local businesses.

- LU-2.5C. Continue to develop an active transportation plan for Downtown Stockton, and implement complete streets projects to improve bicycle and pedestrian safety that are identified in the plan.
- LU-3.2A. Implement the "road diet" recommendations from the City's Bicycle Master Plan that reduce roadway widths to provide space for bike lanes and other amenities that improve safety and ease of the streetscape for all modes.
- LU-6.2A. Develop and implement an infill incentive program that encourages infill development through expedited permitting, changes in fee structures, prioritizing infrastructure improvements in infill areas, property owner and/or landlord incentives to maintain property and reduce blight, and/or other strategies. As part of this program, define and prioritize categories of infill types based on land use and residential density or nonresidential intensity.
- LU-6.2C. Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and strategies to avoid gentrification.
- LU-6.2D. Comply with State requirements that limit the idling of motor vehicles.
- LU-6.4B. Maintain a reasonable proximity and balance (i.e., magnitude) between job-generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.
- LU-6.4C. Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

POLICIES: TRANSPORTATION ELEMENT

- TR-1.2. Enhance the use and convenience of rail service for both passenger and freight movement.
- TR-2.1. Develop safe and interconnected bicycle and pedestrian facilities, including along "complete" streets that target multiple travel modes.
- TR.-2.3. Utilize natural features and routes with lower traffic volumes and speeds to encourage residents to walk and wheel more frequently.
- TR-3.1. Avoid widening existing roadways in an effort to preclude inducement of additional vehicle traffic.
- TR-3.2. Require new development and transportation projects to reduce travel demand and greenhouse gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.
- TR-4.2. Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.

ACTIONS: TRANSPORTATION ELEMENT

- TR-1.1A. Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing any new truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists.
- TR-1.1B. Maintain and periodically update a schedule for synchronizing traffic signals along arterial streets and freeway interchanges to facilitate the safe and efficient movement of people and goods and to provide signal priority for transit vehicles at intersections.
- TR-1.1C. Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.
- TR-1.1D. Update existing Precise Road Plans to reflect the 2040 General Plan, including changes in land use and level of service requirements, and a shift in priority from vehicular travel to travel by all modes through complete streets.
- TR-1.1E. Work with local school districts to implement pedestrian crossing enhancements like stop signs within neighborhoods around schools, encourage activities like a walking school bus, and create educational programs that teach students bicycle safety.
- TR-1.2A. Actively support and pursue access to high-speed rail.
- TR-1.2B. Support the San Joaquin Regional Transportation District's Regional Bus Service, Altamont Commuter Express (ACE), and AMTRAK's San Joaquin intercity rail service, and pursue and support other regional transit programs and projects, such as:
    - ACE plans to bypass existing bottlenecks (e.g., the Union Pacific railyards in South Stockton);
    - Connecting to the BART system;
    - Extending ACE service south to Merced; and
    - Proposing rail between Stockton and Sacramento along the California Traction and other rail corridors.
- TR-2.1A. Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, and shopping and office centers, along with showers and lockers for major employment sites.
- TR-2.1B. Maintain and implement the City of Stockton Bicycle Master Plan.
- TR-2.1C. Maintain and implement the City of Stockton Safe Route to School Plan.
- TR-2.2A. Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.
- TR-2.2B. Obtain input from community residents, non-profit organizations, and local and regional transit operators on major new development projects, and support transit operators by ensuring major projects are designed to support transit and provide fair share funding of the cost of adequate transit service and access.

- TR-2.2C. Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, with the assistance of new development funding.
- TR-2.2D. Support efforts to electrify buses.
- TR-2.3A. Develop and maintain bikeways on separate rights-of-way (e.g., Calaveras River, East Bay Municipal Utility District easement, French Camp Slough, and Shima Tract Levee).
- TR-2.3B. Require dedication of adequate right-of-way for bicycle use in new arterial and collector streets, and where feasible, in street improvement projects.
- TR-3.1A. Limit street widths to the minimum necessary to adequately carry the volume of anticipated traffic, while allowing for safe bicycle and pedestrian facilities, emergency access, and large vehicle access.
- TR-3.1B. Where feasible and appropriate, reduce the width of existing streets using bulb-outs, medians, pedestrian islands, shade tree landscaping, appropriate signage, and similar methods, while not jeopardizing emergency response.
- TR-3.1C. Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage.
- TR-3.2A. Amend the parking requirements in the Development Code to encourage shared parking, require preferential parking for rideshare vehicles, and allow reduced parking requirements to support transit, bicycling, and walking.
- TR-3.2B. Require commercial, retail, office, industrial, and multifamily residential development to provide charging stations and prioritized parking for electric and alternative fuel vehicles.
- TR-3.2C. Respond to the implications and opportunities associated with connected vehicles and autonomous vehicles by monitoring technological advances and adjusting roadway infrastructure and parking standards to accommodate autonomous vehicle technology and parking needs.
- TR-3.2D. Continue to coordinate with the San Joaquin Council of Governments to increase opportunities for additional park and ride facilities, consistent with the San Joaquin County Regional Park and Ride Lot Master Plan.
- TR-4.2A. To evaluate the effects of new development and determine mitigation measures and impact fees, require projects to evaluate per capita VMT and impacts to transit, bicycle, and pedestrian modes.
- TR-4.2B. Amend the City's Transportation Impact Analysis Guidelines to include alternative travel metrics and screening criteria.

POLICIES: SAFETY ELEMENT

- SAF-4.1. Reduce air impacts from mobile and stationary sources of air pollution.
- SAF-4.2. Encourage major employers to participate in a transportation demand management program (TDM) that reduces vehicle trips through approaches such as carpooling, vanpooling, shuttles, car-sharing, bikesharing, end-of-trip facilities like showers and bicycle parking, subscription bus service, transit subsidies, preferential parking, and telecommuting.

- SAF-4.3. Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.

ACTIONS: SAFETY ELEMENT

- SAF-4.1A. Require the construction and operation of new development to implement best practices that reduce air pollutant emissions, including:
    - Use of low-emission and well-maintained construction equipment, with idling time limits.
    - Development and implementation of a dust control plan during construction.
    - Installation of electrical service connections at loading docks, where appropriate.
    - Installation of Energy Star-certified appliances.
    - Entering into Voluntary Emissions Reduction Agreements with the San Joaquin Valley Air Pollution Control District.
- SAF-4.1B. Use the results of the Health Risk Assessments required by the California Air Toxics "Hot Spots" Act to establish appropriate land use buffer zones around any new sources of toxic air pollutants that pose substantial health risks.
- SAF-4.1C. Require the use of electric-powered construction and landscaping equipment as conditions of project approval when appropriate.
- SAF-4.1D. Limit heavy-duty off-road equipment idling time to meet the California Air Resources Board's idling regulations for on-road trucks.
- SAF-4.2D. Provide information and conduct marketing and outreach to major existing and new employers about the transportation demand management (TDM) program facilitated by the San Joaquin Council of Governments.
- SAF-4.3A. Distribute educational materials from the San Joaquin Valley Air Pollution Control District on the City's website and at its Permit Center.
- SAF-4.3B. Coordinate review of development project applications with the San Joaquin Valley Air Pollution Control District to ensure that air quality impacts are consistently identified and mitigated during CEQA review.

POLICIES: COMMUNITY HEALTH ELEMENT

- CH-5.1. Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.
- CH-5.2. Expand opportunities for recycling, re-use of materials, and waste reduction.

ACTIONS: COMMUNITY HEALTH ELEMENT

- CH-5.1A. Upon the next revision of the City's Local Hazard Mitigation Plan, conduct a comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies, and incorporate them into the Safety Element, in accordance with SB 379.

- CH-5.1B. Maintain and implement the City of Stockton Climate Action Plan (CAP) and update the CAP to include the following:
    - Updated communitywide GHG emissions inventory;
    - 2030 GHG emissions reduction target, consistent with SB 32;
    - Estimated 2030 GHG emissions reduction benefits of State programs;
    - Summary of the City's progress toward the 2020 local GHG emissions reduction target;
    - New and/or revised GHG reduction strategies that, when quantified, achieve the 2030 reduction target and continue emission reductions beyond 2030; and
    - New or updated implementation plan for the CAP.
- CH-5.1C. Accommodate a changing climate through adaptation and resiliency planning and projects.
- CH-5.2A. Use recycled materials and products for City projects and operations where economically feasible, and work with recycling contractors to encourage businesses to use recycled products in their manufacturing processes and encourage consumers to purchase recycled products.
- CH-5.2B. Continue to require recycling in private and public operations, including construction/demolition debris.
- CH-5.2C. Expand educational and outreach efforts to promote recycling by occupants of multi-family housing, businesses, and schools.

City of Stockton Climate Action Plan

The City of Stockton Climate Action Plan (2014) sets forth a strategy to reduce community-generated GHG emissions, consistent with statewide GHG reduction efforts. As a condition for approval of the 2035 General Plan, the City of Stockton entered into a Settlement Agreement with the Sierra Club and the California Attorney General's Office in October 2008. The Settlement Agreement was enacted to ensure future growth outlined in the City of Stockton 2035 General Plan addresses GHG emissions in a meaningful and constructive manner. The City of Stockton Climate Action Plan (CAP) outlines a framework to feasibly reduce community GHG emissions in a manner that is supportive of AB 32 and is consistent with the Settlement Agreement and 2035 General Plan policy. The CAP is considered functionally equivalent to a GHG Reduction Plan, given that both refer to a document that quantifies and reduces GHG emissions within a particular jurisdiction.

The City of Stockton Climate Action Plan was approved by the Stockton City Council on December 2, 2014. The Climate Action Plan summarizes the City's GHG emissions inventory and provides 26 GHG emissions reduction measures. The CAP relies on numerous voluntary measures for both existing and new development, but also includes mandatory measures where required by other state or local existing mandates and other City initiatives. The CAP also provides implementation strategies for the emissions reduction measures provided within the CAP.

3.7.3 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan).

Prior to the Newhall Ranch decision, GHG analysis in CEQA documents often involved comparison of the project emissions to a "no action taken" (NAT) scenario. In the Newhall Ranch decision, the court found that, although comparison of a project to NAT (or "business as usual") may be appropriate in concept, the comparison of a specific local project against a statewide business as usual scenario is not an analogous comparison. Specifically, the Court stated that the business as usual approach would need to be based on a substantial evidence-supported link between data in the Scoping Plan and the project, at its proposed location, to demonstrate consistency of a project's reductions with statewide goals. It should be noted that, based on current data available, it is not possible, within the structure of the Scoping Plan sectors, to develop the evidence to reliably relate a specific land use development project's reductions to the Scoping Plan's statewide goal, as envisioned by the Court. Based on the court's finding, the NAT approach is now considered problematic and is no longer recommended. Therefore, this DEIR analysis replaces a former SJVAPCD threshold with a threshold that is consistent with the Newhall Ranch decision. This newer approach consists of evaluating the consistency of a project's GHG efficiency with California's GHG reduction targets. In light of the Newhall Ranch decision, an efficiency metric was developed to assess the Project's consistency with California's adopted GHG reduction targets for 2020 under AB 32, 2030 under SB 32, and for 2050 under Executive Order S-3-05.

In light of the Newhall Ranch decision, an independent efficiency metric was calculated by to assess the Project's consistency with California's adopted GHG reduction targets for 2020 AB 32. It was found, based on this independent calculation, that a per capita threshold of 4.84 MT CO_2e/SP/year in 2020 would be the appropriate threshold for projects in California for the Year 2020. The 4.84 MT CO_2e/SP/year in 2020 threshold is based on emissions for the land use-driven emission sectors in

the CARB GHG Inventory. This approach to developing a GHG efficiency metric is only based on sectors that would accommodate projected growth (as indicated by population and employment growth) while allowing for consistency with the goals of AB 32. More specifically, this per service population efficiency target is based on the AB 32 GHG reduction target and GHG emissions inventory prepared for the CARB's AB 32 Scoping Plan. The land-used sector driven inventory for 1990 was divided by the population and employment projections for California in 2020. This efficiency metric allows the threshold to be applied evenly to all project types (residential, commercial/retail and mixed use) and uses an emissions inventory comprised only of sources from land-use related sectors. The efficiency approach allows lead agencies to assess whether any given project or plan would accommodate growth in a way that is consistent with the emissions limit established under AB 32.

Since this independently-generated GHG efficiency threshold for the State of California would be applicable statewide, this approach to establishing efficiency thresholds is utilized for this analysis for operational emissions.

THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the proposed Project would do the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation;
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency;

In order to determine whether or not the proposed Project would result in a significant impact on energy use, this EIR includes an analysis of proposed Project energy use, as provided under *Impacts and Mitigation Measures* below.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Significant and Unavoidable)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development

would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage.

The Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)™ (v.2016.3.2). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are summarized in Table 3.7-1. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the Project applicants, the proposed Project is assumed to commence construction in 2021 and finish in late 2039. It should be noted that this schedule is an approximation and may change over time. A regularized construction schedule was utilized for modelling purposes for the sake of simplicity.

TABLE 3.7-1: MAXIMUM CONSTRUCTION GHG EMISSIONS (MITIGATED AVERAGE MT CO_2E/YEAR)

YEAR	BIO- CO_2	NON-BIO- CO_2	TOTAL CO_2	CH_4	N_2O	CO_2E
2026	0	10,715.8	10,715.8	0.5	0	10,727.6

SOURCES: CALEEMOD (V.2016.3.2)

As presented in the table, short-term construction emissions of GHGs are estimated at a maximum of approximately 10,728 MT CO_2e per year.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions generated by the Project during its operation. Estimated GHG emissions associated with the proposed Project are summarized in Table 3.7-2, below. It should be noted that CalEEMod does not account for the Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e. mobile emissions) over time. Therefore, the operational emissions results provided in Table 3.7-2 are likely an overestimate for mobile emissions, assuming the Executive Order is implemented. As shown in the following table, the annual mitigated GHG emissions associated with the proposed Project would be approximately 72,615.9 MT CO_2e.

TABLE 3.7-2: OPERATIONAL GHG EMISSIONS AT BUILDOUT (MITIGATED METRIC TONS/YEAR)

	BIO- CO_2	*NON-BIO- CO_2*	*TOTAL CO_2*	*CH4*	*N2O*	*CO_2E*
Area	0	0.1	0.1	<1	0	0.1
Energy	0	21,602.5	21,602.5	0.8	0.3	21,699.6
Mobile	0	42,748.6	42,748.6	1.8	0	42,794.6
Waste	1,564.2	0	1,564.2	92.4	0	3,875.1
Water	450.2	2,305.8	2.756.0	46.3	1.1	4,246.4
Total	**2,014.4**	**66,657.0**	**68,671.4**	**141.4**	**1.4**	**72,615.9**

SOURCES: CALEEMOD (V.2016.3.2)

The significance thresholds for GHG emissions should be related to compliance with AB 32 and SB 32, and the City of Stockton, as lead agency, has chosen to utilize a threshold of significance for GHG emissions as required by the Newhall Ranch decision. This threshold was independently derived by De Novo Planning Group. The rationale for using this threshold is outlined in the previous subsection, entitled "Thresholds of Significance".

According to the Traffic Study prepared for the proposed Project (Fehr & Peers, 2021), and as described in more detail in Section 3.13 of this EIR, the Project would increase automobile VMT by approximately 22,633 net new daily trips, which would generate substantial GHG emissions. The proposed Project would also generate substantial emissions from on-site energy, waste, and water emissions. Warehouse and other industrial uses tend to generate few workers per square foot, in comparison to other types of uses.

According to U.S. Energy Information Agency,[1] the ratio of workers for "Warehouse and Storage" land uses is approximately 2,055 square feet per job. With a total Project warehouse square footage of approximately 6,091,551 square feet, the proposed Project is estimated to generate approximately 2,964 warehouse and storage workers during the Project's operational phase. Dividing this number of estimated workers by the total annual operational GHG emissions at Project buildout yields approximately 24.50 MT CO_2e/SP/Year, which far exceeds the 4.84 MT CO_2e/SP/year in 2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory.

CONCLUSION

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change. However, the operational GHG emissions associated the proposed Project are above the derived thresholds, which may affect statewide GHG reduction goals. The Project would generate GHG emissions, directly and indirectly, that would exceed the 4.84 MT CO_2e/SP/year in 2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Although the implementation of the mitigation measures presented in Section 3.3: Air Quality of this EIR would reduce the overall annual GHG emissions associated with the proposed Project, the proposed Project would be required to implement additional mitigation to ensure emissions are reduced to below the applicable threshold.

[1] See here for more detail: https://www.eia.gov/consumption/commercial/data/2012/bc/cfm/b2.php

The proposed Project is required to implement Mitigation Measure 3.7-1 in an effort to reduce GHG emissions to the extent possible. However, even with implementation of all feasible mitigation, it may not be feasible for all individual projects to reduce operational emissions at full Project buildout below the applicable thresholds. Therefore, the proposed Project's criteria pollutant emissions would be considered to have a ***significant and unavoidable*** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.7-1: *Prior to the approval of individual phases of development (i.e. final maps, site plan review, etc.), each Project applicant shall demonstrate that the individual Project does not exceed the applicable SJVAPCD greenhouse thresholds for Project operations. If the SJVAPCD greenhouse thresholds for an individual Project is exceeded, the Project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term greenhouse gas impacts to below the applicable SJVAPCD thresholds of significance. Each off-site mitigation strategy shall be developed with, and approved by, the SJVAPCD and the City of Stockton. Each offsite mitigation strategy is subject to the review and approval of SJVAPCD and the City of Stockton on a project-by-project basis, and is intended to be in addition to offsets that are obtained through any on-site mitigation measures. The City of Stockton is required to verify each offsite mitigation strategy and its associated reductions to ensure that the associated greenhouse gas impacts are reduced to the maximum extent feasible (i.e. to below the applicable SJVAPCD thresholds of significance, at minimum). Examples of off-site mitigation strategies may include (but are not limited to) transportation demand management (TDM) measures and/or financial incentives for Project employees to utilize alternative transportation options such as buses, bicycles, or electric vehicles.*

Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources (Less than Significant)

The CEQA Guidelines requires consideration of the potentially significant energy implications of a Project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate State and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The proposed Project includes a Tentative Map for the 422.2-acre site to create 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses.

The amount of energy used by the proposed Project during operation would directly correlate with the amount of energy used by Project buildings and outdoor lighting, and the generation of vehicle trips associated with the proposed Project. Other Project energy uses include fuel used by vehicle trips generated during Project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by Project maintenance activities during Project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed Project, as provided by applicable modelling software (i.e. CalEEMod v2016.3.2 and the CARB EMFAC2017). Additional assumptions and calculations are provided within Appendix B.3 of this EIR.

ELECTRICITY AND NATURAL GAS

Electricity and natural gas used by the proposed Project would be used primarily to generate energy for outdoor parking lot lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category is 35,531 MT CO_2e.

ON-ROAD VEHICLES (OPERATION)

The proposed Project would generate vehicle trips during its operational phase. A description of Project operational on-road mobile energy usage is provided below.

According to the Traffic Study prepared for the proposed Project (Fehr & Peers, 2021), and as described in more detail in Section 3.13 of this EIR, the Project would increase automobile VMT by approximately 22,633 net new daily trips. In order to calculate operational on-road vehicle energy usage and emissions, De Novo Planning Group used fleet mix data from the CalEEMod (v2016.3.2) output for the proposed Project, Year 2040 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2017, weighted average MPG factors for gasoline and diesel were derived. Therefore, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 399 gallons of gasoline and 633 gallons of diesel per day, or 145,694 gallons of gasoline and 231,137 gallons of diesel per year.

ON-ROAD VEHICLES (CONSTRUCTION)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2021 gasoline and diesel MPG factors provided by EMFAC2017 (year 2021 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table 3.7-3, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the building construction phase.

There is no feasible mitigation available that would reduce on-road mobile vehicle GHG emissions generated by the Project construction activities (requiring the use of electric construction vehicles was deemed infeasible, given price and availability concerns). See Appendix B.3 of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

TABLE 3.7-3: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	*# OF DAYS*	*TOTAL DAILY WORKER TRIPS(A)*	*TOTAL DAILY VENDOR TRIPS(A)*	*TOTAL HAULER WORKER TRIPS(A)*	*TOTAL GALLONS OF GASOLINE FUEL(B)*	*TOTAL GALLONS OF DIESEL FUEL(B)*
Site Preparation	240	18	0	0	1,672	0
Grading	620	20	0	0	4,798	0
Paving	3,685	15	0	0	2,554	0
Building Construction	440	4,674	1,830	0	333,240	457,438
Architectural Coatings	3,685	935	0	0	66,662	0
Total	**N/A**	**N/A**	**N/A**	**N/A**	**408,926**	**457,438**

NOTE: (A) PROVIDED BY CALEEMOD OUTPUT. (B) SEE APPENDIX B.3 OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD (V.2016.3.2); EMFAC2017.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed Project would use a total of approximately 207,678 gallons of diesel fuel for off-road construction vehicles. Detailed calculations are provided in Appendix B.3 of this EIR.

CONCLUSION

The proposed Project would use energy resources for the operation of Project buildings (natural gas and electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E is expected to achieve at least a 33% mix of renewable energy resources by 2020, and 60% by 2030. Other statewide measures, including

those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the threshold as described by the *CEQA Guidelines*. This is a ***less than significant*** impact.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. This section is based in part on the:

- *Envision Stockton 2040 General Plan* (City of Stockton, 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, 2018);
- City of Stockton Municipal Code;
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Search (United States Environmental Protection Agency [EPA], 2021);
- Envirostar database search (California Department of Toxic Substances Control [DTSC], 2021);
- GeoTracker Information System and Geographic Environmental Information Management System database search (State Water Resources Control Board [SWRCB], 2020);
- National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites (United States EPA], 2020);
- Toxics Release Inventory (TRI) Program database search (United States EPA], 2019);
- *California Airport Land Use Planning Handbook* (California Department of Transportation, Division of Aeronautics, 2011);
- *Airport Land Use Compatibility Plan for Stockton Metropolitan Airport* (San Joaquin Council of Governments, 2018);
- Web Soil Survey (United States Department of Agriculture Natural Resources Conservation Service, 2019); and
- *Custom Soils Report for San Joaquin County, California* (NRCS, 1992).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Justice (November 24, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

As discussed in the Initial Study (see Appendix A), impacts related to wildfires would be less than significant. Additionally, the Project site is not located within a very high fire hazard severity zone; therefore, the thresholds associated with the Project's proximity to state responsibility areas or lands classified as very high fire hazard severity zones are not applicable to the Project and there is no impact associated with these thresholds. As such, these CEQA topics are not relevant to the Project and will not be addressed further.

3.8.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Project Location

The proposed Project site is comprised of 422.22 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. The Project also includes off-site sewer improvements located along and adjacent to existing Project area roadways.

Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity.

Existing Site Uses

The Project site is comprised of active agricultural fields. The agricultural lands on the Project site have been used historically for intensive agricultural purposes. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north.

Figure 2.0-4 shows aerial imagery of the current existing site uses within the Project site.

Existing Surrounding Uses

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton. These uses are located within the County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks (French Camp Slough).
- West – The UPPR, Airport Way, and agricultural lands.

Site Topography

The Project site is relatively flat and ranges in elevation from approximately 14 to 40 feet above mean sea level.

Site Soils

A Custom Soil Survey was completed for the Project site using the National Resources Conservation Services (NRCS) Web Soil Survey program. The NRCS Soils Map provided in Figure 3.2-1 in Section

3.2, Agricultural Resources, identifies the type and range of soils found in the Project site, which is summarized below in Table 3.8-1.

TABLE 3.8-1: NRCS SOIL SERIES INFORMATION

UNIT SYMBOL	*NAME*	*SOURCE MATERIAL*	*DRAINAGE*	*PERCENT OF AOI*
170	Hollenbeck silty clay, 0-2 percent slopes	Alluvium derived from mixed rock sources	Moderately well drained	0.05%
250	Stockton Clay. 0 to 2 percent slopes	Alluvium derived from mixed rock sources	Somewhat poorly drained	37.90%
180	Jacktone clay, 0 to 2 percent slopes	Alluvium derived from mixed rock sources	Somewhat poorly drained	62.05%

NOTE: THIS TABLE DOES NOT INCLUDE THE 4.3 ACRES OF WATER WITHIN THE AOI.

SOURCE: NRCS WEB SOIL SURVEY 2020.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE)), petroleum-based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Adjoining Properties

The Project site is generally bounded on the north by an industrial park and the Stockton Metropolitan Airport, on the east by agricultural land and 99 Frontage Road/State Route (SR) 99, on the south agricultural land, and on the west by Airport Way and agricultural land.

Site Reconnaissance

Site reconnaissance was conducted in July and August 2020[1]; however, it should be noted that portions of the property were limited during the site reconnaissance due to the active agricultural uses on-site, including orchards and alfalfa crops. At the time of the survey, the Project site consisted of alfalfa fields, a walnut orchard, and small areas of fallow field and natural landscape. The alfalfa fields were planted in rotation, allowing recently mowed sections to be available for survey at regular intervals. The single walnut orchard was flood-irrigated regularly but allowed to dry thoroughly between floods, making survey possible.

On-site soil was uniform in a medium-dark brown color and shade with no indication of staining. Survey visibility was good for all areas of the Project site. Mowing and grooming of the fields and

[1] Peak & Associates, Inc. 2020. *Determination of Eligibility and Effect for the South Stockton Commerce Center Project [pages 19-21].*

orchard, as well as disking of the non-planted areas along the slough provided a clear view of the soil. Soil disturbance was moderate, with few or no rodent dens observed, but plowing and road maintenance allowed for some subsurface inspection. Aside from crops, vegetation includes a sparse riparian zone tight against the slough consisting of tule sedges, occasional oak trees, and other bushes and grasses and trees.

No aboveground storage tanks (ASTs) were observed on-site. Additionally, there are no known underground storage tanks within the Project site.

Historic Site Conditions

The land of the Project site included portions of holdings of three individuals in 1895: P.G. Sharp to the north in sections 26 and 38, J.T. Salmon in sections 27 and 39, and the estate of Cutler Salmon on the east side of the property. The Project vicinity was a typical agricultural area prior to World War I, but the interest in aviation generated by the war soon had an effect on this rural area near the Stockton Metropolitan Airport. By 1925, the area in the vicinity of the Project site was part of a large agricultural and stock raising operation, the Wilber Salmon Ranch (Peak & Associates, Inc., 2020).

Historical Use Information

Historical information was reviewed to develop a history of the previous uses on the Project site and surrounding area, in order to evaluate the Project site and adjoining properties for evidence of Recognized Environmental Conditions. Standard historical sources reviewed during the preparation of this report included the following, as available: Aerial Photographs, Environmental Records, and Databases.

AERIAL PHOTOGRAPHS

Aerial photographs of the Project site and general vicinity were reviewed. In 1993, the Project site appeared to be used for agricultural purposes while the lands to the north appear developed with the industrial park and Stockton Metropolitan Airport as it is today. The UPRR tracks that bisect the western portion of the Project site as well as the French Slough and French Camp Slough Levee Road/North Fork Ljcreek Levee Road in the southwestern portion of the Project site appear to have already been developed. From 1993 to present, the Project site appears to have been active agricultural fields.

ENVIRONMENTAL RECORDS

A search of local, state, and federal agency databases for the Project site and known contaminated sites in the vicinity was performed. None of the parcels in the Project site were found to contain any known contamination.

The U.S. Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) does not list data on disposal or other releases of toxic chemicals in the Project site (USEPA, 2015). There are 17 TRI facilities in the City of Stockton. The nearest TRI site is Valimet (ID: 95206VLMTN431SP) located at 431 Sperry Road, approximately 1.5 miles northwest of the Project site.

The California Department of Toxic Substances Control (DTSC) maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. There are no sites listed in the Envirostor database within the Project site. The nearest site listed on the Envirostor database is the Former Sharpe Army Depot Annex located on 100 acres adjacent to the Project site at the Stockton Metropolitan Airport and industrial park southwest of the airport. This site served as an Army post during World War II and is listed as a Military Evaluation Cleanup Site on Envirostor. In April 2014, the Department of Toxic Substance Control concurred that there is no Department of Defense Action Indicated on this site based on continued use of the property post transfer; therefore, the site received a "No Further Action" status.

GeoTracker is the State Water Resources Control Board's (SWRCB's) Internet-accessible database system used by the SWRCB, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks (USTs). See Table 3.8-2 for a complete list of sites identified by the GeoTracker database within 0.5 miles of the Project site.

TABLE 3.8-2: GEOTRACKER HAZARDOUS MATERIAL RELEASE SITES WITHIN 0.5 MILES OF PROJECT SITE

SITE NAME	*TYPE*	*CLEANUP STATUS*	*ADDRESS*
Army Aviation Support Facility (T0607700364)	Cleanup Program Site	Completed – Case Closed	2000 Stimson Road
California Army National Guard Combined Support Maintenance Shop (T10000006628)	Cleanup Program Site	Completed – Case Closed	8020 South Airport Way
California Army National Guard Facility – Field Maintenance Shop #24 (T0607700742)	Cleanup Program Site	Open – Remediation	8020 Airport Way S
California Army National Guard – Parent Facility (SL186403611)	Cleanup Program Site	Open – Remediation	2000 Stimson Road
Mosquito Abatement Dist #2 (T0607700664)	LUST Cleanup Site	Completed – Case Closed	7759 Airport Way S
Consolidated Freightways (T0607700100)	LUST Cleanup Site	Completed – Case Closed	7611 Airport Way S
American Savings & Loan Association (T0607700251)	LUST Cleanup Site	Completed – Case Closed	1888 Lockheed Court
Career Aviation (Former) (T0607700806)	LUST Cleanup Site	Completed – Case Closed	6250 Lindbergh Street
Stockton Metropolitan Airport (T0607700159)	LUST Cleanup site	Completed – Case Closed	5000 Airport Way S

NOTE: LUST = LEAKING UNDERGROUND STORAGE TANK.
SOURCE: SWRCB, GEOTRACKER, 2020.

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS data identifies active, planned and closed sites. The Project site does not have any active or planned solid waste facilities

listed in the database. The nearest active facility, Forward Landfill Inc., is located approximately 1.0 miles east of the Project site.

DATABASES

There is a broad list of federal and state databases that provide information for sites with varying potential for risk from the possible existence of hazardous materials. There are numerous redundancies among these various database listings. Below is a brief summary of each.

National Priorities List: The National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites is EPA's database of more than 1,200 sites designated or proposed for priority cleanup under the Superfund program. NPL sites may encompass relatively large areas. The Project site is not listed in this database.

RCRIS System: The Resource Conservation and Recovery Information System (RCRIS) is an EPA database that includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Identification on this list does not indicate that there has been an impact on the environment. The Project site is not listed in this database.

CERCLIS Data: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is an EPA database that contains information on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and individuals, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites that are either proposed for or on the NPL, as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Project site is not listed in this database.

CORRACTS: Corrective Action Report (CORRACTS) is an EPA database that identifies hazardous waste handlers with RCRA corrective action activity. The Project site is not listed in this database.

Cortese Database: The Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. The source of this database is the California Environmental Protection Agency (Cal-EPA) and are found in the GeoTracker database. The Project site is not listed in this database.

GeoTracker has replaced past databases, such as the Leaking Underground Storage Tank Information System (LUSTIS) and the Underground Storage Tank (UST) database. Permitted USTs are not located in the Project site. The nearest permitted UST is located at a Stockton Army Aviation Supply Facility, located at 2000 Stimson Road approximately 0.1 miles north of the Project site.

Hazardous Material Sites

As noted above, the State of California Hazardous Waste and Substances Site List (also known as the "Cortese List") is a planning document used by the state, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements for providing information about

the location of hazardous materials sites. Government Code Section 65962.5 requires the Cal EPA to annually update the Cortese List. The DTSC is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

GeoTracker is a geographic information system (GIS) that provides online access to environmental data and is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. Searches of the above resources and records identified nine hazardous material sites within 0.5 miles and 14 hazardous material sites within 1.0 mile of the Project site known to handle and store hazardous materials that are associated with a hazardous material related release or occurrence. The terms "release" or "occurrence" include any means by which a substance could harm the environment: by spilling, leaking, discharging, dumping, injecting, or escaping. Table 3.8-3 displays the known hazardous material sites within 0.5 miles and 1.0 mile of the Project site with a description of the hazards provided. It should be noted that the Project site and the surrounding areas do not contain identified oil and gas monitoring wells.

TABLE 3.8-3: GEOTRACKER HAZARDOUS MATERIAL RELEASE SITES WITHIN 1.0 MILE OF PROJECT SITE

SITE NAME	*TYPE*	*CLEANUP STATUS*	*ADDRESS*
Army Aviation Support Facility (T0607700364)	Cleanup Program Site	Completed – Case Closed	2000 Stimson Road
California Army National Guard Combined Support Maintenance Shop (T10000006628)	Cleanup Program Site	Completed – Case Closed	8020 South Airport Way
California Army National Guard Facility – Field Maintenance Shop #24 (T0607700742)	Cleanup Program Site	Open – Remediation	8020 Airport Way S
California Army National Guard – Parent Facility (SL186403611)	Cleanup Program Site	Open – Remediation	2000 Stimson Road
Mosquito Abatement Dist #2 (T0607700664)	LUST Cleanup Site	Completed – Case Closed	7759 Airport Way S
Consolidated Freightways (T0607700100)	LUST Cleanup Site	Completed – Case Closed	7611 Airport Way S
American Savings & Loan Association (T0607700251)	LUST Cleanup Site	Completed – Case Closed	1888 Lockheed Court
Career Aviation (Former) (T0607700806)	LUST Cleanup Site	Completed – Case Closed	6250 Lindbergh Street
Stockton Metropolitan Airport (T0607700159)	LUST Cleanup Site	Completed – Case Closed	5000 Airport Way S
AG Spanos Jet Center (T0607700867)	LUST Cleanup Site	Completed – Case Closed	4800 Airport Road S
PG&E General Construction Yard (SL0607753482)	Cleanup Program Site	Completed – Case Closed	401 E French Camp Road (French Camp, CA)
J.R. Simplot Company (former UAP/Pacifex) (SLT5S7293752)	Cleanup Program Site	Open – Inactive	8858 Priest Road (French Camp, CA)
AERO Industries (T0607700070)	LUST Cleanup Site	Completed – Case Closed	4807 Airport Way S

SITE NAME	*TYPE*	*CLEANUP STATUS*	*ADDRESS*
ACE Tomato Co Inc. (T0607793851)	LUST Cleanup Site	Completed – Case Closed	2771 E French Camp Road (Manteca, CA)

NOTE: LUST = LEAKING UNDERGROUND STORAGE TANK.
SOURCE: SWRCB, GEOTRACKER, 2020.

As noted previously, none of the parcels in the Project site were found to contain any known contamination. Two open cases, the California Army National Guard Facility – Field Maintenance Shop #24 cleanup program site and the California Army National Guard Facility – Parent Facility cleanup program site, are both located approximately 0.05 miles and 0.1 miles north of the Project site, respectively.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Stockton Planning Area is subject to various federal, state, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))
- Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

In addition to area roadways, hazardous materials are routinely transported on Union Pacific Railroad lines that bisect the Project site. Hazardous materials are transported on these lines. The risk of accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation Federal Railroad Administration found the UPRR company train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident. Risk of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in California.

The Union Pacific Railroad Company does implement a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.

HAZARDS FROM AIR TRAFFIC

The State Division of Aeronautics has compiled extensive data regarding aircraft accidents around airports in California. This data is much more detailed and specific than data currently available from the FAA and the National Transportation Safety Board (NTSB). According to the California Airport Land Use Planning Handbook (2011), prepared by the State Division of Aeronautics, 21 percent of general aviation accidents occur during takeoff and initial climb and 44.2 percent of general aviation accidents occur during approach and landing. The State Division of Aeronautics has plotted accidents during these phases at airports across the country and has determined certain theoretical areas of high accident probability.

Approach and Landing Accidents

As nearly half of all general aviation accidents occur in the approach and landing phases of flight, considerable work has been done to determine the approximate probability of such accidents. Nearly 77 percent of accidents during this phase of flight occur during touchdown onto the runway or during the roll-out. These accidents typically consist of hard or long landings, ground loops (where the aircraft spins out on the ground), departures from the runway surface, etc. These types of accidents are rarely fatal and often do not involve other aircraft or structures. Commonly these accidents occur due to loss of control on the part of the pilot and, to some extent, weather conditions. (California Division of Aeronautics, 2011).

The remaining 23 percent of accidents during the approach and landing phase of flight occur as the aircraft is maneuvered towards the runway for landing, in a portion of the airspace around the airport commonly called the traffic pattern. Common causes of approach accidents include the pilot's misjudging of the rate of descent, poor visibility, unexpected downdrafts, or tall objects beneath the final approach course. Improper use of rudder on an aircraft during the last turn toward the runway can sometimes result in a stall (a cross-control stall) and resultant spin, causing the aircraft to strike the ground directly below the aircraft. The types of events that lead to approach accidents tend to place the accident site fairly close to the extended runway centerline. The probability of accidents increases as the flight path nears the approach end of the runway. (California Division of Aeronautics, 2011).

According to aircraft accident plotting provided by the State Division of Aeronautics, most accidents that occur during the approach and landing phase of flight occur on the airport surface itself. The remainder of accidents that occur during this phase of flight are generally clustered along the extended centerline of the runway, where the aircraft is flying closest to the ground and with the lowest airspeed. (California Division of Aeronautics, 2011).

Takeoff and Departure Accidents

According to data collected by the State Division of Aeronautics, nearly 65 percent of all accidents during the takeoff and departure phase of flight occur during the initial climb phase, immediately after takeoff. This data is correlated by two physical constraints of general aviation aircraft:

- The takeoff and initial climb phase are times when the aircraft engine(s) is under maximum stress and is thus more susceptible to mechanical problems than at other phases of flight; and
- Average general aviation runways are not typically long enough to allow an aircraft that experiences a loss of power shortly after takeoff to land again and stop before the end of the runway.

While the majority of approach and landing accidents occur on or near to the centerline of the runway, accidents that occur during initial climb are more dispersed in their location as pilots are not attempting to get to any one specific point (such as a runway). Additionally, aircraft vary widely in payload, engine power, glide ratio, and several other factors that affect glide distance, handling characteristics after engine loss, and general response to engine failure. This further disperses the accident pattern. However, while the pattern is more dispersed than that seen for approach and landing accidents, the departure pattern is still generally localized in the direction of departure and within proximity of the centerline. This is partially due to the fact that pilots are trained to fly straight ahead and avoid turns when experiencing a loss of power or engine failure. Turning flight causes the aircraft to sink faster and flying straight allows for more time to attempt to fix the problem (California Division of Aeronautics, 2011).

Stockton Metropolitan Airport

The Stockton Metropolitan Airport is located to the north of the Project site, approximately 0.18 miles from the northeast corner of the Project site to the airport runway and 1.0 mile to the main airport building. This airport is a County-owned facility that occupies approximately 1,609 acres at an elevation of 23 feet above mean sea level (MSL). The acreage within the airport influence area is 56,184 acres.

The Stockton Metropolitan Airport is designated as a Non-hub Commercial Service Airport within the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). The airport is served by Allegiant Air, which provides service to Phoenix/Mesa, Arizona and Las Vegas, Nevada. In addition to commercial service, Stockton Metropolitan Airport offers a wide range of fixed base operators (FBOs) providing fuel, aircraft maintenance, aircraft hangar and tie-down rental, aircraft rental, flight training, aircraft management services, and pilot lounges for corporate and general aviation pilots. The airport also houses FBOs that support air cargo operations.

Stockton Metropolitan Airport is served by a parallel runway system in a northwest-southeast orientation. Runway 11L-29R is 10,650 feet long and 150 feet wide and is constructed of asphalt. Runway 11R-29L is 4,448 feet long and 75 feet wide and also constructed of asphalt. Runway 11L-29R is accommodated by several instrument approach procedures aiding pilots in navigation to the runway. Runway 29R contains a medium intensity approach lighting system with runway alignment lights (MALSR) to provide runway alignment guidance for pilots in reduced visibility conditions.

Runway 11L-29R is served by a four-light Precision Approach Path Indicator (PAPI- 4) at both ends and contains high intensity runway lighting (HIRL) to indicate the location of the runway edge. Runway 11R-29L does not contain approach or runway edge lighting.

The Project site is located within the airport influence area for the Stockton Metropolitan Airport identified in the Airport Land Use Compatibility Plan (ALUCP). The northeastern corners of the Project site are within CNEL 60 noise exposure contours and the eastern portion of the Project site is within the SEL Contour. Additionally, the whole Project site is located within Traffic Pattern Zone 7a of the Airport's Safety Zones, as identified in the Airport's ALUCP.

3.8.2 REGULATORY SETTING

FEDERAL

The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Several laws governing the transport, storage, and use of hazardous materials are governed by these agencies as well as oversight for contaminated sites cleanup. Federal laws and regulations that are applicable to hazards and hazardous materials are presented below.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their

ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintain UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the Environmental Protection Agency (EPA) and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of June 2020, only 45.6 percent of USTs were in compliance with all TCR categories[2].

Comprehensive Environmental Response, Compensation, and Liability Act

CERCLA introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. CERCLA was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

STATE

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (OES), Cal-EPA, DTSC, California Department of Transportation (Caltrans), California Highway Patrol (CHP), State Water Quality Control Board, and the California Air Resources Board. Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies. State laws and regulations that are applicable to hazards and hazardous materials are presented below.

[2] EPA. *Semiannual Report of UST Performance Measures Mid Fiscal Year 2020*. June 2020. Access: https://www.epa.gov/sites/production/files/2020-06/documents/ca-20-12.pdf

California Health and Safety Code

Cal-EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated cleanups.

California Code of Regulations Title 22 and Title 26

The California Code of Regulations (CCR) Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal-EPA established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

LOCAL

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. The San Joaquin County Department of Environmental Health is the CUPA designated for San Joaquin County. The San Joaquin County Department of Environmental Health is responsible for the implementation of statewide programs within its jurisdiction, including: Underground storage of hazardous substances (USTs), Hazardous Materials Business Plan (HMP) requirements, California Accidental Release Prevention (Cal-ARP) program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement.

San Joaquin County Office of Emergency Services

The San Joaquin County Office of Emergency Services administers the State's Hazardous Material Release Response Plan and Inventories and the Accidental Release Prevention (Cal-ARP) programs. Additionally, the Office of Emergency Services has a Hazardous Material Area Plan designed to protect human health and the environment through hazardous materials emergency planning, response and agency coordination and community right-to-know programs. The Hazardous Material Area Plan, among other provisions, provides guidance for businesses required to file a hazardous materials business plan. Under Chapter 6.95 of the California Health and Safety Code and the Federal Resource Conservation and Recovery Act, any business storing quantities of hazardous materials greater than 55 gallons of liquid, 500 pounds of solid or 200 cubic feet of some compressed gases must file a hazardous materials business plan annually that establishes incident prevention measures, hazardous material handing protocols and emergency response and evacuation procedures. The City of Stockton Police Department and the Stockton Fire Department work with San Joaquin County to implement the Hazardous Material Area Plan.

The Office of Emergency Services also administers the Emergency Planning and Community Right-to-Know program for Tracy. The Office of Emergency Services has also prepared the Multi-Hazard Plan as the basic emergency plan for San Joaquin County.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to hazards and hazardous materials. General Plan policies and actions applicable to the Project are identified below:

POLICIES: SAFETY ELEMENT

- SAF-2.1. Ensure that community members are adequately prepared for natural disasters and emergencies through education and training.
- SAF-2.2. Prepare sufficiently for major events to enable quick and effective response.
- SAF-2.5. Protect the community from health hazards and annoyance associated with excessive noise levels.
- SAF-2.6. Minimize the risk to city residents and property associated with the transport, distribution, use, and storage of hazardous materials.

ACTIONS: SAFETY ELEMENT

- SAF-2.2A. Require new development to provide adequate access for emergency vehicles and evacuation routes, including by designing roadway systems to provide multiple escape routes in the event of a levee failure. SAF-2.6A. Restrict transport of hazardous materials within the city to routes that have been designated for such transport.
- SAF-2.2B. Formulate, review, periodically update, and make available to the public emergency management plans for that safe evacuation of people from areas subject to inundation from levee and dam failure.
- SAF-2.2D. Continue to work with San Joaquin County, the County Office of Emergency Services, other cities in the region, and disaster agencies to coordinate disaster and emergency preparedness planning.
- SAF-2.6A. Restrict transport of hazardous materials within the city to routes that have been designated for such transport.
- SAF-2.6B. When appropriate, require new development to prepare a hazardous materials inventory and/or Phase I or Phase II hazardous materials studies, including any required clean-up measures.
- SAF-2.6C. Educate the public regarding the types of household hazardous wastes and the proper methods of disposal.

City of Stockton Municipal Code

Chapter 2.82 of the Stockton Municipal Code, Emergency Organization and Functions, describes the preparation and the preparation and implementation of plans for the protection of persons and property within Stockton in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of the City with all other public agencies, corporations, organizations, and affected private persons. Stockton Municipal Code Section 2.82.060, Director and Deputy Director of Emergency Services, establishes that one of the duties of the Director of Emergency Services is to request that the City proclaim the existence of a threat or

local emergency. Once a local emergency is proclaimed, the Director has seven days to take action. In addition, the Director has the authority to request the Governor to proclaim a "state of emergency" when local resources are inadequate to cope with the emergency. The Director is charged with controlling and directing the efforts of the emergency organization of the City and directing cooperation between the coordination of services and staff.

Section 16.36.080 of the Stockton Municipal Code, Hazardous Materials, sets forth the standards for regulating the use, handling, storage, and transportation of hazardous materials. Per Section 16.36.080(A), a use permit is required for any new commercial, industrial, institutional, or accessory use, or major addition (over 10 percent) to an existing use within 1,000 feet of a residential zoning district that involves the manufacture, storage, handling, or processing of hazardous materials in sufficient quantities that would require permits as hazardous materials. In addition, this section of the Stockton Municipal Code provides standards for reporting, notification, new development, and both underground and above-ground storage of hazardous materials.

City of Stockton Emergency Operations Plan

The City adopted its most recent version of its Emergency Operations Plan (EOP) in June 2012. The EOP addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The EOP establishes the emergency management organization required to mitigate any significant emergencies and identifies roles and responsibilities required to protect the health and safety of Stockton residents and property. In addition, the EOP establishes operations concepts associated with a field response to emergencies.

Stockton Metropolitan Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan (ALUCP) for the Stockton Metropolitan Airport was last updated in May 2016. The ALUCP provides guidance related to the placement of land uses near the Stockton Metropolitan Airport. Specifically, the ALUCP seeks to protect the public from adverse effects of aircraft noise, ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and ensure that no structures or activities adversely affect navigable airspace.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 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.
- 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 for people residing or working in the Project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Construction of the proposed project would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials will pose a reasonable risk of release into the environment if not properly handled, stored, and transported.

Construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Mitigation Measure 3.9-1 contained in Section 3.9, Hydrology and Water Quality, ensures compliance with existing regulatory requirements of the Regional Water Quality Control Board, which require the preparation a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit

practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the San Joaquin County Department of Environmental Health and the City of Stockton Fire Department.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by San Joaquin County Department of Environmental Health, the designated Certified Unified Program Agency for San Joaquin County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories). Additionally, in the event that hazardous materials are discovered during construction, a Soils Management Plan (SMP) will need to be submitted and approved by the San Joaquin County Department of Environmental Health, as required by Mitigation Measure 3.8-1. The SMP will establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. Such compliance would reduce the potential for accidental release of hazardous materials during construction of the proposed project. As a result, it would lessen the risk of exposure of construction workers and the public to accidental release of hazardous materials, as well as the demand for incident emergency response.

The Project includes a Tentative Map to subdivide the 422.22-acre site into 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. As described in Chapter 2.0, Project Description, a Site Plan is not currently proposed for any of the proposed lots. Future development of these lots would involve the conversion of active agricultural land into industrial, commercial, public facility, and/or open space uses. Site grading, excavation for utilities, trenching, backfilling, and the construction of proposed facilities that could result in the exposure of construction workers and the general public to hazardous materials, such as pesticides and herbicides. Like most agricultural and farming operations in the Central Valley, agricultural practices in the area have used agricultural chemicals including pesticides and herbicides as a standard practice. Although no contaminated soils have been identified on the Project site or the vicinity above applicable levels, residual concentrations of pesticides may be present in soil as a result of historic agricultural application and storage. Continuous spraying of crops over many years

can potentially result in a residual buildup of pesticides, in farm soils. Of highest concern relative to agrichemicals are chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides (OCPs), such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE).

Mitigation Measure 3.8-2 provides a requirement for future developments within the subdivided lots to conduct site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. This sampling should be performed after agricultural operations cease, and development is anticipated to occur. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health. Implementation of Mitigation Measure 3.8-2 would ensure the redevelopment of the active agricultural land would not result in accidental release of or exposure to hazardous materials.

OPERATIONAL PHASE IMPACTS

The operational phase would occur after construction is completed and business operations commence on a day-to-day basis. As previously noted, the Project proposes a Tentative Map to subdivide the 422.22-acre site to create 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. As described in Chapter 2.0, Project Description, the Project would result in a maximum of 6,091,551 square feet of industrial type land uses, 140,350 square feet of commercial land uses, 54 acres of open space, 41 acres of public facilities, and 19 acres of right-of-way circulation improvements.

According to the Envision 2040 Stockton General Plan, the industrial land use allows for a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, Retail Sales, service businesses, public and quasi-public uses, and other similar and compatible uses. Additionally, the commercial land use allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses.

Depending on the future industrial uses on-site, the Project has the potential to routinely transport, use, or dispose of hazardous materials, and/or present a reasonably foreseeable release of hazardous materials. Any operations that involve the use of hazardous materials would be required to have the hazardous material transported, stored, used, and disposed of in compliance with local, state, and federal regulations. The San Joaquin County Department of Environmental Health is the CUPA for San Joaquin County and is responsible for the implementation of statewide programs within the City including Hazardous Materials Business Plan (HMBP) requirements, among numerous other programs. Additionally, businesses are regulated by Cal/OSHA and are therefore required to ensure employee safety. Specific requirements include identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers. To further ensure the safety of employees and reduce the potential for accidental release of hazardous materials into the environment, the applicant must submit a HMBP

to San Joaquin County Department of Environmental Health (CUPA) for review and approval prior to bringing hazardous materials onsite, as required by Mitigation Measure 3.8-3.

As with construction, operation of the proposed Project is required to be consistent with federal, State, and local laws and regulations addressing hazardous materials management and environmental protection, including, but not limited to 49 CFR 173 and 177, and CCR Title 26, Division 6 for transportation of hazardous materials, and CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code for routine use of hazardous materials. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including Caltrans, the CHP, the San Joaquin County Department of Environmental Health.

CONCLUSION

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 through 3.8-3 and Mitigation Measure 3.9-1 contained in Section 3.9, Hazards and Hazardous Materials, would reduce potential impacts that could occur due to the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment associated with construction activities within the Project site to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.8-1*: In the event that hazardous materials are encountered during construction, a Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.*

Mitigation Measure 3.8-2: *Prior to the issuance of grading permits for any of the parcels (i.e., Parcels 1-13, Basins A and C, Open Space B, Sewer Pump Station D, and Open Space E) identified on the Project's Tentative Subdivision Map (see Figure 2.0-7 of this EIR), the applicant or future project proponent shall hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.*

Mitigation Measure 3.8-3*: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or his subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous*

waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).

*Implement **Mitigation Measure 3.9-1**.*

Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (No Impact)

Given the unknown nature of future business establishments on the industrial and commercial lots, the Project has the potential for the routine transport, use, or disposal of hazardous materials, as provided under Impact 3.8-1. However, the Project site is not located within one-quarter-mile of a school. The nearest school to the Project site is the French Camp Elementary School located at 241 4th Street, French Camp, CA, which is approximately 1.1 miles northwest of the Project site. Therefore, ***no impact*** would occur related to emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (No Impact)

The hazards assessment included a site reconnaissance, interviews, historical land use research, and database research. The assessment revealed no evidence of historical or existing Recognized Environmental Conditions in connection with the Project site. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Implementation of the proposed Project would have a ***no impact*** with regards to this environmental issue.

Impact 3.8-4: Potential for the Project to result in a safety hazards for people residing or working on the Project site as a result of public airport or public use airport (Less than Significant)

As previously stated, the Project site is adjacent to the Stockton Metropolitan Airport and located within the airport influence area (AIA) identified in the Stockton Metropolitan Airport's Airport Land Use Compatibility Plan (ALUCP).

According to the Stockton Metropolitan Airport ALUCP, the northeastern corners of the Project site are within CNEL 60 noise exposure contours and the eastern portion of the Project site is within the SEL Contour. The locations of CNEL and SEL contours are among the factors used to determine land use compatibility. According to Section 3.3.2.3, Noise Exposure for Other Land Uses, of the ALUCP, the proposed industrial and commercial land uses on-site are compatible with the Project site's CNEL and SEL noise contours.

Additionally, the Project site is within Traffic Pattern Zone 7a of the Airport's Safety Zones, as identified in the Airport's ALUCP. Lands within Traffic Pattern Zone 7a cannot be developed with non-residential intensities greater than 450 persons per acre and must have open land over 10

percent of the site. Additionally, uses within Traffic Pattern Zone 7a cannot be hazardous to flight, include waterways that create a bird hazard, and outdoor stadiums are prohibited. Airspace review is required for development greater than 100 feet tall on lands within Zone 7a. Similarly, new dumps or landfills within Zone 7a are subject to the FAA notification and review and are further subject to restrictions and conditions outlined by the FAA.

According to the Stockton Metropolitan Airport's ALUCP, the industrial and commercial land uses are consistent with the Traffic Pattern Zone 7a of the Airport's Safety Zones. Additionally, new developments are required to comply with Chapter 16.28 of the Stockton Municipal Code, Overlay Zoning District Land Use and Development Standards, which requires that uses be consistent with the Stockton Municipal Airport ALUCP and that heights be limited in various zones to ensure safety. Further, the General Plan includes Action TR-1.3a, which directs the City to ensure that all future development is consistent with the ALUCP, except in cases where the City Council concludes that project would protect public health, safety, and welfare by minimizing the public's exposure to excessive noise and safety hazards.

Given that the Project's proposed land uses are compatible with the safety requirements of the ALUCP, and that the Project and future development would be subject to existing Stockton Municipal Code Chapter 16.28 requirements as well as proposed General Plan requirements about development within the AIA, the impact would be ***less than significant***.

Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

(*Note: The following discussion is associated with potential impacts of the Project on emergency response plans and/or evacuation plans. Proposed emergency vehicle access to and from the site is addressed in Section 3.12, Transportation and Circulation.*)

The Stockton Emergency Operations Plan (EOP), adopted in June 2012, addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The EOP establishes the emergency management organization required to mitigate any significant emergencies and identifies roles and responsibilities required to protect the health and safety of Stockton residents and property. Additionally, The San Joaquin County Office of Emergency Services (OES) also maintains an Emergency Operations Plan (EOP) that serves as the official Emergency Plan for San Joaquin County. It includes planned operational functions and overall responsibilities of County Departments during an emergency situation. The Emergency Plan also contains a threat summary for San Joaquin County, which addresses the potential for natural, technological and human-caused disasters (County Code, Title 4-3007).

The County OES also prepared a Hazardous Materials Area Plan (§2720 H&S, 2008) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of

long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is now implemented by the San Joaquin County Environmental Health Department.

The San Joaquin County Environmental Health Department maintains a Hazardous Materials Management Plan/ Hazardous Materials Business Plan (HMMP/HMBP). The HMMP/HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials. The Environmental Health Department maintains a Hazardous Materials Database and Risk and Flood Maps available to the public on its website.

In San Joaquin County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The Project would not interfere with any emergency response plan or emergency evaluation plan, as the Project does not include any actions that would impair or physically interfere with the San Joaquin County EOP, San Joaquin County Hazardous Materials Area Plan, and the Stockton EOP. As previously stated, the proposed Project includes a Tentative Map to subdivide the 422.2-acre site into 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. No site plans are being proposed for the development of any of the lots; however, the Tentative Map does propose a new west-east trending primary road referred to as Commerce Drive, which would provide access to Airport Way to the west and the 99 Frontage Road to the east resulting in increased connectivity of the area.

Future uses on the Project site will have access to the County resources that establish protocols for safe use, handling and transport of hazardous materials. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Furthermore, the specific design and layout of the future development projects under the Tentative Map would be reviewed by the City's law enforcement and fire personnel to ensure that adequate emergency ingress and egress is provided throughout the site that would not interfere or impair evacuation plans. Therefore, impacts related to the potential for the project to impair implementation of emergency response plans would be ***less than significant*** impact.

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This section describes the regulatory setting, existing hydrology and water quality conditions, and potential impacts on existing drainage patterns, surface hydrology, and water quality conditions that are likely to result from Project implementation, and measures to reduce potential impacts. This section is based in part on the following documents, reports and studies:

- *Envision Stockton 2040 General Plan* (City of Stockton, December 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, June 2018);
- *California Water Plan Update 2013* (DWR, 2013);
- *The Delta Plan* (Delta Stewardship Council, as amended July 2019);
- *National Pollutant Discharge Elimination System Municipal Stormwater Program: Stormwater Management Plan* (City of Stockton, April 2009);
- *California's Groundwater Bulletin 118, San Joaquin Valley Groundwater Basin, Eastern San Joaquin Subbasin* (DWR, 2006);
- *California's Groundwater* (DWR, 2003);
- *Eastern San Joaquin Groundwater Basin Groundwater Management Plan* (San Joaquin County Department of Public Works, September 2004);
- *Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan* (Eastern San Joaquin Groundwater Authority, November 2019);
- *Eastern San Joaquin Integrated Regional Water Management Plan Update* (Eastern San Joaquin County Groundwater Basin Authority, June 2014);
- *Lower San Joaquin River and Delta South Regional Flood Management Plan* (San Joaquin Area Flood Control Agency, November 2014);
- *Spring 2018 Groundwater Report* (San Joaquin County Flood Control and Water Conservation District, 2018);
- *2015 Urban Water Management Plan* (City of Stockton, May 2016);
- *The South Stockton Commerce Center Hydrologic and Hydraulic Assessment* (Kjeldsen, Sinnock, & Neudeck [KSN], December 2020); and
- *South Stockton Commerce Center Water Supply Assessment* (City of Stockton Municipal Utilities Department, October 2020).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Justice (November 24, 2020), Central Valley Regional Water Quality Control Board (October 20, 2020), and Sierra Club (October 27, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

San Joaquin County is located in the San Joaquin River watershed. The San Joaquin River is about 300 miles long. It begins in the Sierra Nevada mountain range on California's eastern border. The river runs down the western slope of the Sierra and flows roughly northwest through the Central

Valley, to where it meets the Sacramento River at the Sacramento-San Joaquin Delta. Once a great marsh, the Sacramento-San Joaquin Delta is now a network of channels and sunken "islands" that cover—together with Suisun Marsh—about 1,300 square miles. Laid over those islands and channels is infrastructure: water supply conduits; major arteries of the state's electrical grid; natural gas fields, storage facilities, and pipelines; highways and railways; and shipping channels, all surrounded by an increasingly urban landscape. This maze of channels and islands drains more than 40 percent of the state's lands and carries about half of the state's total annual runoff (Delta Stewardship Council, as amended July 2019).

Because the Central Valley receives relatively little rainfall (12 to 17 inches a year, falling mostly October through March), snowmelt runoff from the mountains is the main source of fresh water in the San Joaquin River. Over its 300-mile length, the San Joaquin River is fed by many other streams and rivers, most notably the Stanislaus, Tuolumne and Merced rivers.

Most of the surface water in the upper San Joaquin River is stored and diverted at Millerton Lakes' Friant Dam, near Fresno. From Friant Dam, water is pumped north through the Madera Canal and south through the Friant-Kern canal to irrigation districts and other water retailers, which then deliver the water directly to the end users in the southern portion of the watershed.

In the central and northern portions of the watershed, many agricultural and municipal users receive water from irrigation districts, such as the Modesto, Merced, Oakdale, South San Joaquin and Turlock Irrigation Districts. That water is provided through diversions from rivers that are tributary to the San Joaquin, such as the Mokelumne, Stanislaus, Tuolumne and Merced rivers.

In an average year, about 1.5 million acre-feet of water is diverted from the San Joaquin River at Friant Dam, leaving little flow in the river until the Merced River joins the San Joaquin northwest of the City of Merced. Additional water also reaches the river via flows returning to the river from municipal wastewater treatment plants, as well as urban and agricultural runoff. The rest of the area's water supply needs are met by importing water from northern California (via the Central Valley Project) and by pumping water from the groundwater basin (Delta Stewardship Council, as amended July 2019).

Climate

Summers in the region are warm and dry ranging from an average high in July of 93°F to an average low of approximately 59°F. Winters are cool and mild, with an average high of 53°F and a low of 37°F in January. The average annual precipitation is approximately 13.81 inches. Precipitation occurs as rain, most of which falls between the months of November through April, peaking in January at 2.85 inches. The average temperatures range from December lows of 37.5°F to July highs of 94.3°F.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1. STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

Hydrologic Region

San Joaquin County is located in the San Joaquin River Hydrological Region. The San Joaquin River is the principal river of the region, and all other streams of the region are tributary to it. The Mokelumne River and its tributary the Cosumnes River originate in the central Sierra Nevada, along with the more southerly Stanislaus and Tuolumne rivers. The Merced River flows from the south central Sierra Nevada and enters the San Joaquin near the City of Newman. The Chowchilla and Fresno rivers also originate in the Sierra south of the Merced River and trend westward toward the San Joaquin River. Creeks originating in the Coast Range and draining eastward into the San Joaquin River include Del Puerto Creek, Orestimba Creek, and Panoche Creek. Del Puerto Creek enters the San Joaquin near the City of Patterson, and Orestimba Creek enters north of the City of Newman. During flood years, Panoche Creek may enter the San Joaquin River or the Fresno Slough near the town of Mendota. The Kings River is a stream of the Tulare Lake Hydrologic Region, but in flood years it may contribute to the San Joaquin River, flowing northward through the James Bypass and Fresno Slough to enter near the City of Mendota. The Mud, Salt, Berrenda, and Ash sloughs also add to the San Joaquin River, and numerous lesser streams and creeks also enter the system, originating in both the Sierra Nevada and the Coast Range. The entire San Joaquin river system drains northwesterly through the Delta to Suisun Bay (DWR 2013, pg. SJR-5).

Groundwater

The San Joaquin Valley Groundwater Basin lies within the San Joaquin River and Tulare Lake Hydrologic Regions. The San Joaquin River Hydrologic Region portion of the basin covers approximately 3.73 million acres while the Tulare Lake Hydrologic Region portion of the basin cover

approximately 5.15 million acres. Groundwater is extensively used in the San Joaquin Valley Groundwater Basin by agricultural and urban entities and accounts for approximately 48% of the groundwater used in the State (DWR 2003).

The northern portion of the basin is within the San Joaquin River Hydrologic Region and consists of nine subbasins. These subbasins are the Cosumnes, Eastern San Joaquin, Tracy, Modesto, Turlock, Merced, Delta-Mendota, Chowchilla, and Madera (DWR, 2003). The majority of the City of Stockton, including the Project site, is located in the Eastern San Joaquin River Subbasin; however, a small portion of the west end of the Stockton Planning Area is located above the Tracy Subbasin.

LOCAL SETTING

The proposed Project site is comprised of 422.2 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is relatively flat with natural gentle slope from southwest to northeast. The Project site topography ranges in elevation from approximately 14 to 40 feet above sea level. The Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north.

The French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. The slough continues east under the UPRR and then south across the southwestern portion of the site. Before continuing south off-site, an irrigation canal/ditch breaks off of the French Camp Slough, which runs from west to east providing water to the on-site crops. Additionally, an irrigation ditch/canal runs along the northern boundary of the Project site.

Drainage

The major drainage pattern in the Stockton region is westerly from the Sierra Nevada, and then northerly through the San Joaquin Valley to the San Joaquin Delta.

The western half of Stockton is in the Sacramento-San Joaquin Delta (Delta) as defined by DWR. As previously stated, the Sacramento-San Joaquin Delta is formed by the confluence of the state's two largest rivers, the Sacramento and San Joaquin Rivers, before they flow to San Francisco Bay. The Sacramento flows south from its headwaters near Mt. Shasta while the San Joaquin River originates in the southern Sierra Nevada. The Mokelumne and Cosumnes Rivers, located between Stockton and Sacramento, are also included in the Delta's watershed. The Delta provides drinking water for two-thirds of Californians and irrigation water for over 7 million acres of farmland (Delta Stewardship Council, as amended July 2019).

As stated, the Delta watershed drains nearly 50 percent of the state's runoff and serves as one of the state's most valuable fresh water resources (Delta Stewardship Council, as amended July 2019). The Delta is highly engineered with numerous leveed islands and tracts, many of which are located west of the City of Stockton. Due to the nature of the Delta as the confluence for a number of waterways, as well as tidal influence within the Delta, flooding is a concern for development in the

vicinity of the Delta. Meeting water quality standards within Delta waterways is a major concern in management of the Delta, as it supplies municipal water to a majority of California's population. The Project site does not fall within the Primary or Secondary Zones of the Delta, although the waterways that flow from the Project Area eventually discharge to the Delta (City of Stockton, April 2009).

The San Joaquin River is heavily managed, and is the primary receiving water body for several rivers and streams that flow from the east out of the Sierra Nevada and northward towards the Delta. Its headwater tributaries, the south and middle forks, rise from glacial lakes in the southern Sierra Nevada and flow west toward the Central Valley and then north into the Delta. Regional tributaries that flow from the east and join the main stem include Pixley Slough, Bear Creek, Five Mile Slough, Calaveras River, Mormon Slough, Walker Slough, and French Camp Slough (City of Stockton, 2018).

Figure 3.9-1 identifies the watersheds located within the Project site boundaries. The majority of the Project site is located in the French Camp Slough watershed. Additionally, a small portion along the southern boundary of APN 201-020-010, in the eastern area of the Project site, is located in the Littlejohns Creek watershed. French Camp Slough, which receives flows from North Littlejohns Creek and Weber Slough, flows into the San Joaquin River west of the Project site.

STORMWATER DRAINAGE

Urban stormwater drainage in the City of Stockton is provided by a storm drain system that is separate from the municipal sewer system. The City of Stockton Municipal Utility Department operates and maintains approximately 620 miles of pipe, 72 pump stations, and more than 100 discharge pipes. The local storm drain facilities collect and route runoff from the streets and gutters through surface canals and stormwater retention basins, as well as a through a network of underground gravity and force mains (pipelines), pump stations, and outfalls into rivers, creeks, and the Delta, including outfalls to the San Joaquin River, Bear Creek, Pixley Slough, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, Calaveras River and Stockton Diverting Canal, Smith Canal, French Camp Slough, Walker Slough, Weber Slough, North Littlejohns Creek, and Duck Creek (City of Stockton, June 2018).

Groundwater

As previously stated, the Project site is located above the Eastern San Joaquin River Groundwater Subbasin. The Eastern San Joaquin River Subbasin covers approximately 1,105 square miles and extends from the Mokelumne River on the north and northwest; San Joaquin River on the west; Stanislaus River on the south; and consolidated bedrock on the east. The Eastern San Joaquin Subbasin is bounded on the south, southwest, and west by the Modesto, Delta-Mendota, and Tracy Subbasins, respectively and on the northwest and north by the Solano, South American, and Cosumnes Subbasins. (DWR 2006, pg. 1).

The Eastern San Joaquin River Groundwater Subbasin is not adjudicated; however, a groundwater management plan and groundwater sustainability plan have been prepared for the subbasin. In 2005, Stockton adopted the Eastern San Joaquin Groundwater Basin Groundwater Management Plan (San Joaquin County Department of Public Works, 2004) prepared by the Northeastern San Joaquin County Groundwater Banking Authority, replacing the 1995 Groundwater Management

Plan. Given the subbasins critical state of overdraft, the Eastern San Joaquin Groundwater Authority (ESJGWA) was formed in 2017 and the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan was adopted in November 2019.

According to the Eastern San Joaquin River Groundwater Subbasin Groundwater Sustainability Plan, the origin of geologic formations within the Eastern San Joaquin Subbasin varies in geologic time ranging from recent to Pre-Cretaceous bedrock or basement. The Victor formation is the uppermost formation and extends from the ground surface to a maximum depth of about 150 feet. Compared to the underlying formations, the Victor formation is generally more permeable and the groundwater is typically unconfined. The underlying Laguna formation includes discontinuous lenses of unconsolidated to semi-consolidated sands and silts interspersed with lesser amounts of clay and gravel. The Laguna formation is hydraulically connected to the Victor formation and is estimated to be 750 to 1,000 feet thick. Moderate permeability has been reported within the Laguna formation with some highly permeable coarse-grained beds. Most of the municipal and industrial wells in the region penetrate through the Victor formation into the Laguna formation.

According to the 2014 Eastern San Joaquin Integrated Regional Water Management Plan, the subbasin has been historically in a critical condition of overdraft with the historic hydrologic record estimating net groundwater overdraft to be approximately 150,000 to 160,000 acre-feet per year (af/yr). According to the Envision Stockton 2040 General Plan EIR, average groundwater use in the Eastern San Joaquin Subbasin is about 809,321 acre-feet per year (afy), of which approximately 95 percent is for agricultural uses and 5 percent for municipal and industrial uses. Historically, groundwater elevations have declined about 40 to 60 feet, averaging approximately 1.7 feet per year.

The San Joaquin County Flood Control and Water Conservation District (District) monitors groundwater levels and groundwater quality throughout San Joaquin County to identify the condition of the Eastern San Joaquin Subbasin. According to the Spring 2018 Groundwater Report, of the 135 wells able to be compared, 70 showed decreases in groundwater levels, 58 showed increases in groundwater levels, and 7 showed no change in groundwater elevations. The Eastern San Joaquin Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners.

GROUNDWATER RESOURCES

The City currently has groundwater wells located in the City's North and South systems. Groundwater is used conjunctively with the City's other supply sources. Groundwater is managed for long-term sustainability and supply through conjunctive use with surface water supplies. According to the 2015 Urban Water Management Plan, the City has determined that the sustainable groundwater yield is 0.75 ac-ft/acre/yr, equivalent to a groundwater yield of approximately 50,000 ac-ft/yr. To establish the projected groundwater supply that is reasonably available, City of Stockton Municipal Utilities Department (COSMUD) assumes that the reasonably available groundwater for

the current water service area (38,524 acres) is pumped at 0.6 ac-ft/acre/yr, equivalent to an annual groundwater supply of 23,100 ac-ft/yr (City of Stockton, May 2016).

LOCAL GROUNDWATER QUALITY

The majority of the groundwater in the basin is characterized by calcium-magnesium bicarbonate or calcium-sodium bicarbonate types. Large areas of chloride type water occur along the western margin of the subbasin along the San Joaquin River. Based on analyses of 174 water supply wells in the subbasin, total dissolved solids (TDS) ranges from 30 to 1,632 mg/L and averages approximately 310 mg/L. Specific conductance of groundwater ranged from 78 to 5,390 µmhos/cm, with a mean value of 685 and a median of 356. Some of the highest specific conductance values were found along the western part of the subbasin and San Joaquin River alignment (DWR, 2003).

Saline intrusion threatens the groundwater quality in the Stockton area, especially in dry years when groundwater is used more heavily. As a result of declining water levels, a cone of depression has formed creating a gradient that allows saline water underlying the Delta region to migrate northeast within the southern portions of Stockton. Additionally, large areas of elevated nitrate in groundwater exist within the subbasin located southeast of Lodi, south of Stockton, and east of Manteca extending towards the San Joaquin-Stanislaus County line (DWR, 2003). According to the 2019 Drinking Water Quality Report prepared for the City, drinking water from groundwater meets all drinking water standards set by the state and federal government (City of Stockton, 2019).

Flooding

Flooding is the accumulation of water where none usually occurs or the overflow of excess water from a stream, river, lake, reservoir, or coastal body of water onto adjacent floodplains. Floods are natural events that are considered hazards only when people and property are affected. Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

As previously stated, the Project site lies within the larger area known as the Delta Basin, which historically was a tidal marsh formed in an overflow area of the Sacramento and San Joaquin Rivers. During the early part of the 20th century, over 80 percent of the Delta was reclaimed through construction of levees. There are over 1,100 miles of man-made levees protecting land in the Delta from flooding. The RD-17 levee system is designed to a 100-year protection standard. However, no levees meet the State's 200-year flood protection requirement in the Central Valley Flood Protection Plan.

According to the Lower San Joaquin River and Delta South Regional Management Plan, flooding in the City of Stockton comes from three main sources: The San Joaquin River, local creek flooding, and high tides. Flooding events from the San Joaquin River can last months and are typically caused by prolonged snow melts, rain-on-snow events, and/or prolonged duration atmospheric river rainfall events. Local creek flooding events generally last days to a week and are typically caused by very intense, short duration "cloudburst" rainfall events and/or prolonged duration atmospheric river

rainfall events. Lastly, flood events from high tides generally last between a few hours and cyclical over a few days.

Figure 3.9-2 illustrates the Federal Emergency Management Agency (FEMA) Flood Zone Designations for portions of the Project site and surrounding areas. The majority of the Project site is located within the 100-Year designated FEMA Flood Zone. Additionally, portions of the Project site adjacent to the French Camp Slough are designated within the Regulatory Floodway and smaller portions of the Project site are within the 500-year flood zone and areas of minimal flood hazards. It should be noted that the Project site is not within a 200-year flood zone or within the 200-year United States Army Corp of Engineers Comprehensive Study Flood Plain.

100-YEAR FLOODPLAIN

The 100-Year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. Floodplain zones (Special Flood Hazard Areas [SFHA]) are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs). These tools assist communities in mitigating flood hazards through land use planning. FEMA also outlines specific regulations, intended to be adopted by the local jurisdictions, for any construction, whether residential, commercial, or industrial within 100-year floodplains.

Lands within the FEMA-designated 100-year floodplain (SFHA) are subject to mandatory flood insurance as required by FEMA. The insurance rating is based on the difference between the base flood elevation (BFE), the average depth of the flooding above the ground surface for a specific area, and the elevation of the lowest floor. Because the City of Stockton participates in the National Flood Insurance Program, it must require development permits to ensure that construction materials and methods will mitigate future flood damage, and to prevent encroachment of development within floodways. New construction and substantial improvements of residential structures are also required to "have the lowest habitable floor (including the basement if it is, or easily could be 'habitable') elevated to or above the base flood level." Non-residential structures must have their utility systems above the BFE or be of flood-proof construction.

REGULATORY FLOODWAY

A "Regulatory Floodway" refers to the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. FEMA requires communities to regulate the development in these floodways to ensure that there are no increases in upstream flood elevations.

Dam Failure

The southwest corner of the Project site south of the French Camp Slough is located within the New Melones Dam Inundation Area, as shown in Figure 3.9-3. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with

storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody

and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. The Project site, via North Littlejohns Creek and French Camp Slough, indirectly drains into the San Joaquin River. The San Joaquin River, from the Merced River to the south Delta Boundary, is listed as impaired for boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides[1], mercury, and unknown toxicity. These sources of pollution are mainly attributed to agriculture and resource extraction. Additionally, the waterways in the regional vicinity of the Project site that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL AND STATE

Clean Water Act

The Clean Water Act (CWA), initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2013-001-DWQ-DWQ).

[1] Group A Pesticides could include aldrin, deldrin, chlordane, endrin, heptachlor, heptachlor expoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphene.

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps (FIRMs) for local and regional planners to promote sound land use and floodplain development by identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as Flood Insurance Studies (FISs). The most recent FIS and FIRMs were completed and published for the City of Stockton in 2009. Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

The Flood Disaster Protection Act (FDPA) requires owners of all structures in identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally-related financial assistance, such as mortgage loans from federally-insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA. The NFIP is required to offer federally-subsidized flood insurance to property owners in those communities that adopt and enforce floodplain management ordinances that meet minimum criteria established by FEMA. The National Flood Insurance Reform Act of 1994 further strengthened the NFIP by providing a grant program for state and community flood mitigation projects. The act also established the Community Rating System (CRS), a system for crediting communities that implement measures to protect the natural and beneficial functions of their floodplains, as well as managing erosion hazards.

The City of Stockton, under NFIP, has created standards and policies to ensure flood protection. These policies address development and redevelopment, compatibility of uses, required predevelopment drainage studies, compliance with discharge permits, enhancement of existing waterways, cooperation with the US Army Corps of Engineers (Corps) and the San Joaquin Area Flood Control Agency (SJAFCA) for updating, and method consistency with the Regional Water Quality Control Board (RWQCB) and proposed best management practices (BMPs).

200-Year Flood Protection in the Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB 5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2016 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025. Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;

3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

California Water Code

The Federal Clean Water Act places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the States to follow in developing their programs and allows the Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

> (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
>
> > (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

National Pollutant Discharge Elimination System

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for periods of five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Under Phase I, which started in 1990, the Regional Water Quality Control Boards have adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of Phase II, the SWRCB adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including nontraditional Small MS4s, which are

governmental facilities such as military bases, public campuses, and prison and hospital complexes. The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations.

Under Phase II requirements, dischargers in any location whose projects disturb 1 or more acres of soil or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). On September 2, 2009, the SWRCB adopted a new Construction General Permit (CGP) (Order No. 2009-0009-DWQ) that supersedes the existing CGP as of July 1, 2010. Construction activity subject to this permit includes clearing, grading, and 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 CGP requires the development and implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list best management practices the discharger will use to protect stormwater runoff and the placement of those BMPs.

Assembly Bill 3030 - Groundwater Management Act

In 1992, the State Legislature provided for more formal groundwater management with the passage of Assembly Bill (AB) 3030, the Groundwater Management Act (Water Code Section 10750, et seq.). Groundwater management, as defined in DWR's Bulletin 118 Update 2003, is the planned and coordinated monitoring, operation, and administration of a groundwater basin, or portion of a basin, with the goal of long-term groundwater resource sustainability. Groundwater management needs are generally identified and addressed at the local level in the form of Groundwater Management Plans (GMP). The Act provides local water agencies with procedures to develop a GMP to enable those agencies to manage their groundwater resources efficiently and safely while protecting the quality of supplies. Under the Act, development of a GMP by a local water agency is voluntary.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) established a framework for sustainable, local groundwater management. SGMA requires groundwater-dependent regions to halt overdraft and bring basins into balanced levels of pumping and recharge. With passage of the SGMA, the Department of Water Resources launched the Sustainable Groundwater Management (SGM) Program to implement the law and provide ongoing support to local agencies around the state. The

SGMA defines "sustainable groundwater management" and requires that a Groundwater Sustainability Plan be adopted for the most important groundwater basins in California as a means to empower local agencies to manage basins sustainably. The SGMA establishes basic requirements for the Groundwater Sustainability Plans as well as a timetable for the adoption of the plans.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

The Delta Reform Act of 2009

While there are many agencies involved in both the near and long-term management of the Delta, the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act) established the Delta Stewardship Council (Council) to create a comprehensive, long-term, legally enforceable plan to guide how multiple federal, state, and local agencies manage the Delta's water and environmental resources. The 2009 legislation directed the Council to oversee implementation of this plan through coordination and oversight of state and local agencies proposing to fund, carry out, and approve Delta-related activities. It also granted the Council regulatory and appellate authority over certain actions that take place in whole or in part in the Delta and Suisun Marsh, referred to as covered actions.

Since 2010, the Council has developed, amended, and begun implementing the Delta Plan, addressing multiple complex challenges in the process. Much progress has been made, but much remains to be done. Developed to achieve the state's coequal goals of a reliable statewide water supply and a protected, restored Delta ecosystem in a manner that preserves the values of the Delta as a place, the Delta Plan includes 14 regulatory policies and 95 recommendations. Collectively, these policies and recommendations address current and predicted challenges related to the Delta's ecology, flood management, land use, water quality, and water supply reliability. The Delta Plan's

policies and recommendations are based on best available science and depend on cooperation and coordination among federal, state, and local agencies.

Central Valley Flood Protection Board

The Central Valley Flood Protection Board (CVFPB), formerly known as the California State Reclamation Board, is the regulating authority over flood risk management in the Central Valley. In addition, CVFPB is charged with the review and adoption the CVFPP. The CVFPB's governing body consists of seven Governor-appointed and Senate-confirmed members. The board works in close partnership with the California Department of Water Resources (DWR), the US Army Corp of Engineers (USACE), and stakeholders to implement the CVFPP. The CVFPB also works closely with the California Department of Fish and Wildlife, US Fish and Wildlife, and the National Marine Fisheries Service to evaluate the environmental impacts of flood control.

Central Valley Flood Protection Plan

The CVFPP was adopted by the CVFPB on June 29, 2012. The plan provides a policy, program, and project implementation framework to help guide regional and State level financing plans and investments. The CVFPP proposes a State Systemwide Investment Approach (SSIA) for sustainable, integrated flood management in areas currently protected by facilities of the State Plan of Flood Control (SPFC). The CVFPP suggests improvements to SPFC levees located along the San Joaquin River and tributary channels in the Stockton Metropolitan Area.

LOCAL

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to hydrology, water quality, and flooding. General Plan policies and actions applicable to the Project are identified below:

POLICIES: SAFETY ELEMENT

- SAF-2.1. Ensure that community members are adequately prepared for natural disasters and emergencies through education and training.
- SAF-2.2. Prepare sufficiently for major events to enable quick and effective response.
- SAF-2.3. Protect the community from the potential flood events.
- SAF-2.4. Minimize risks to the community from flooding through appropriate siting and protection of structures and occupants.
- SAF-3.2. Protect the availability of clean potable water from groundwater sources.

ACTIONS: SAFETY ELEMENT

- SAF-2.1B. Inform the public about the specific risks of living in flood-prone areas, and provide residents instructional information on how to take steps to reduce their exposure to flood damages

- SAF-2.2A. Require new development to provide adequate access for emergency vehicles and evacuation routes, including by designing roadway systems to provide multiple escape routes in the event of a levee failure.
- SAF-2.2B. Formulate, review, periodically update, and make available to the public emergency management plans for the safe evacuation of people from areas subject to inundation from levee and dam failure.
- SAF-2.2C. Require new critical facilities, including hospitals, emergency operations centers, communications facilities, fire stations, and police stations, to be located, designed, and constructed to avoid or mitigate potential risks and ensure functional operation during flood events (i.e., avoid locating in the 100-year and 200-year floodplains), seismic and geological events, fires, and explosions.
- SAF-2.2D. Continue to work with San Joaquin County, the County Office of Emergency Services, other cities in the region, and disaster agencies to coordinate disaster and emergency preparedness planning.
- SAF-2.3A. Coordinate with appropriate State, federal, and local flood control agencies to develop a flood protection plan for the levee systems protecting the city that:
    - Identifies the levees protecting the city and the entities responsible for the operation and maintenance of the levees;
    - Determines the flood levels in the waterways and the level of protection offered by the existing levees along the waterways;
    - Identifies a long-term plan to upgrade the system as necessary to provide at least a 100-year level of flood protection to the city, and 200-year level of flood protection, where feasible;
    - Encourages multi-purpose flood management projects that, where feasible, incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the city's streams, creeks, and lakes; and
    - Includes provisions for updates to reflect future State or federally mandated levels of flood protection.
- SAF-2.3B. Collaborate with State and local flood management agencies and other interested parties to develop funding mechanisms to finance the local share of flood management responsibilities, and maintain cooperative working relationships with appropriate agencies to minimize flood hazards and improve safety.
- SAF-2.3C. Require new public and private waterfront development to be oriented to waterways and provide setbacks and easements along levees and channels to provide space for levee widening, flood fighting, roadway and maintenance access, open space and trail amenities, and appropriate landscaping.
- SAF-2.3D. Prepare and maintain a map of evacuation routes for major flood events.
- SAF-2.4A. Regulate new urban development in accordance with State requirements for 200-year level of flood protection and federal requirements for 100-year level of flood protection.
- SAF-2.4C. Preserve floodways and floodplains for non-urban uses to maintain existing flood carrying capacities, except when mitigated in conformance with the City's floodplain management program.

- SAF-2.4D. Consider the best available flood hazard information and mapping from regional, State, and federal agencies to inform land use and public facilities investment decisions.
- SAF-3.2A. Continue to cooperate with San Joaquin County, Stockton East Water District, and CalWater to monitor groundwater withdrawals and ensure that they fall within the target yield for the drinking water aquifer.
- SAF-3.2B. Require new development to employ low impact development (LID) approaches, including:
    - Conserving natural areas and reducing imperviousness;
    - Runoff storage;
    - Hydro-modification (to mimic pre-development runoff volume and flow rate);
    - Reducing trash accumulation; and
    - Public education and outreach.

City of Stockton Municipal Code

The City of Stockton sets forth stormwater quality requirements in Municipal Code Chapter 13.16, Stormwater Management and Discharge Control, and 13.20, Stormwater Quality Control Criteria Plan. Chapter 15.44, Flood Damage Prevention, outlines specific requirements for new developments within floodplain areas that serve to minimize public and private losses due to flood conditions. Chapter 15.48, Grading and Erosion Control, of the Stockton Municipal Code regulates grading and erosion control in the city.

City of Stockton and San Joaquin County Stormwater Quality Control Criteria Plan

The Stormwater Quality Control Criteria Plan (SWQCCP) was prepared to accomplish the following goals:

- Protect water resources of the City and County from the adverse impacts of urban stormwater runoff;
- Ensure that the implementation of the measures in the SWQCCP is consistent with the NPDES permit and other State requirements, including trash control;
- Provide clear development standards for developers, design engineers, agency engineers, and planners to use in the selection and implementation of appropriate control measures;
- Emphasize the implementation of low impact development (LID)-based strategies; and
- Provide maintenance procedures to ensure that the selected control measures will be maintained to provide effective, long-term pollution control.

The control measures, often termed BMPs, were selected to optimize post-construction, on-site stormwater pollution control. All Priority New Development and Significant Redevelopment Projects must apply all four categories of stormwater pollution controls measures, which include:

- Site Design Controls;
- Source Controls;

- Volume Reduction Measures; and
- Treatment Controls.

In addition, all Priority Projects and Priority Land Use Projects must apply trash control measures (Section 6).

The principal objective of the Site Design Controls is to reduce stormwater runoff peak flows and volumes through appropriate site design. The benefits derived from this approach include:

- Reduced size of downstream treatment controls and conveyance systems;
- Reduced pollutant loading to treatment controls; and
- Reduced hydraulic impact on receiving streams.

City of Stockton NPDES Stormwater Management Plan

The City of Stockton NPDES Stormwater Management Plan (SWMP) includes existing and enhanced program control measures, represents the strategy for controlling the discharge of pollutants from the municipal storm drain system to the MEP. The core objectives of the SWMP are to:

1. Identify and control those pollutants in urban runoff that pose significant threats to the waters of the State and waters of the U.S. and their beneficial uses;
2. Comply with the federal regulations to eliminate or control, to the MEP, the discharge of pollutants from urban runoff associated with the stormwater drainage system;
3. Achieve compliance with water quality standards;
4. Develop a cost-effective program which focuses on pollution prevention of urban stormwater;
5. Seek cost-effective alternative solutions where prevention is not a practical solution for a significant problem; and
6. Coordinate the implementation of control measures with other agencies.

To address the core objectives and pollutants of concern, the NPDES SWMP incorporates a series of commitments and performance standards and, as a result, provides for a long-term, comprehensive, and multidisciplinary effort by the City to achieve water quality standards and protect beneficial uses. Pursuant to the NPDES SWMP, the Project will be required to prepare a Project Stormwater Quality Control Plan (SQCP) specifying BMPs the project will use, and design specifications for selected BMPs, for submission to the City of Stockton Department of Municipal Utilities (for projects in the city).

Eastern San Joaquin Groundwater Authority

In 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA) in response to continued overdraft of California's groundwater resources. The Eastern San Joaquin Groundwater Subbasin is one of 21 basins and subbasins identified by the California Department of Water Resources (DWR) as being in a state of critical overdraft. The ESJGWA was formed in 2017 in response to SGMA. A Joint Exercise of Powers Agreement establishes the ESJGWA, which is composed of 16 Groundwater Sustainability Agencies, including the Central Delta Water District,

Central San Joaquin Conservation District, City of Lodi, City of Manteca, City of Stockton, Eastside San Joaquin GSA, Linden County Water District, Lockeford Community Services District, North San Joaquin Water Conservation District, Oakdale Irrigation District, San Joaquin County Number 1, San Joaquin County Number 2, South San Joaquin GSA, Stockton East Water District, and the Woodbridge Irrigation District. The ESJGWA is governed by a 16-member Board of Directors (ESJGWA Board), with one representative from each GSA.

In November 2019, the ESJGWA adopted the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan (GSP) to address the overdraft condition in the subbasin. The sustainability goal description for the Eastern San Joaquin Subbasin is to maintain an economically-viable groundwater resource for the beneficial use of the people of the Eastern San Joaquin Subbasin by operating the Subbasin within its sustainable yield or by modification of existing management to address future conditions. This goal will be achieved through the implementation of a mix of supply and demand type projects consistent with the GSP implementation plan.

San Joaquin Area Flood Control Agency

In 1995, the San Joaquin Area Flood Control Agency (SJAFCA) was created as a Joint Powers Authority between the City of Stockton, San Joaquin County and the San Joaquin County Flood Control and Water Conservation District for the purpose of addressing flood protection for the City of Stockton and surrounding County area. SJAFCA's first endeavor was to prevent the possible de-accreditation of levees and to improve project levees to meet FEMA standards. As a result, SJAFCA constructed the Flood Protection Restoration Project (FPRP) which consisted of flood wall and levee improvements along 40 miles of existing channel levees, 12 miles of new levees, modifications to 24 bridges and the addition of two major detention basins and pumps.

Recent flooding disasters, such as Hurricane Katrina, have resulted in a reevaluation of local flood risk and flood protection. FEMA has undertaken a Map Modernization Program that has resulted in a levee recertification program with new and more stringent levee standards. SJAFCA is facing a number of challenges to assure flood protection facilities meet both State and Federal regulatory requirements. SJAFCA works with San Joaquin, other cities, and local reclamation districts to address flood protection and levee requirements in our area. SJAFCA coordinates and partners with State and Federal agencies to address FEMA's Flood Insurance Rate Maps, levee standards, and flood protection issues.

Lower San Joaquin River & Delta South Regional Flood Management Plan

In 2014, the SJAFCA prepared and adopted the Lower San Joaquin River and Delta South Regional Flood Management Plan to provide a reconnaissance-level assessment of flood risks, and identify a prioritized list of near-term and long-term flood risk reduction projects for the Regions. The Lower San Joaquin River and Delta South Regional Flood Management Plan is a multi-faceted plan to improve public safety through integrated flood management in order to reduce the chance and consequences of flooding while promoting coincident integrated water management benefits, other multi-benefit components, and sustainable economic growth. The goal of this regional flood management plan was to improve flood management systems, emergency response, the operation and maintenance, the ecosystem, and both public and institutional awareness.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
    - 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
    - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (Less than Significant with Mitigation)

CONSTRUCTION PHASE

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

To ensure Project construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), the Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards (Mitigation Measure 3.9-1). Such BMPs may include: temporary erosion control measures such as silt fences, staked straw

bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. Upon completion of the Project, the applicant would be required to submit a Notice of Termination to the State Regional Water Quality Control Board to indicate that construction is completed. Mandatory compliance with the SWPPP would ensure that the proposed Project would not violate any water quality standards or waste discharge requirements during construction activities. Additionally, the Project will be required to comply with Stockton Municipal Chapter 13.16, Stormwater Management and Discharge Control, which establishes limitations and regulations for discharges into the City's stormwater system, and Chapter 13.20, Stormwater Quality Control Criteria Plan, which establishes requirements that control the discharges of pollutants. Therefore, water quality impacts associated with construction activities would be less than significant.

OPERATIONAL PHASE

The long-term operations of the proposed Project (all phases) could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in increased impervious area at the site as a result of the proposed development. Normal activities in these developed areas include the use of various automotive petroleum products (i.e. oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Within urban areas, these pollutants are generally called nonpoint source pollutants. The pollutant levels vary based on factors such as time between storm events, volume of storm event, type of uses, and density of people.

A guiding stormwater management principle for projects should be that it does not result in new impacts to properties downstream or upstream. Potential impacts include considerations of both stormwater quantity and quality. Long-term water quality could be significant due to development of the proposed Project; however, the Project would be designed to conform with current City of Stockton standard requirements, as discussed below.

The Project proposes to construct two storm drain detention basins to provide flood control (flood control basins). The primary flood control basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. Additionally, the Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5 of the Project's Tentative Map (see Figure 2.0-7). The flood control channel will connect to a proposed outfall to the primary flood control basin, generally located within the northeast area of the basin. A storm drain (ranging from 15 to 96 inches) is proposed within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 of the Project's Tentative Map (see Figure 2.0-7) and connect to the proposed outfall to the primary detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary flood control basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the flood control basin, generally located within the northeast area of the basin. An outfall from the basin to French Camp Slough will also be constructed.

The overall design of the drainage infrastructure, including the proposed detention basins, will be required to comply with the *City of Stockton NPDES SWMP* (City of Stockton, April 2009), which includes existing and enhanced program control measures for controlling the discharge of pollutants to the municipal storm drain system to the maximum extent practicable (MEP). In addition, General Plan Action SAF-3.2B requires new development to employ low impact development (LID) approaches that conserve natural areas and reduce impervious areas. The term LID means a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions. The Project would be required to integrate LID measures throughout the Project to provide stormwater quality treatment. These LID measures would likely include both volume-based best management practices (BMPs) (i.e., bioretention, infiltration features, pervious pavement, etc.) and flow-based BMPs (i.e., vegetated swales, stormwater planter, etc.). The use of these features would be dependent upon the location and setting within the Project site.

According to the *City of Stockton SWQCCP*, the Project is considered a priority project as it would result in the development of more than 5,000 square feet of industrial/commercial developments. Priority projects are required to prepare and submit a Project Stormwater Quality Control Plan that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. In particular, the Project Stormwater Quality Control Plan will need to specify BMPs the Project will use and design specifications for selected BMPs. The Project Stormwater Quality Control Plan must be submitted for review and approval by the City of Stockton Department of Municipal Utilities, as required by Mitigation Measure 3.9-2. Implementation of Mitigation Measure 3.9-2 would require the Project to be consistent with regulatory requirements, which would ensure that the proposed Project would have a ***less than significant*** impact on operation related water quality.

MITIGATION MEASURE(S)

Mitigation Measure 3.9-1: *Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the*

City of Stockton and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.

Mitigation Measure 3.9-2: *Prior to the issuance of grading permits, the applicant and/or future Project proponent must submit a site-specific Project Stormwater Quality Control Plan to the City of Stockton Department of Municipal Utilities for review and approval. The site-specific Project Stormwater Quality Control Plan must specify BMPs the Project will use and design specifications for selected BMPs to ensure the Project's consistency with State and local water quality regulations.*

Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (Less than Significant)

As previously stated, the Project site is located in the Eastern San Joaquin Groundwater Basin. Much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra snowmelt flowing downstream. Precipitation in the region is 13.81 inches, most of which falls between November through April. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into the Delta. While the proposed Project would reduce the amount of pervious surfaces within the Project site, the proposed Project is designed to promote infiltration of groundwater in areas with pervious surface. Storm drainage flows in the Project site would be directed to one of two drainage basins, which include outfalls into the French Camp Slough. Additionally, the Project includes a drainage channel for flood control. In the event that Weber Slough overflows, the flood waters will spill into the flood channel and be directed to the northern onsite basin. Onsite stormwater runoff will be directed into an underground pipe system which will collect the runoff and direct it to the onsite basins. Upon compliance with Mitigation Measure 3.9-2, the Project will have incorporated site design measures, landscape features, and approved engineered treatment facilities (typically bioretention facilities) for water quality treatment that minimizes imperviousness, retains or detains stormwater, slows runoff rates, and reduces pollutants in post-development runoff consistent with the *City of Stockton NPDES SWMP*.

The City of Stockton Metropolitan Area (COSMA) has three water retailers including the City of Stockton Municipal Utilities District (COSMUD), California Water Service Company (Cal Water), and San Joaquin County within their respective service areas. The Project site will receive its water from the COSMUD, which relies on purchased water from the Calaveras, Stanislaus, and Mokelumne Rivers; surface water from the San Joaquin Delta; and groundwater. According to the Water Supply Assessment (WSA) prepared by COSMUD for the Project, sufficient water supplies exist to meet the Project's build-out water demand as well as all existing and reasonably foreseeable water demands. Additionally, the WSA concludes that the existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin underlying the COSMA

(COSMUD, October 2020). As such, implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.9-3: The proposed Project would not alter the existing drainage pattern of the site or area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff (Less than Significant)

Currently, runoff from within the Project site is collected in a system of shallow agricultural and roadside ditches. The French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. The slough continues east under the UPRR and then south across the southwestern portion of the site. Before continuing south off-site, an irrigation canal/ditch breaks off of the French Camp Slough, which runs from west to east providing water to the on-site crops. Additionally, an irrigation ditch/canal runs along the northern boundary of the Project site.

As previously discussed, the majority of the Project site is located within the French Camp Slough watershed with a small portion located in the Littlejohns Creek watershed. The French Camp Slough, which receives flows from North Littlejohns Creek and Weber Slough, flows into the San Joaquin River west of the Project site. The proposed Project would alter the existing drainage site through grading and future development of the 13 development lots, two basin lots, two open space lots, one sewer pump station lot, and off-site sewer improvements. As described in Chapter 2.0, Project Description, the Project would result in a maximum of 6,091,551 square feet of industrial type land uses, 140,350 square feet of commercial land uses, 54 acres of open space, 41 acres of public facilities, and 19 acres of right-of-way circulation improvements. Development of the proposed Project, when complete, would result in increased impervious surfaces and result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, thereby generating additional runoff during storm events. Additional runoff could contribute to increased erosion, siltation, and pollution, and increase in flood potential, or runoff that could exceed the capacity of the City's drainage system.

According to the South Stockton Commerce Center (SSCC) Hydrologic and Hydraulic Assessment prepared by Kjeldsen, Sinnock, and Neudeck (KSN) (December 2020), the proposed drainage infrastructure on-site would include a pair of flood control basins. In order to route floodwaters away from the proposed buildings and other infrastructure, an approximately 5,500 feet flood control channel would also be developed along the northern edge of the Project. The flood channel would collect water leaving Weber Slough towards the south and route it towards the west eventually discharging the Weber Slough overflow into the northern flood control basin. The northern flood control basin would be fed directly by the flood control channel and has a total capacity of approximately 450 ac-ft. The southern flood control basin (+132 ac-ft capacity) will be filled primarily by overflows from the French Camp Slough levee system to the south with some minor collection of Weber Slough overflows between Airport Way and the Union Pacific Railroad. The Union Pacific Railroad provides a hydraulic break between the Project areas contributing to the

northern flood control basin and the southern flood control basin as it does not overtop during a 100-year flood event (KSN, December 2020).

The majority of floodwater entering the northern flood control basin would be directly flowing from the Weber Slough adjacent to the north basin's north western side. Currently, the Weber Slough channel capacity is insufficient to convey the 100-year flood within its banks, thus overflow occurs. Implementation of the proposed Project would allow for approximately 138.1 ac-ft of flows originating directly from the Weber Slough area to be intercepted by and stored within the northern flood control basin assisting with overall Project site drainage and flooding. Additionally, a comparison of existing conditions and proposed conditions with Project implementation revealed there are no offsite impacts which would cause an increase in water surface greater than 0.05 feet (KSN, December 2020). Therefore, implementation of the Project would not result in flooding on- or off-site or runoff water exceeding the capacity of existing or planned stormwater drainage systems.

Construction would include excavation and the overall disturbance of existing landscape, and would expose bare soil, and could temporarily alter drainage patterns with the potential to cause erosion and sedimentation. Adherence with statewide NPDES Construction General Permit and MS4 Permit construction requirements would ensure erosion or siltation does not occur onsite through implementation of erosion and sediment control BMPs during construction of the proposed Project. These requirements (see Mitigation Measure 3.9-1) would include the implementation of minimum BMPs, typical Source Control BMPs, and typical Treatment Control BMPs for erosion, sediment, non-storm water management and waste management. Adherence to the MS4 Permit and Construction General Permit conditions would ensure that potential water quality degradation associated with the construction of future development projects within the Project area would be minimized. With implementation of erosion and sediment control BMPs, as would be required by the appropriate permitting authorities, and goals, policies, and implementation measures to reduce water quality impacts, construction-related impacts related to alteration of an existing drainage pattern that could result in substantial erosion or siltation on- or off-site from future development projects occurring under the proposed Project would be less than significant.

Additionally, planned urbanization of the Project site would result in changes to land use, natural vegetation, and infiltration characteristics, and would introduce new sources of water pollutants, producing "urban runoff." Pollutants contained within urban runoff may include, but are not limited to sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals that can degrade receiving waters. Urban runoff pollutants may stem from erosion of disturbed areas, deposition of atmospheric particles derived from automobile or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, decomposing plant materials, animal excrement, and spills of toxic materials on surfaces which receive rainfall and generate runoff. New industrial development can generate urban runoff from parking areas, as well as any areas of hazardous materials storage exposed to rainfall.

In order to ensure that stormwater runoff from the Project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, or otherwise degrade water quality, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs.

The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. Further, General Plan Action SAF-3.2B requires new development to employ LID approaches that conserve natural areas and reduce impervious areas. Therefore, consistency with the General Plan and implementation of these Mitigation Measures would reduce this impact to a less-than-significant level.

Overall, compliance with Federal, State, and local standards and regulations as well as implementation of Mitigation Measures 3.9-1 and 3.9-2 would ensure that that the proposed Project would not result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff and that the impact would be ***less than significant***.

Impact 3.9-4: The proposed Project has the potential to, in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation (Less than Significant)

FLOOD HAZARD ZONES

According to the Project's Hydrologic and Hydraulic Assessment, a majority of the Project size is located in FEMA designated Zone AO, where flood depths can reach one or more feet deep. A small portion of the Project site is also located within the New Melones Dam Inundation Area, as shown in Figure 3.9-3.

The Zone AO is considered a Special Flood Hazard Area (SFHA) and would require that the development be elevated above the base flood elevation (BFE). As discussed above, the City of Stockton has adopted a Flood Damage Prevention Ordinance (Chapter 15.44 of the Stockton Municipal Code), which outlines specific requirements for new development within floodplain areas. The City of Stockton's Municipal Code states that in a Zone AO, the lowest finished floor be: "elevated above the highest adjacent grade to a height two (2) feet above the depth number specified in feet on the FIRM, or elevated at least four (4) feet above the highest adjacent grade if no depth number is specified." As there is a depth (1 foot) published for the applicable Zone AO for this Project, the building footpads should be elevated three feet (1 foot depth plus 2 feet freeboard) above the highest adjacent grade to the building.

The typical way to elevate larger developments is to build the development upon fill placed to bring the finished floor elevation to two feet above the BFE. When using this approach, the typical method for obtaining FEMA approval is to file a Conditional Letter of Map Revision based on Fill (CLOMR-F). This requires the local NFIP administrating community's approval before it can be submitted to

FEMA for review and approval. The CLOMR-F provides the developer assurances that once the stated finished floor elevation is achieved, the structure will be removed from the SFHA. Once the Project is constructed and 'as-built' information is provided to FEMA, a final Letter of Map Revision based on Fill (LOMR-F) can be obtained through a similar process.

The Hydrologic and Hydraulic Assessment included an analysis to determine potential impacts to the floodplain from placing fill to bring the finished floor elevation to three feet above highest adjacent grade. The Hydrologic and Hydraulic Assessment utilized information regarding the rough grading surfaces, proposed building layouts, and proposed stormwater infrastructure, including the two flood control basins and flood control channel, to compare the existing conditions to the proposed conditions at Project buildout. As stated in Impact 3.9-3, the Hydrologic and Hydraulic Assessment determined that there are no offsite impacts which would cause an increase in water surface greater than 0.05 feet due to Project implementation. (KSN, December 2020).

In addition to the above analysis, the Hydrologic and Hydraulic Assessment also included an evaluation of the proposed flood control system for the Project to determine if the proposed flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from a 100-year flood event. The analysis was conducted under the assumption that the flood control basins would not be drained during the actual flood event. According to the Hydrologic and Hydraulic Assessment, the results of the analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin (KSN, December 2020). Therefore, the Hydrologic and Hydraulic Assessment notes the applicant shall apply for a CLOMR-F based upon the effective FEMA floodplains, as required by Mitigation Measure 3.9-3.

The Project would not result in a flood hazard or result in the release of pollutants due to on- or off-site flooding due to implementation of the proposed Project upon implementation of Mitigation Measure 3.9-3. Additionally, as noted in Impact 3.9-1, the Project will be required to prepare a SWPP (Mitigation Measure 3.9-1), a Project Stormwater Quality Control Plan (Mitigation Measure 3.9-2), and implement LID approaches that conserve natural areas and reduce impervious areas to ensure stormwater runoff from the Project site does not adversely increase pollutant levels. Consequently, this impact is considered ***less than significant*.**

TSUNAMIS AND SEICHES

Tsunamis originating in the Pacific Ocean would dissipate in the San Francisco Bay, and therefore pose a negligible hazard to the Project site. The probability of a seiche occurring in the San Joaquin River or in one of the many upstream reservoirs is considered minimal. Given the geologic context of the Project area, if such an event were to occur, the likelihood of it exposing Project facilities or people to a significant risk of injury or death is considered low. Given that the Project site is approximately 4.6 miles east of the San Joaquin River and is not located adjacent to an existing reservoir lake, or other large standing water body, impacts relative to this topic would be ***less than significant.***

MITIGATION MEASURE(S)

Mitigation Measure 3.9-3: *Prior to the issuance of grading permits, the applicant shall obtain the local NFIP administrating community's approval and file a Conditional Letter of Map Revision based on Fill (CLOMR-F) to remove any structures located within a FEMA designated Zone AO from the Special Flood Hazard Area.*

Impact 3.9-5: The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than Significant)

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability are the two guiding documents for water quality and sustainable groundwater management in the Project area.

WATER QUALITY CONTROL PLAN FOR THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Section 303 of the Clean Water Act requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

In order to ensure that stormwater runoff from the Project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, or otherwise degrade water quality, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. The Project would also be subject to the applicable water quality regulations, including, but not limited to, Stockton Municipal Chapter 13.16, Stormwater Management and Discharge Control, which established limitation and

regulations for discharges into the City's stormwater system, and Chapter 13.20, Stormwater Quality Control Criteria Plan, which establishes requirements that control the discharges of pollutants.

EASTERN SAN JOAQUIN GROUNDWATER SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

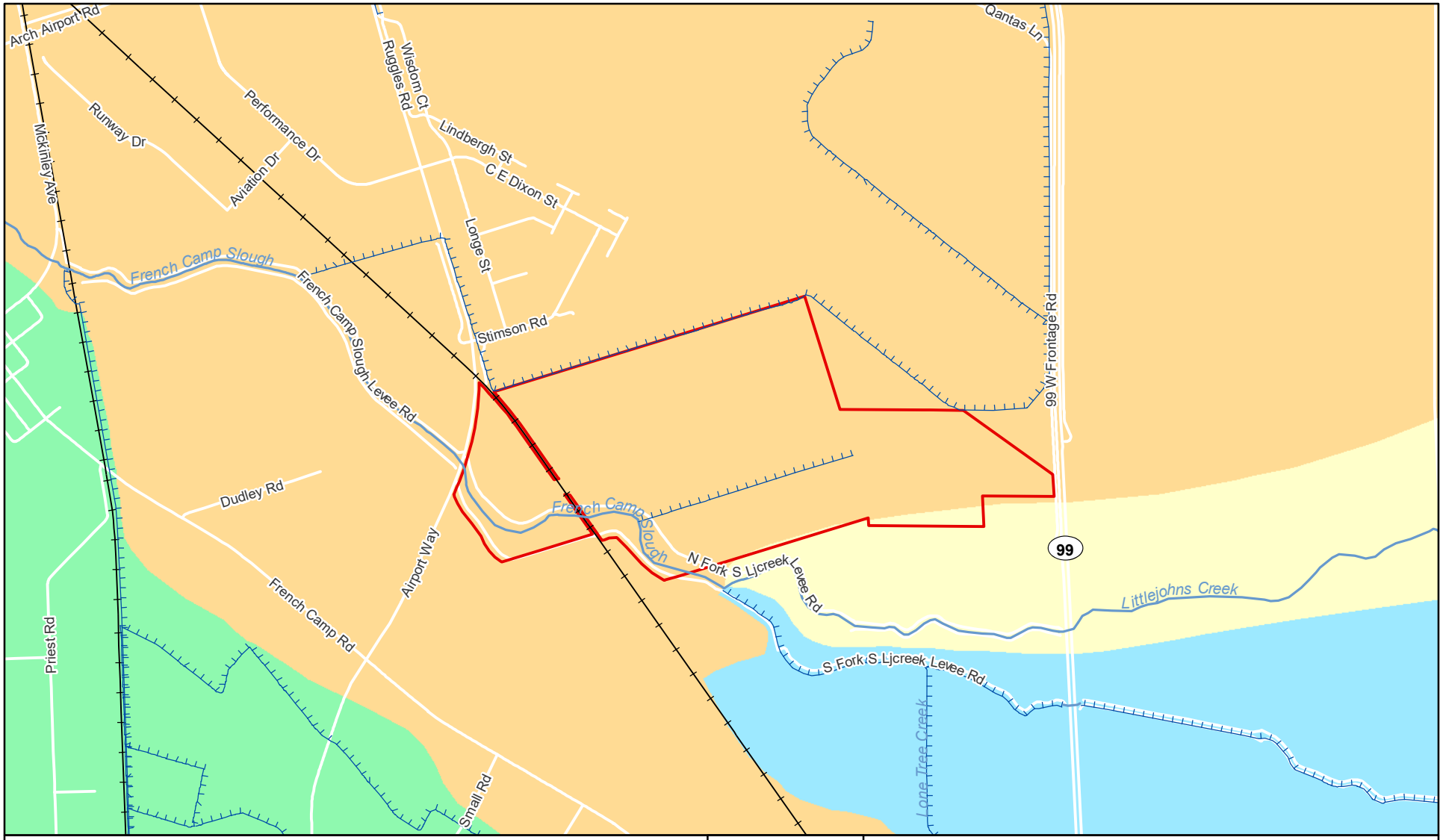
The ESJGWA adopted the Eastern San Joaquin Groundwater Subbasin (ESJGS) Groundwater Sustainability Plan in November 2019. The goal for the ESJGS Groundwater Sustainability Plan is to maintain an economically-viable groundwater resource for the beneficial use of the people of the Eastern San Joaquin Subbasin by operating the Subbasin within its sustainable yield or by modification of existing management to address future conditions. The ESJGS Groundwater Sustainability Plan outlines the need to reduce overdraft conditions and has identified 23 projects for potential development that either replace groundwater use (offset) or supplement groundwater supplies (recharge) to meet current and future water demands. According to the plan, the Subbasin will achieve sustainability by implementing water supply projects that either replace groundwater use or supplement groundwater supplies to attain the current estimated pumping offset and/or recharge need of 78,000 AF/year.

As discussed in Impact 3.9-2, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. As previously stated, the Project's WSA concluded that the existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin underlying the COSMA (COSMUD, October 2020).

Additionally, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. The Project would also be subject to the applicable water quality regulations, including, but not limited to, Stockton Municipal Chapter 13.16, Stormwater Management and Discharge Control, which established limitation and regulations for discharges into the City's stormwater system, and Chapter 13.20, Stormwater Quality Control Criteria Plan, which establishes requirements that control the discharges of pollutants.

CONCLUSION

Overall, implementation of the proposed Project and adherence to the requirements of Mitigation Measures 3.9-1 and 3.9-2 would have a ***less than significant*** impact related to conflicts with the Basin Plan and the ESJGS Groundwater Sustainability Plan.



LEGEND

- Project Boundary
- Stream or River
- Canal or Ditch
- French Camp Slough Watershed
- Littlejohns Creek Watershed
- Lone Tree Creek Watershed
- Lone Tree Creek-San Joaquin River Watershed

N

0 500 1,000
Feet

Source: San Joaquin County GIS; USGS WBD. Map date: September 23, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.9-1. Watersheds

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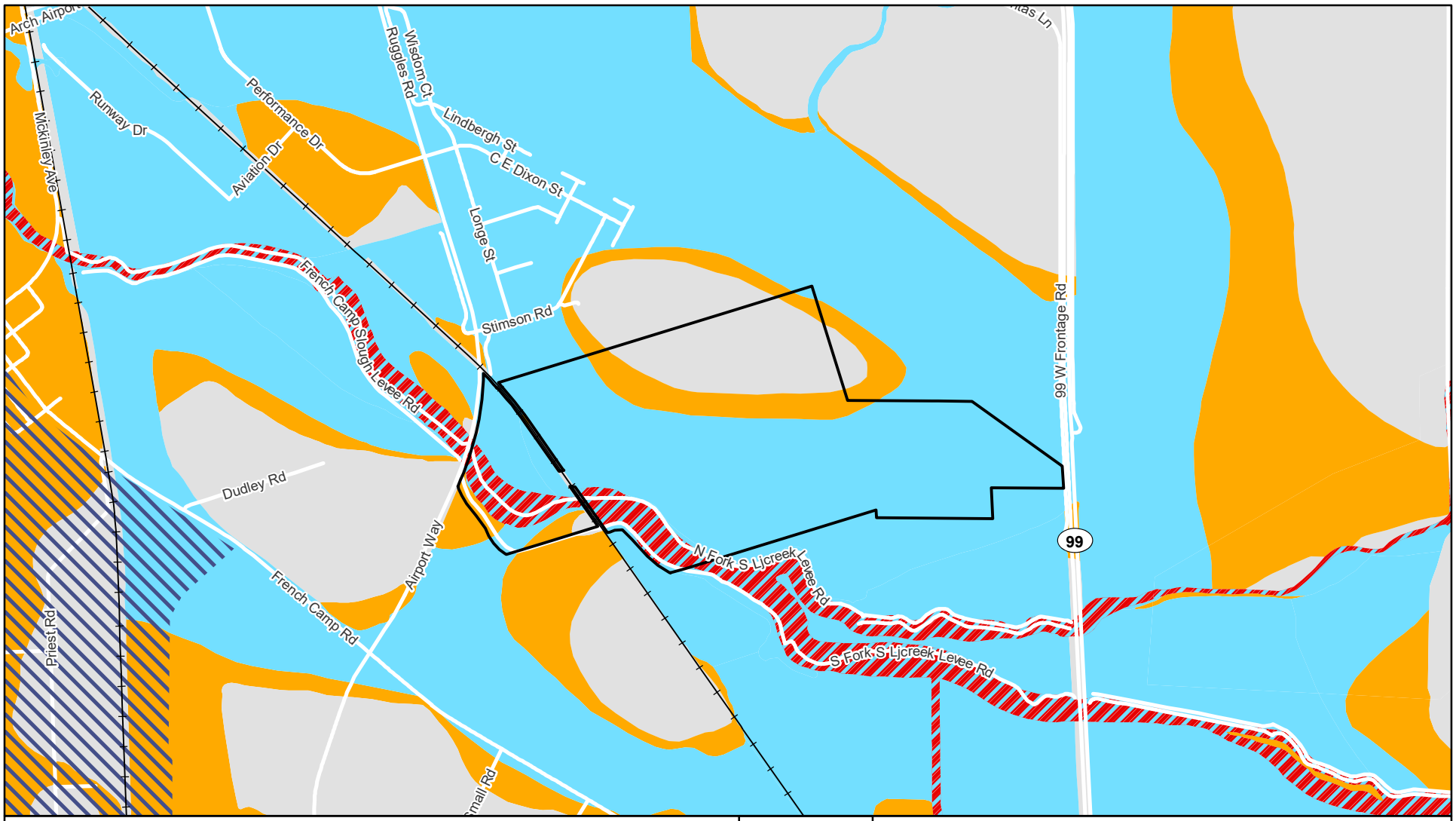

LEGEND

- Project Boundary
- 200-Year USACE Comprehensive Study Floodplain

FEMA Designation

- 100-Year Flood Zone
- Regulator Floodway
- 500-Year Flood Zone
- Area of Minimal Flood Hazard

Source: San Joaquin County GIS; FEMA; DWR. Map date: September 23, 2020. Revised: December 29, 2020; February 8, 2021.

N

0 500 1,000

Feet

SOUTH STOCKTON COMMERCE CENTER

Figure 3.9-2. Flood Zones

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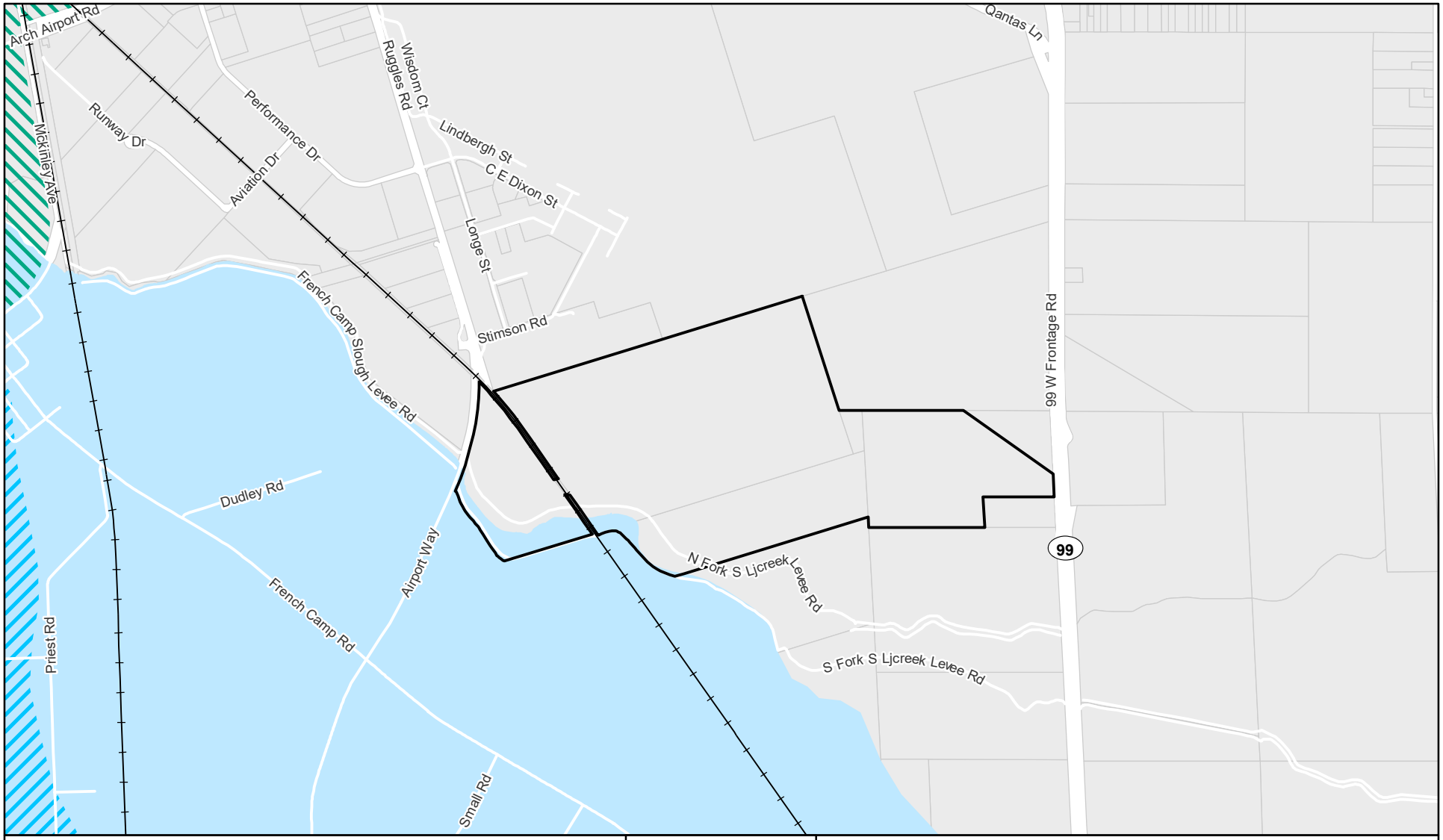

LEGEND

- Project Boundary
- Camanche Dam Inundation Area
- San Luis Dam Inundation Area
- New Melones Dam Inundation Area

N

0 500 1,000
Feet

Source: San Joaquin County GIS; FEMA; DWR. Map date: September 23, 2020. Revised: December 29, 2020; February 8, 2021.

SOUTH STOCKTON COMMERCE CENTER

Figure 3.9-3. Dam Inundation Areas

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This section describes the existing land uses on the Project site and in the surrounding area, describes the applicable land use regulations, and evaluates the environmental effects of implementation of the proposed Project related to land use. Information in this section is based on information provided in the Project materials, site surveys conducted by De Novo Planning Group in 2020, and the following reference documents:

- *Envision Stockton 2040 General Plan* (2018);
- *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* (2018);
- City of Stockton Municipal Code (2020); and
- *San Joaquin County General Plan* (2016).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

As discussed in the Initial Study prepared for the proposed Project, the Project site is currently undeveloped and does not contain any existing housing that would be displaced. Development of the site, as proposed, would not displace substantial numbers of existing people or housing. Thus, this CEQA topic is not relevant to the proposed Project and will not be addressed further in this EIR.

3.10.1 ENVIRONMENTAL SETTING

EXISTING PHYSICAL ENVIRONMENT

The City of Stockton is located in central San Joaquin County, approximately 11 miles north of Manteca and approximately 31 miles south of Elk Grove. State Route 99 travels through Stockton near the eastern edge of the City and Interstate 5 travels through Stockton near the western edge of the City. The Stockton Planning Area, which includes the City and its Sphere of Influence, occupies an area of approximately 135 square miles.

Project Site

The proposed Project site is comprised of 422.2 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. Figures 2.0-1 and 2.0-2 found in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The off-site sewer

improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north.

Surrounding Land Uses

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton Airport. These uses are located within the County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks.
- West – The UPPR, Airport Way, and agricultural lands.

DEMOGRAPHICS

Population Trends

The City experienced a population increase from 2005 to 2015 of 26,999 persons (9.6%) as shown in Table 3.10-1. During the period from 2015 to 2020, population continued to increase in the City, resulting in a total population of 318,522 in 2020.

TABLE 3.10-1: POPULATION GROWTH

YEAR	*POPULATION*	*CHANGE*	*PERCENT CHANGE*
2005	280,000	-	-
2010	291,707	10,707	4.2%
2015	306,999	7,121	5.2%
2020	318,522	11,523	3.8%

SOURCES: DOF, 2005, 2010, 2015, AND 2020.

Persons Per Dwelling Unit

According to the most recent Department of Finance data (2020), the average number of persons residing in a dwelling unit in the City of Stockton is 3.26.

3.10.2 REGULATORY SETTING

STATE

Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a jurisdiction and of any land outside its boundaries that, in the jurisdiction's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies

the goals, objectives, policies, principles, standards, and plan proposals that support the jurisdiction's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

LOCAL

Envision Stockton 2040 General Plan

As noted above, General Plans are prepared under a mandate from the State of California, which requires each city and county to prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. State law requires general plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety. In addition to those components required by State law, the Stockton General Plan also contains optional elements, including Community Design, Economic Development, District and Villages, Public Facilities and Services, Recreation and Waterways, and Youth and Education.

The Envision Stockton 2040 General Plan includes an introduction, a description of the City's land use planning framework, and four separate chapters that establish goals, policies, and actions for each given set of topics. The chapters cover all of the topics required by California State Government Code Section 65302 as well as topics of particular interest to Stockton. The General Plan structure is summarized as follows:

- **Introduction:** Describes the required elements of the General Plan and its planning context, and provides an overview of the Plan's organization.
- **Planning Framework:** Covers existing land use conditions and the policy framework, describes the Envision Stockton 2040 General Plan Update process, and presents the location, intensity, and type of future growth and development in the City and its SOI.
- **Land Use:** Provides overall land use policies for the City, including the connection between land use and transportation and utilities and other infrastructure. This chapter also incorporates the State-required Open Space and Conservation Element topics, as well as other topics important to the community, including economic development and community design.
- **Transportation:** Satisfies the State law requirement that the Transportation Element specify the general location and extent of existing and proposed major streets and other

transportation facilities. This chapter is correlated with the Land Use chapter to provide adequate pedestrian, bicycle, motor vehicle, transit, air, and water transportation to serve both new and existing land uses.

- **Safety:** Serves as the State-required Safety Element. It provides information about risks in Stockton due to natural and human-made hazards, and contains goals, policies, and actions designed to protect the community and property from hazards. It specifically addresses risks associated with geologic and seismic hazards, flooding and storm drainage, wildland fires, and hazardous materials and waste. Based on clear community input to prioritize public safety from criminal activity, this chapter also includes policies and actions to deter crime and support law enforcement and community protection efforts.
- **Community Health:** Addresses the State-required Environmental Justice and Noise Element topics, as well as Air Quality, which is a required general plan topic regionally per the San Joaquin Valley Air Pollution Control District. This chapter also addresses public services and utilities, as well as the community-identified priorities of public health, recreation, youth and education, the local economy, and climate change and adaptation.

GENERAL PLAN LAND USE MAP

The General Plan Land Use Map portrays the ultimate uses of land in the City of Stockton through land use designations. The Land Use Map designates the Project site as Industrial, Commercial, and Open Space/Agriculture. Figure 2.0-5 in Chapter 2.0 depicts the Stockton General Plan land use designations for the Project site and the surrounding areas. The General Plan contains the following descriptions for these land uses:

Industrial (I): This designation allows for a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, Retail Sales, service businesses, public and quasi-public uses, and other similar and compatible uses. Residential uses are prohibited. The maximum FAR for industrial uses is 0.6.

Commercial (C): This designation allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses. Community or regional commercial centers as well as freestanding commercial establishments are permitted. In addition, limited industrial uses are allowed, provided that they are indoors and compatible with surrounding uses. The maximum FAR ranges differ based on the geographic area. Outside the Greater Downtown, the maximum FAR is 0.3.

Open Space/Agriculture (OS/A): This designation allows for agriculture, parks, single-family residential units, farm worker housing, wetlands, wildlife reserves, and other similar and compatible uses and structures related to the primary use of the property for preservation of natural resources or agriculture. Lands under this designation are intended to remain unincorporated and under the jurisdiction of San Joaquin County. The minimum parcel size is 40 acres, maximum density is 1 dwelling unit per parcel, and maximum FAR is 0.01. The Open Space/Agriculture land use

designation within the Project area is currently located near the French Camp Slough, and this area would not be altered by the proposed Project.

GENERAL PLAN POLICIES

The following policies of the Envision Stockton 2040 General Plan related to land use and population are applicable to the proposed Project:

- **LU-3.1.** Ensure that exterior remodels and the siting, scale, and design of new development are compatible with surrounding and adjacent buildings, public spaces, and cultural and historic resources.
- **LU-4.1.** Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation if the proposal meets all of the criteria listed under the definition of the designation.
- **LU-4.2.** Attract employment- and tax-generating businesses that support the economic diversity of the city.
- **LU-6.2.** Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
- **LU-6.6.** Coordinate land use planning efforts among City departments and with regional agencies.
- **LU-6.7.** Enhance public participation in the planning process.

GENERAL PLAN ACTIONS

The following actions of the Envision Stockton 2040 General Plan related to land use and population are applicable to the proposed Project:

- **LU-4.1B.** Seek out and market to businesses that build on Stockton's competitive advantages and offer high- and living-wage jobs in a range of industries, such as management of companies and enterprises, finance and insurance, wholesale trade, professional and technical services, information, healthcare and social assistance, and education.
- **LU-6.6B.** Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs.
- **LU-6.6C.** Review and update the Development Code to ensure consistency with the updated General Plan.
- **LU-6.7A.** Work with community-based organizations to develop and implement a comprehensive and accountable long-term strategy to engage the Stockton community in planning decisions.

- LU-6.7B. Require that sponsors of new development projects, especially those that require Planning Commission and/or City Council approval, have early, frequent, and meaningful communication with affected citizens and stakeholders.

Stockton Municipal Code, Title 16 – Development Code

The purpose of Title 16, Development Code, of the City's Municipal Code is to establish the zoning districts applied to property within the City, determine how the zoning districts are applied on the Zoning Map, and provides general permit requirements for development and new land use in accordance with the Stockton General Plan.

ZONING MAP

The Zoning Map identifies zoning districts within the City at the parcel level. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). Figure 2.0-6 in Chapter 2.0 depicts the City's zoning districts for the Project site and the surrounding areas. Below is a general description of the zoning districts within the Project site.

IL (Industrial, Limited) District: This zone is applied to areas appropriate for light manufacturing uses that may generate more nuisance impacts than acceptable in commercial zoning districts and whose operations are totally conducted indoors. Includes retail stores and ancillary office uses. The IL zoning district is consistent with the industrial land use designation of the General Plan.

CG (Commercial, General) District: This zone is applied to areas appropriate for a wide variety of general commercial uses, including retail, personal and business services; commercial recreational uses; and a mix of office, commercial, and/or residential uses. The CG zoning district is consistent with the commercial land use designation of the General Plan.

OS (Open Space) District: This zone is applied to areas of the City with open space resources, including agricultural lands, wetlands, wildlife reserves, and other sensitive natural resources; passive recreational areas such as golf courses; or natural hazards. Structural uses are limited to those which support the maintenance and/or use of the open space area. The OS zoning district is consistent with the open space and agricultural land use designations of the General Plan.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMCP)

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) provides comprehensive measures for compensation and avoidance of impacts on various biological resources, including agricultural land. One of the primary goals of the SJMSCP is to preserve productive agriculture where that goal is compatible with protecting and preserving lands with biological resources and habitat. The SJMSCP is administered by the San Joaquin Council of Governments (SJCOG). The Project applicant will pay fees to SJCOG on a per-acre basis for designated agricultural lands and habitat that are converted to urban use. SJCOG will then use these funds to purchase conservation easements on agricultural and habitat lands in the region. The

purchase of conservation easements allows the landowners to retain ownership of the land and continue agricultural operations, essentially preserving such lands in perpetuity. The vast majority of the Project site is designated as Category C/Pay Zone B. This zone consists of "Agricultural Habitat Lands", as described in Chapter 2.2 of the SJMSCP. Portions of the Project site located along French Camp Slough are designated as Category A/No Pay Zone. This zone consists of "Urban Lands", as described in Chapter 2.2 of the SJMSCP.

The City of Stockton is a permit holder and is responsible for local implementation responsibilities including collection of fees, maintenance of implementing ordinances/resolutions and coordinating with the Joint Powers Authority (JPA) for annual reporting requirements.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on land use and population if it will:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- 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).

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The proposed Project would not physically divide an established community (No Impact)

The Project site is located at the southern edge of the City of Stockton city limits and is adjacent primarily to undeveloped agricultural land to the east, south, and west, and to developed areas to the north. The Project would result in an extension of developed uses within an area of the City that currently has development uses and is planned for urban development by the City's General Plan. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned development. The Project would have ***no impact*** in regards to the physical division of an established community.

Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect (Less than Significant)

Land use plans, policies, and regulations that govern the land uses on the Project site and have jurisdiction over the Project include Envision Stockton 2040 General Plan, Stockton Municipal Code, and the SJCMSCP. Consistency with the SJMPSCP is discussed in Impact 3.4-9 in Section 3.4, Biological Resources.

ENVISION STOCKTON 2040 GENERAL PLAN

Since general plans often contain numerous policies emphasizing differing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or arguably inconsistent with some individual policies. (*Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 719.) The Project is consistent with the key land use issues and development concepts of the Envision Stockton 2040 General Plan, which provide for logical growth of the City, emphasize community form, scale, and identity, encourage attractive, sustainable neighborhoods, support public transit and bicycle and pedestrian circulation, encourage housing opportunity, promote employment and economic development, encourage a mix of land uses that balance public services and fiscal sustainability, and promote access to open space.

The Project is located within the City limits and will provide employment-generating uses that will promote employment and economic development, while providing public facilities and open space. The Project is consistent with the General Plan land use policies that encourage an orderly pattern of development in the areas surrounding the Airport and encourage employment- and tax-generating businesses that support the economic diversity of the City.

When land uses are not consistent with a General Plan there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. The land uses as proposed are consistent with the General Plan. Although the proposed SSCC Project is consistent with the site's existing General Plan and Zoning designations, due to the location of drive entrances for surrounding developments and the alignment of the future Commerce Drive, a General Plan Amendment and Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way is required. As seen on Figure 2.0-5 in Chapter 2.0, Project Description, these areas are currently designated Commercial and Industrial, respectively, in the Envision Stockton 2040 General Plan. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be designated Commercial and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial. Figure 2.0-8 in Chapter 2.0, Project Description, shows the proposed boundary modifications to the General Plan land use designations for these two areas. Approval of the General

Plan amendment would ensure that the proposed Project would be substantially consistent with the Envision Stockton 2040 General Plan land use requirements.

Additionally, the Project is consistent with the most of the applicable General Plan policies that aim to avoid or mitigate an environmental effect. As shown in Table 3.10-2, the Project is consistent with many of the City's General Plan policies, and the Project would conflict with one policy (Policy LU-6.4) adopted to avoid or mitigate an environmental effect.

TABLE 3.10-2: GENERAL PLAN POLICY CONSISTENCY

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
LAND USE	
LU-3.1. Ensure that exterior remodels and the siting, scale, and design of new development are compatible with surrounding and adjacent buildings, public spaces, and cultural and historic resources	**Consistent.** The Project is a new development which is compatible with surrounding and adjacent buildings and public spaces. There are no known cultural or historic resources within the area. The existing development adjacent to the north of the Project site includes mainly industrial warehouses. The proposed industrial and commercial uses would be constructed in a similar form and scale as the existing warehouses to the north.
LU-4.1. Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation if the proposal meets all of the criteria listed under the definition of the designation	**Consistent.** The proposed Project is considered large-scale and would provide jobs and local revenue for the city. The Project location is appropriate for commercial and industrial warehouse uses because it is located on land planned for industrial uses by the General Plan. Additionally, the Project area is located near existing industrial warehouses, and can utilize Airport Way, the existing rail line, and State Route (SR) 99 for the transport of goods.
LU-4.2. Attract employment- and tax-generating businesses that support the economic diversity of the city	**Consistent.** The proposed Project would generate employment- and tax-generating businesses which would support the economic diversity of the city.
LU-5.1. Integrate nature into the city and maintain Stockton's urban forest	**Consistent.** As discussed in Section 3.4, Biological Resources, the Project site contains numerous orchard trees in the residential areas, and shade trees along French Camp Slough. It may be possible for specific trees to be incorporated into the final design of the development once the more detailed engineering effort begins. For example, the proposed open space areas along French Camp Slough will result in preservation of the shade trees along the Slough. The proposed open space would also integrate nature into the Project site. Nevertheless, any Heritage Trees that cannot remain in the final design must be replaced in accordance with Chapter 16.130 of the Municipal Code if deemed applicable at the time of removal. Mitigation Measure 3.4-2 would require compliance with the Stockton Municipal Code for removal and replacement of Heritage Oak Trees.
LU-5.2. Protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible	**Consistent:** There are no known cultural or historic resources on site which would be encroached on or destroyed by the proposed Project. Nevertheless, Section 3.5, Cultural and Tribal Resources, of this EIR includes mitigation measures to be followed should cultural resources be found on-site during construction. Natural resources areas, habitat, and agricultural lands are found on-site. Specifically, French

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
development	Camp Slough, foraging and nesting habitat for birds, and row crops and orchards are located on the Project site. As noted previously, French Camp Slough would be maintained as open space as part of the proposed Project. Additionally, Section 3.4, Biological Resources, includes mitigation measures to reduce the potential impacts to special-status birds to a less-than-significant level. Although the Project would involve development of land currently used for agricultural purposes, the majority of the Project site is designated Industrial and Commercial by the General Plan and development of the site with industrial and commercial uses has been anticipated by the General Plan. Further, the Project would be subject to the City and County Right-to-Farm ordinances, which would ensure that the Project does not encroach or destroy agricultural operations in the area.
LU-5.3. Define discrete and clear city edges that preserve agriculture, open space, and scenic views	**Consistent:** The Project site is located in the southern portion of the City adjacent to SR 99 and the Stockton Airport. The site has been anticipated for development of industrial and other urban uses as part of the City's General Plan. As noted previously, the Project would include creation of 54 acres of open space along and surrounding the Slough in order to avoid disturbance and other urban activities. This scenic open space area would be preserved as part of the Project. However, the remaining agricultural areas on the site would be converted to urban uses as part of the Project. As discussed in Section 3.2, Agricultural Resources, of this EIR, the Envision Stockton 2040 General Plan EIR anticipated development of the Project site as part of the overall evaluation of the buildout of the City. The General Plan EIR determined that impacts associated with the conversion and loss of Important Farmland would be significant and unavoidable. According to the General Plan EIR, although the General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, it designates approximately 16,160 acres of farmlands of concern under CEQA for non-agricultural uses. Because these farmland areas are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. The only way to mitigate this impact would be to prohibit any development on farmland of concern. However, as noted, the General Plan identifies this area for development of industrial and commercial uses while maintaining other areas for agricultural use.
LU-6.2. Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.	**Does Not Conflict.** The proposed Project site is not a vacant, underutilized, or blighted infill area. However, the Project site is designated for industrial land uses in the City's General Plan. Additionally, the Project would not prevent the City from developing and/or redeveloping vacant, underutilized, or blighted infill areas of the City.
LU-6.4. Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).	**Inconsistent.** The Project site is designated for industrial land uses in the City's General Plan. The employment-generating uses would be located in the southern portion of the City near existing industrial and employment uses. Impacts associated with VMT are discussed in Impact 3.13-1 in Section 3.13. As discussed, implementation of the

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	proposed Project would result in additional vehicle travel generated by the food, retail/commercial, and industrial/warehousing land uses. This would result in the average home-based work VMT per worker of 21.05 miles. This is greater than the Baseline (Existing) of 18.56 miles or Envision Stockton 2040 goal of 15.88 miles. Therefore, the Project would not reduce VMT and is not consistent with this policy.
LU-6.6. Coordinate land use planning efforts among City departments and with regional agencies	**Consistent.** The proposed Project is subject to CEQA review. A Notice of Preparation (NOP) to prepare an EIR was published for this Project. State and federal regulatory and resource agencies had the opportunity to provide comments based on this initial notice and will also be notified and provided the opportunity to comment during the public review period for the Draft EIR. The Project proposal and associated Draft EIR were also reviewed by various City departments.
LU-6.7. Enhance public participation in the planning process	**Consistent.** As noted in Response to Policy LU-6.7, the proposed Project is subject to CEQA review. A NOP to prepare an EIR was published for this Project. Additionally, a public scoping meeting was held via WebEx on October 26, 2020 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. State agencies, federal regulatory and resource agencies, and members of the public had the opportunity to provide comments on environmental issue areas of concern based on the initial NOP and scoping meeting and will also be notified and provided the opportunity to comment during the public review period for the Draft EIR. The Project will also be heard by the Stockton Planning Commission and City Council. Members of the public and regulatory agencies will have various opportunities to participate in the planning process for this Project.
TRANSPORTATION	
TR-1.1. Ensure that roadways safely and efficiently accommodate all modes and users, including private, commercial, and transit vehicles, as well as bicycles and pedestrians and vehicles for disabled travelers.	**Consistent.** As described in Section 3.13, Transportation and Circulation, the Project's transportation and circulation system is designed to accommodate access to and from Airport Way via the signalized Airport Way/Commerce Drive intersection, a grade-separated Commerce Drive/Union Pacific Railroad (UPRR) overcrossing, and pedestrian/bicycle facilities connecting each of the buildings to Commerce Drive. The Project proposes new industrial and commercial development, which would result in increased travel activity, including vehicle (cars and trucks), bicycle, pedestrian, and potentially transit trips. In order to provide access to and from the Project site, the signalized Airport Way/Commerce Drive intersection will be designed to serve all travel modes and Surface Transportation Assistance Act (STAA) vehicles. These Project-generated trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes.
TR-1.2. Enhance the use and convenience of rail service for both passenger and freight movement.	**Consistent.** The Project proposes to potentially include rail service to up to three large parcels (parcels 2, 3, and 4) within the Project site. A potential railroad spur line would extend east from the UPRR along the Project site's northern edge providing rail access to

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	the parcels.
TR-2.1. Develop safe and interconnected bicycle and pedestrian facilities, including along "complete" streets that target multiple travel modes.	**Consistent.** As described in the Environmental Setting, Section 3.13, Transportation and Circulation, there is currently no existing pedestrian, bicycle, or transit service/facility within the undeveloped Project area. The Envision Stockton 2040 General Plan identifies an interconnected, hierarchical system of sidewalks, on-street bike lanes, and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Stockton. The Project's transportation and circulation system is designed to accommodate access to and from Airport Way via the signalized Airport Way/Commerce Drive intersection, a grade-separated Commerce Drive/UPRR overcrossing, and pedestrian/bicycle facilities connecting each of the buildings to Commerce Drive.
TR-2.2. Connect housing and employment development in areas with good transit access through open and inclusive processes where appropriate.	**Does Not Conflict.** The Project includes employment generating uses in an area of the City currently containing industrial and other employment generating uses. Transit service in the area is provided by San Joaquin Regional Transit District (RTD). There are limited transit services provided to Project site, with the closest routes, Routes 44, 91 and 510, serving Arch-Airport Road with stops approximately three miles from the Project site. Additionally, as required by Mitigation Measure 3.13-1 in Section 3.13, the Project would be required to submit a transportation demand management (TDM) Plan to the City, which would include strategies to encourage transit use and incentive the use of alternative travel modes.
TR-3.2. Require new development and transportation projects to reduce travel demand and greenhouse gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.	**Consistent.** The proposed Project would be subject to the California Building Code, which requires electric vehicle infrastructure and parking spaces. Additionally, as required by Mitigation Measure 3.13-1 in Section 3.13, the Project would be required to submit a TDM Plan to the City, which would include strategies to reduce travel demand and greenhouse gas emissions.
PUBLIC FACILITIES & SERVICES	
PFS-1.1. The City shall give priority to providing services to existing urban areas in order to prevent the deterioration of existing levels-of-service.	**Consistent.** Although level of service is no longer a CEQA topic, Appendix F of this Draft EIR analyzes level of service and traffic congestion associated with the proposed Project.
PFS-1.5. The City shall continue to utilize developer fees, the City's public facilities fees, and other methods (i.e., grant funding and assessment districts) to finance public facility design, construction, operation, and maintenance.	**Consistent.** The Project would be subject to Section 16.72.060(C), Park Land Dedications and Fees, and Section 16.72.260, Public Facilities Fee, of the Municipal Code. These impact fees would be used by the City to finance public facility design, construction, operation, and maintenance.
PFS-1.4. The City shall ensure that proposed developments do not create substantial adverse impacts on existing infrastructure and that the necessary infrastructure will be in place to support the development.	**Consistent.** Impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. Impacts on public services infrastructure (fire stations, police stations, and libraries) are discussed in Section 3.12, Public Services. The proposed Project includes development of the utility infrastructure required to support the development.

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PFS-1.8. The City shall review development proposals for their impacts on infrastructure (i.e., sewer, water, fire stations, libraries, streets) and require appropriate mitigation measures if development reduces service levels.	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. Impacts on public services infrastructure (fire stations, police stations, and libraries) are discussed in Section 3.12, Public Services. In most cases, the Project would not result in reduced service levels. Section 3.14 includes a mitigation measure which requires the Project proponent to secure adequate wastewater treatment capacity/allocation.
PFS-1.9. During the development review process, the City shall not approve new development unless the following conditions are met: • **The applicant can demonstrate that all necessary infrastructure will be installed or adequately financed;** • **Infrastructure improvements are consistent with City infrastructure plans.**	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. The Project would provide all necessary infrastructure required to serve the Project site. The infrastructure improvements are consistent with City infrastructure plans.
PFS-3.1: The City shall require that all new urban development is served by an adequate collection system to avoid possible contamination of groundwater from onsite wastewater disposal (septic) systems.	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. The Project would be served by an adequate collection system.
PFS-3.4: The City shall ensure through the development review process that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs, pursuant to a master plan, to avoid the need for future replacement to achieve upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future.	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. The proposed infrastructure system is designed according to City utility Master Plans and will meet the capacity needs of the Project.
PFS-3.8: Prior to approval of any tentative subdivision map for a proposed residential project, the City shall formally consult with the wastewater system provider that would serve the proposed subdivision to make a factual showing or impose conditions in order to ensure an adequate wastewater removal system necessary for the proposed development. Prior to recordation of any final small lot subdivision map, or prior to City approval of any project-specific discretionary approval or entitlement required for nonresidential land uses, the City or the project applicant shall	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities and Service Systems. Section 3.14 includes a mitigation measure which requires the Project proponent to secure adequate wastewater treatment capacity/allocation. Treatment capacity would be available to serve the Project prior to occupancy.

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demonstrate, based on substantial evidence, the availability of a long-term, reliable wastewater collection system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary nonresidential approval or entitlement. Such a demonstration shall consist of a written verification that existing treatment capacity is or will be available and that needed physical improvements for treating wastewater from the Project site will be in place prior to occupancy.	
PFS-4.1: The City shall require detention storage with measured release to ensure that the capacity of downstream creeks and sloughs will not be exceeded. **To this end:** • **Outflow to creeks and sloughs shall be monitored and controlled to avoid exceeding downstream channel capacities;** • **Storage facilities shall be coordinated and managed to prevent problems caused by timing of storage outflows.**	**Consistent.** The Project proposes to construct two storm drain detention basins to provide flood control. The primary basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. The Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5. The drainage channel will connect to a proposed outfall to the detention basin, generally located within the northeast area of the basin. A storm drain (ranging from 15 to 84 inches) is proposed within the proposed Commerce Drive right-of-way. The secondary basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the detention basin, generally located within the northeast area of the basin. An outfall from the basin to French Camp Slough will also be constructed (exact size and location to be determined). Is its noted that the Project must obtain discharge permits from the authority/authorities that have jurisdiction over French Camp Slough. The Hydrologic and Hydraulic Assessment prepared for the Project included an evaluation of the proposed flood control system for the Project to determine if the proposed flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from a 100-year flood event. The analysis was conducted under the assumption that the flood control basins would not be drained during the actual flood event. According to the Hydrologic and Hydraulic Assessment, the results of the analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin (KSN, December 2020). Therefore, the Hydrologic and Hydraulic Assessment notes the applicant shall apply for a CLOMR-F based upon the effective FEMA floodplains, as required by Mitigation Measure 3.9-3.
PFS-4.3: Best Management Practices. The City shall require, as part of watershed drainage plans, Best Management Practices (BMPs), to reduce pollutants to the	**Consistent.** The Project would implement BMPs during construction and operation. Mitigation Measure 3.9-1 in Section 3.9, Hydrology and Water Quality, requires the preparation of a SWPPP, and structural BMPs.

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maximum extent practicable. • **As of November 25, 2003, the City shall require that all new development and redevelopment projects to comply with the post-construction Best Management Practices (BMPs) called for in the Stormwater Quality Control Criteria Plan (SWQCCP), as outlined in the City's Phase 1 Stormwater NPDES permit issued by the California Water Quality Control Board, Central Valley Region (Order No. R5-20020-0181). Also the owners, developers, and/or successors-in-interest must establish a maintenance entity acceptable to the City to provide funding for the operation, maintenance, and replacement costs of all post-construction BMPs.** • **The City shall require, as part of its Storm Water NPDES Permit and ordinances, to implement the Grading Plan, Erosion Control Plan, and Pollution Prevention Plan (SWPPP) during construction activities of any improvement plans, new development and redevelopment projects for reducing pollutants to the maximum extent practicable.**	
PFS-4.6: The City shall ensure through the development review process that public facilities and infrastructure are designed to meet ultimate capacity needs, pursuant to a master plan, to avoid the need for future replacement to achieve upsizing. For facilities subject to incremental sizing, the initial design shall include adequate land area and any other elements not easily expanded in the future.	**Consistent.** As noted in response to Policy PFS-1.4, impacts on utilities infrastructure (including storm drainage) are discussed in Section 3.14, Utilities and Service Systems. The proposed infrastructure system is designed to meet the capacity needs of the Project. Future replacement to achieve upsizing would not be required. The site is within the City Urban Service Area and has been included in the City's various utility Master Plans.
PFS-4.8: The City shall incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID	**Consistent.** The proposed Project would implement LID measures, including conserving natural areas, providing runoff storage, and hydromodification. The Project includes ample open space area around French Camp Slough, which is a natural area in the Project site. The

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alternatives will include: (1) conserving natural areas and reducing imperviousness, (2) runoff storage, (3) hydro-modification (to mimic pre-development runoff volume and flow rate), and (4) public education.	Project would also provide adequate runoff storage through the proposed detention basins.
PFS-5.2 The City shall continue to require recycling in public and private operations to reduce demand for solid waste disposal capacity.	**Consistent.** The Project would include recycling in compliance with City requirements. This would reduce the demand for solid waste disposal.
PFS-5.5 The City shall require the proper disposal and recycling of hazardous materials.	**Consistent.** The Project would include management, use and recycling of hazardous materials in compliance with regulatory requirements. This would ensure proper disposal of hazardous materials and reduce the demand for solid waste disposal. As discussed in Section 3.8, Hazards and Hazardous Materials, depending on the future industrial uses on-site, the Project has the potential to routinely transport, use, or dispose of hazardous materials, and/or present a reasonably foreseeable release of hazardous materials. Any operations that involve the use of hazardous materials would be required to have the hazardous material transported, stored, used, and disposed of in compliance with local, state, and federal regulations. The San Joaquin County Department of Environmental Health is the CUPA for San Joaquin County and is responsible for the implementation of statewide programs within the City including Hazardous Materials Business Plan (HMBP) requirements, among numerous other programs. Additionally, businesses are regulated by Cal/OSHA and are therefore required to ensure employee safety. Specific requirements include identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers. To further ensure the safety of employees and reduce the potential for accidental release of hazardous materials into the environment, the applicant must submit a HMBP to San Joaquin County Department of Environmental Health (CUPA) for review and approval prior to bringing hazardous materials onsite, as required by Mitigation Measure 3.8-3.
PFS-5.6 The City shall require the recycling of construction debris.	**Consistent.** The Project would include construction debris recycling in compliance with City requirements.
PFS-5.7 The City shall ensure that all new development has appropriate provisions for solid waste storage, handling, and collection pickup.	**Consistent.** The Project would be required to provide receptacle space for solid waste storage, and the Project has been designed to allow for solid waste collection pickup consistent with City requirements.
PFS-7.5. The City shall continue to promote the use of building and site design features as a means for crime prevention and reduction.	**Consistent.** Project design would be reviewed by the City and Stockton Police Department for opportunities to use building and site design features as a means for crime prevention and reduction.
PFS-8.4. The City shall require new development to pay all public facility fees (PFF) as a means to provide a fair share of costs to provide fire station facilities and equipment in order to maintain the City's	**Consistent.** As noted in the response to Policy PFS-1.5, the Project would be subject to Section 16.72.060(C), Park Land Dedications and Fees, and Section 16.72.260, Public Facilities Fee, of the Municipal Code. These impact fees would be used by the City to finance public facility design, construction, operation, and maintenance.

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
ISO rating of 1. Also, new development may be required to create a Community Facility District (CFD) or other funding mechanisms to pay the costs associated with the operation of a fire station.	
PFS-8.6. The City shall require that new development provide adequate access for emergency vehicles, particularly firefighting equipment, as well as provide evacuation routes.	**Consistent.** As discussed in Impact 3.13-4 in Section 3.13, Transportation and Circulation, implementation of the proposed Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The Airport Way/Commerce Drive intersection and internal transportation network is designed to maintain levels of accessibility for police and fire response, which ensures vehicles have the necessary access when responding to an emergency. The signalized Airport Way/Commerce Drive intersection will provide emergency vehicle pre-emption (EVP) capabilities to ensure emergency vehicle response times are not impeded. In addition, the internal transportation network is designed to maintain high levels of emergency vehicle accessibility and mobility, which ensures vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from Airport Way or from the secondary access point via the SR 99 frontage road will have unimpeded access to the Project site
HEALTH & SAFETY	
SAF-2.3. Protect the community from potential flood events.	**Consistent:** Impacts associated with potential flood events are discussed in Section 3.9, Hydrology and Water Quality, of this EIR. As discussed, a majority of the Project size is located in FEMA designated Zone AO, where flood depths can reach one or more feet deep. The Hydrologic and Hydraulic Assessment completed for the Project included an analysis to determine potential impacts to the floodplain from placing fill to bring the finished floor elevation to three feet above highest adjacent grade. The Assessment determined that there are no offsite impacts which would cause an increase in water surface greater than 0.05 feet due to Project implementation. (KSN, December 2020). Additionally, the Hydrologic and Hydraulic Assessment also included an evaluation of the proposed flood control system for the Project to determine if the proposed flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from a 100-year flood event. According to the Assessment, the results of the analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin (KSN, December 2020). Therefore, the Hydrologic and Hydraulic Assessment notes the applicant shall apply for a CLOMR-F based upon the effective FEMA floodplains, as required by Mitigation Measure 3.9-3. With implementation of this mitigation measure, all potential flood impacts would be less than significant.
SAF-2.4. Minimize risks to the community from flooding through appropriate siting and protection of structures and	**Consistent:** See Response to Policy SAF-2.3 above.

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occupants.	
SAF-2.5. Protect the community from health hazards and annoyance associated with excessive noise levels.	**Consistent.** All impacts associated with excessive noise levels were determined to be less than significant or less than significant with mitigation. See Section 3.11, Noise, for the complete discussions.
SAF-3.2. Protect the availability of clean potable water from groundwater sources.	**Consistent.** This issue is addressed in Section 3.8 (Hydrology and Water Quality) of the Draft EIR. Impacts associated with groundwater depletion, interference with groundwater recharge, and conflicts with groundwater management plans were determined to be less than significant.
HS-4.5. The City shall use the SJVAPCD Guidelines for Assessing and Mitigating Air Quality Impacts (GAAMAQI) for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents. The City shall continue to cooperate with the SJVAPCD in the review of development proposals.	**Consistent.** As discussed in Section 3.3, Air Quality, the SJVAPCD GAMAQI was used to determine air quality impacts resulting from the Project. The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the mitigation measures provided by the SJVAPCD for construction-related PM_{10} emissions, including mitigation measures identified in Section 3.3. Prior to the approval of individual phases of development (i.e. final maps, improvement plans, site plan review, etc.), each project applicant shall coordinate with the SJVAPCD to ensure compliance with Rule 9510 for both operational and construction emissions. If the SJVAPCD criteria pollutant thresholds for an individual project is exceeded, the project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term air quality impacts to below the applicable SJVAPCD thresholds of significance. Nevertheless, the Project's impacts related to criteria pollutant increases were determined to be significant and unavoidable.
HS-4.6. The City shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The City shall require projects to comply with the City's adopted air quality impact assessment and mitigation process and to provide specific mitigation measures as outlined in policies of Chapter 8 Transportation and Circulation.	**Consistent.** As discussed in Section 3.3, Air Quality, the Project would be required to implement mitigation measures in order to reduce the air quality impacts; see Response to Policy HS-4.5. As part of Project implementation, the City would be required to monitor the implementation of mitigation measures adopted as part of this EIR.
HS-4.7. The City shall continue the program for assessing air quality mitigation fees for all new development, with the fees to be used to fund air quality programs.	**Consistent.** As discussed in Section 3.3, Air Quality, prior to the approval of individual phases of development (i.e. final maps, improvement plans, site plan review, etc.), each project applicant shall coordinate with the SJVAPCD to ensure compliance with Rule 9510 for both operational and construction emissions. If the SJVAPCD criteria pollutant thresholds for an individual project is exceeded, the project applicant shall develop a reasonably feasible offsite mitigation strategy to reduce long-term air quality impacts to below the applicable SJVAPCD thresholds of significance. This may consistent of fee payments to the SJVAPCD for their use in funding offsite mitigation strategies.
HS-4.9. The City shall require contractors to implement dust suppression measures during excavation, grading, and site	**Consistent.** Mitigation Measure 3.3-2 requires a dust control plan that meets all of the applicable requirements of APCD Rule 8021. Mitigation Measure 3.3-3 required dust control measures, as required by APCD

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preparation activities. Techniques may include, but are not limited to, the following: **a. Site watering or application of dust suppressants,** **b. Phasing or extension of grading operations,** **c. Covering of stockpiles,** **d. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and** **e. Revegetation of graded areas.**	Rules 8011-8081, be implemented to limit Visible Dust Emissions to 20% opacity or less. Mitigation Measure 3.3-4 requires other dust control measures identified in the SJVAPCD GAMAQI.
HS-4.10. Coordinating with the SJVAPCD, the City shall require large development projects to mitigate air quality impacts. Mitigation measures may include, but are not limited to the following: • **Providing bicycle access and parking facilities,** • **Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels** • **vehicles, and** • **Establishing telecommuting programs or satellite work centers.**	**Consistent.** As noted above, the Project includes mitigation measures to mitigate air quality impacts. The measures relate to both operational and construction emissions. The exact operational emission reduction strategies would be determined prior to approval of the final plans for the Project. See Section 3.3 for the air quality related emissions. Additionally, Mitigation Measure 3.13-1 in Section 3.13 requires submittal of a TDM Plan to the City, which would include strategies to reduce travel demand and greenhouse gas emissions. The listed measures could be implemented as part of the TDM Plan.
HS-4.12. The City shall encourage employment-intensive development with a high floor area ratio where adequate transit service is planned, and discourage such development where adequate transit service is not planned.	**Does Not Conflict.** Transit service in the area is provided by San Joaquin RTD. There are limited transit services provided to Project site, with the closest routes, Routes 44, 91 and 510, serving Arch-Airport Road with stops approximately three miles from the Project site. It is noted that the TDM Plan required for the Project would include strategies to reduce VMT. Specific potential TDM strategies include, but are not limited to, the following: • Incentivize the use of alternative travel modes through shared use of e-bikes and e-scooters; • Provide public transit service, including transit service connecting workers with existing and future residential developments; • Implement a fair value commuting program or other pricing of vehicle travel and parking; • Hire a TDM coordinator for large employers; • Provide carpool and/or vanpool incentive programs; • Provide on-site lockers and showers for workers who take alternative transportation; • Promote walking and bicycling for employees who live and/or

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	work in the area through the preparation of an Active Transportation Plan; • Allow flexible work hours to reduce arrivals/departures during peak hours; and • Employer coordination to SJCOG's Dibs Program (formerly Commute Connection) for workers.
HS-4.17. The City shall promote street design that provides an environment which encourages transit use, biking and walking.	**Consistent.** The Project proposes a west-east trending primary road referred to as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the UPRR right-of-way will be constructed to accommodate the primary access road and avoid conflicts with the UPRR rail line. An eight-foot pedestrian walkway will be provided on the north side of the overcrossing. Further, the required TDM Plan would include strategies which encourage transit use, biking, and walking.
HS-4.18. The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation, to the greatest extent feasible.	**Consistent.** See response to Policy HS-4.17.

SOURCE: DE NOVO PLANNING GROUP, 2021.

Overall, the proposed Project would have a ***less than significant*** impact relative to the General Plan.

STOCKTON ZONING CODE

The Stockton Zoning Code implements the General Plan. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). Similar to the above, although the proposed Project is consistent with the site's existing Zoning designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way. These areas are currently zoned CG and IL, respectively. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be zoned IL. Figure 2.0-9 shows the proposed boundary modifications to the Zoning districts for these two areas.

These proposed zone changes would ensure that zoning would be consistent with the proposed General Plan designations within the Project site. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site.

The proposed commercial and industrial uses are consistent with the Zoning Code. The IL zone is applied to areas appropriate for light manufacturing uses that may generate more nuisance impacts than acceptable in commercial zoning districts and whose operations are totally conducted indoors and includes retail stores and ancillary office uses. The CG zone is applied to areas appropriate for a wide variety of general commercial uses, including retail, personal and business services; commercial recreational uses; and a mix of office, commercial, and/or residential uses. The proposed commercial and industrial uses would be consistent with the allowed uses for the IL and CG zones. Additionally, the proposed FARs for the industrial and commercial uses are within the allowed intensity for the IL and CG zones.

The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the zone change would ensure that the proposed Project would be consistent with the Zoning Code and will have a ***less than significant*** impact relative to this topic.

CONCLUSION

In conclusion, implementation of the proposed Project will have a ***less than significant*** impact relative to this topic.

Impact 3.10-3: The proposed Project would not 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) (Less than Significant)

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342). Similarly, a project would indirectly induce growth if it would remove an obstacle

to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply or wastewater treatment/collection in an area where this service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH EFFECTS OF THE PROJECT

Direct Population Growth: According to the Department of Finance population estimates for the year 2020, the population in Stockton is 318,522 people. The proposed Project would include the development of approximately 422-acres of land which will include: industrial, commercial, open space, public facilities, and public roadway right-of-way land uses. These uses would generate additional employment opportunities. The additional employees may come from Stockton or surrounding communities. The Project would not directly introduce new residents to the City as no housing is proposed as part of the Project. It is noted, however, that some portion of the proposed Project employees would become Stockton residents.

The proposed Project would not include upsizing of offsite infrastructure or roadways. The installation and sizing of new infrastructure would be limited to the needs of the proposed use. Additionally, the Project site is located in the City limits and has City land use designations of Industrial, Commercial, and Open Space/Agriculture; therefore, the employment growth associated with the proposed Project was considered as part of the City's General Plan and associated EIR

process. The proposed Project would not induce substantial population growth in an area, either directly or indirectly.

As discussed above, although the proposed Project is consistent with the site's existing General Plan designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment of the two areas between Airport Way and the Union Pacific Railroad right-of-way.

The proposed Project would not result in direct population growth beyond the City's capacity that is planned in the General Plan.

Indirect Population Growth: As described above, projects that include employment-generating uses have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. Implementation of the Project would provide job growth to the area at the proposed industrial and commercial areas. It is anticipated that local employment would be increased to provide administrative, management, labor services. The proposed Project is expected to require approximately 2,964 full-time and part-time employees. It is anticipated that the employment growth would be met both by existing residents and through the attraction of new residents. The Project would establish a variety of business opportunities that can support the skilled and educated workforce of Stockton and the local area. Estimating the number of these future employees who would relocate to the City would be highly speculative, because many factors influence personal housing location decisions (i.e., family income levels and the cost and availability of suitable housing in the local area). Thus, the number of new employees who may relocate to the City to fill the newly created positions is unknown.

According to the City's General Plan EIR, the 2040 horizon-year projection for the General Plan includes the following:

- 40,900 new dwelling units
- 132,200 new residents
- 63,300 new jobs
- 13.8 million square feet of new commercial space and office space
- 35.6 million square feet of new industrial space

By comparison, SJCOG projects the following for the City of Stockton between 2015 and 2040:

- 48,270 new dwelling units
- 153,530 new residents
- 41,030 new jobs

The employment-generating land uses proposed by the Project would be within the growth projections anticipated and analyzed in the General Plan EIR. Overall, the proposed Project is not

anticipated to exceed the planned growth (directly or indirectly) in the area beyond what is anticipated in the City's General Plan or regional growth projections.

CONCLUSION

While the proposed Project will result in employment growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a ***less than significant*** impact relative to this topic.

This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. This section is based in part on the following documents, reports and studies:

- *Envision Stockton 2040 General Plan* (City of Stockton, December 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, June 2018); and
- *Environmental Noise Assessment, South Stockton Commerce Center, City of Stockton, California* (Saxelby Acoustics, 2021).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.

Noise Unwanted sound.

SEL Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes a +5 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DBA)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less

acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dBA change cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Existing and Surrounding Land Uses

In the vicinity of the Project site, surrounding land uses include existing residential and industrial uses. Residential uses are located to the southwest of the Project site along South Airport Way and French Camp Road. These residential land uses are located outside the boundaries of the City of Stockton and within the boundaries of San Joaquin County. Industrial uses are located directly north of the Project site. Land to the east and south of the Project site is occupied by agricultural uses.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project vicinity, a continuous (24-hour) noise level measurement was conducted near residential receptors adjacent to the Project site on July 8, 2020. Short term noise level measurements were conducted at two locations on the eastern Project boundary on July 9, 2020. The noise measurement locations are shown on Figure 3.11-1. The noise level measurement survey results are provided in Table 3.11-2. Appendix B of Appendix E shows the complete results of the continuous noise monitoring at sites LT-1, ST-1, and ST-2.

TABLE 3.11-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

			AVERAGE MEASURED HOURLY NOISE LEVELS, DB					
			DAYTIME (7AM-10PM)			*NIGHTTIME (10PM-7AM)*		
SITE	*LOCATION*	L_{DN}	L_{EQ}	L_{50}	L_{MAX}	L_{EQ}	L_{50}	L_{MAX}
CONTINUOUS (24-HOUR) NOISE LEVEL MEASUREMENTS								
LT-1	West of site	64	59	56	72	58	52	70
SHORT-TERM NOISE LEVEL MEASUREMENTS								
ST-1	Northeast corner of site	N/A	73	71	81	N/A	N/A	N/A
ST-2	Southeast corner of site	N/A	66	65	73	N/A	N/A	N/A

SOURCE: SAXELBY ACOUSTICS, 2020.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 820 and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

EXISTING ROADWAY NOISE LEVELS

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. While the newer FHWA traffic noise model (TNM 3.0) is required for use on federally funded highway projects, the FHWA RD-77-108 model is still widely used in the industry and recognized as an accurate screening tool, typically resulting in slight over-predictions in traffic noise levels at typical receptor setback distances.

Traffic volumes for existing conditions were obtained from the traffic data prepared for the Project (Fehr & Peers, 2020). Vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Table 3.11-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix C of Appendix E.

TABLE 3.11-3: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

ROADWAY	*SEGMENT*	*EXTERIOR TRAFFIC NOISE LEVEL, DB L_{DN}*
Airport Way	Commerce Dr. to French Camp Rd.	71.2
Airport Way	French Camp Rd. to Roth Rd.	73.6
Airport Way	Roth Rd. to Lathrop Rd.	69.8
Airport Way	Performance Dr. to Arch Rd.	70.5
French Camp Rd.	Airport Way to Ash St.	68.6
French Camp Rd.	Airport Way to Union St.	71.9
French Camp Rd.	Union St. and Southbound [SB] SR 99 Ramps	69.9
Roth Rd.	Airport Way to McKinley Ave.	69.0

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS, 2020.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

LOCAL

Envision Stockton 2040 General Plan

Guidelines for the acceptability of noise have been developed by the Environmental Protection Agency and adapted by the California Office of Noise Control as planning tools for use by local government in California. These are reflected in the Office of Noise Control's "Guidelines for the Preparation and Content of Noise Elements of the General Plan" (1976). While cities, counties and other agencies are free to adopt their own standards, most general plans incorporate these standards or a modified version of them. The Office of Noise Control guidelines recognize that a more restrictive standard could be appropriate under special circumstances such as quiet suburban or rural settings. The City of Stockton has incorporated the Office of Noise Control standards in Table 5-1 of the Safety Element in the Stockton General Plan 2040.

An exterior noise environment of 50 to 60 dBA L_{dn} or CNEL is "normally acceptable" for residential uses, and noise levels of up to 70 dBA L_{dn} or CNEL are "conditionally acceptable." For other sensitive land uses such as schools, libraries, churches, hospitals and the like, an exterior noise environment of up to 70 dBA is considered "normally acceptable." Commercial, industrial and recreational uses are substantially less sensitive to noise with industrial uses being considered "normally acceptable" in environments up to 70 dBA L_{dn} and "conditionally acceptable" up to 80 dBA L_{dn}. Table 5-1 also provides specific guidance for assessing increases in ambient noise as follows: "If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA."

City of Stockton Municipal Code

The City of Stockton Municipal Code Chapter 16, Development Code, contains performance standards for non-transportation noise sources, as shown in Table 3.11-4.

TABLE 3.11-4: STOCKTON MUNICIPAL CODE NOISE STANDARDS FOR NON-TRANSPORTATION NOISE

NOISE LEVEL DESCRIPTOR	*MAXIMUM ACCEPTABLE NOISE LEVEL*	
	DAYTIME (7 A.M. – 10 P.M.)	*NIGHTTIME (10 P.M. – 7 A.M.)*
Hourly L_{eq}, dBA	55	45
Maximum Level (L_{max}), dBA	75	65

*NOTE: * EACH OF THE NOISE LEVEL STANDARDS SPECIFIED ABOVE SHALL BE REDUCED BY 5 DBA FOR SIMPLE TONE, NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC, OR RECURRING IMPULSIVE NOISES.*
SOURCE: STOCKTON MUNICIPAL CODE, CHAPTER 16.

Additionally, Section 16.60.030, Activities Deemed Violations of this Division, outlines construction noise and loading and unloading operational noise activities which violate the noise ordinance:

> 16.60.030(A) – Construction Noise. Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.
>
> 16.60.030(B) – Loading and Unloading Operations. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance.

San Joaquin County General Plan

Table PHS-2 of the San Joaquin County 2035 General Plan establishes an acceptable exterior noise level standard of 65 dBA L_{dn} and an interior noise level standard of 45 dBA L_{dn} for residential uses next to transportation noise sources. For non-transportation noise sources, the General Plan establishes the standards for sensitive uses. See Table 3.11-5. These standards are similar to the City's standards shown in Table 3.11-4 but are 5 dBA lower than the City's standards for daytime hours.

TABLE 3.11-5: SAN JOAQUIN COUNTY GENERAL PLAN NON-TRANSPORTATION NOISE STANDARDS

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: THESE STANDARDS APPLY TO NEW OR EXISTING RESIDENTIAL AREAS AFFECTED BY NEW OR EXISTING NON-TRANSPORTATION SOURCES.
[1] WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.
[2] REFER TO MOUNTAIN HOUSE MASTER PLAN, TABLE 11.2, EXTERIOR NOISE STANDARDS FOR NOISE-SENSITIVE USES AFFECTED BY NON- TRANSPORTATION NOISE SOURCES, PAGE 11.12, FOR MOUNTAIN HOUSE NOISE STANDARDS.
[3] EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.
SOURCE: SAN JOAQUIN COUNTY GENERAL PLAN.

San Joaquin County Development Regulations

The San Joaquin County Development Regulations, Section 9-1025.9(b) establishes land use noise level standards for new non-transportation or "stationary" noise sources, as outlined below that would be applicable to the proposed Project.

9-1025.9(B) – STATIONARY NOISE SOURCES.

Proposed projects that will create new stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 9-1025.9(b), Part II (Table 3.11-6).

TABLE 3.11-6: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: [1]WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

[2]EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

(ORD. 3675; ORD. 4036 § 2(PART), 1999)

SOURCE: SAN JOAQUIN COUNTY DEVELOPMENT REGULATIONS.

VIBRATION STANDARDS

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Stockton does not have specific policies pertaining to vibration levels. However, Stockton Municipal Code Section 16.32.100 includes qualitative benchmarks for reducing vibration effects within Stockton. Land uses that generate vibrations may not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Such uses also may not generate vibrations that cause discomfort or annoyance to reasonable persons of normal sensitivity or that endangers the comfort, repose, health, or peace of residents whose property abuts the use. Vibrations from temporary

construction and demolition activities are exempt from the provisions of this section, as are vehicles that leave the subject parcel (e.g., trucks, trains, and aircraft).

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.11-7 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 3.11-7: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

P.P.V.		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- Generation of a 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;
- Generation of excessive groundborne vibration or groundborne noise levels; and/or
- 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.

Determination of a Significant Increase in Noise Levels

TEMPORARY CONSTRUCTION NOISE IMPACTS

With temporary noise impacts (construction), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Per the City of Stockton noise ordinance, construction activities operating between 10 p.m. and 7 a.m. which create a noise disturbance at the property boundary of a residence are prohibited and would be considered a significant impact. Per the County of San Joaquin Municipal Code, construction noise is prohibited between the hours of 9:00 p.m. and 6:00 a.m. any day and would be considered a significant impact.

OPERATIONAL IMPACTS

The noise standards applicable to the Project include the relevant portions of the City of Stockton and County of San Joaquin General Plan and Municipal Code described in the Regulatory Setting section above (Section 3.11.2), and the following standards. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

Another means of determining a potential noise impact is Table 5-1 of the Stockton General Plan 2040 Safety Element. Table 5-1 provides specific guidance for assessing increases in ambient noise as follows: "If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA." It should be noted that the California Department of Transportation assumes a 12 dBA increase is significant. Therefore, use of the 3 dBA test is considered to be conservative relative to the expected reaction from persons affected by the noise increase.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant with Mitigation)

Traffic Noise Environment at Off-Site Receptors with and without the Project

OFF-SITE TRAFFIC NOISE IMPACT ASSESSMENT METHODOLOGY

Implementation of the proposed Project would result in an increase in daily traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Tables 3.11-8 and 3.11-9 show the predicted traffic noise level increases on the local roadway network for Existing, Existing Plus Project, Cumulative No Project, and Cumulative Plus Project conditions. Appendix C of Appendix E provides the complete inputs and results of the FHWA traffic noise modeling.

TABLE 3.11-8: EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			EXISTING	*EXISTING + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Airport Wy.	Commerce Dr. to French Camp Rd.	80	71.2	75.3	**4.1**	+ 3 dB	Yes
Airport Wy.	French Camp Rd. to Roth Rd.	45	73.6	77.0	**3.4**	+ 3 dB	Yes
Airport Wy.	Roth Rd. to Lathrop Rd.	75	69.8	71.0	1.2	+ 3 dB	No
Airport Wy.	Performance Dr. to Arch Rd.	90	70.5	75.1	**4.6**	+ 3 dB	Yes
French Camp Rd.	Airport Wy. To Ash St.	45	68.6	69.5	1.0	+ 3 dB	No
French Camp Rd.	Airport Wy. To Union St.	60	71.9	73.11	1.8	+ 3 dB	No
French Camp Rd.	Union St. and SB SR 99 Ramps	65	69.9	72.3	2.4	+ 3 dB	No
Roth Rd.	Airport Wy. To McKinley Ave.	75	69.0	71.2	2.2	+ 3 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2020.

TABLE 3.11-9: CUMULATIVE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			CUMULATIVE	*CUMULATIVE + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Airport Wy.	Commerce Dr. to French Camp Rd.	80	75.8	77.6	1.8	+ 3 dB	No
Airport Wy.	French Camp Rd. to Roth Rd.	45	79.7	80.8	1.1	+ 3 dB	No
Airport Wy.	Roth Rd. to Lathrop Rd.	75	74.9	75.4	0.5	+ 3 dB	No
Airport Wy.	Performance Dr. to Arch Rd.	90	77.0	78.6	1.6	+ 3 dB	No
French Camp Rd.	Airport Wy. To Ash St.	45	74.6	74.9	0.3	+ 3 dB	No
French Camp Rd.	Airport Wy. To Union St.	60	77.6	78.1	0.5	+ 3 dB	No
French Camp Rd.	Union St. and SB SR 99 Ramps	65	76.2	76.8	0.6	+ 3 dB	No
Roth Rd.	Airport Wy. To McKinley Ave.	75	72.5	73.5	1.0	+ 3 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2020.

Project-Generated Non-Transportation Noise Environment at Off-Site Receptors

The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the proposed loading docks. In order to evaluate these noise sources at the nearest sensitive receptors, Saxelby Acoustics used the SoundPLAN noise prediction model to generate noise level predictions according to the assumptions outlined below.

The SoundPLAN noise prediction model was used to plot noise contours and to calculate noise levels at the sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors).

It should be noted that sound power is a measure of the total acoustic energy emitted by a noise source and is irrespective of distance from the source. Sound power is input into the SoundPLAN model as a representation of the total acoustic energy emitted by a specific noise source. Sound power levels in this report are A-weighted decibel levels, noted as "dBA, PWL" per industry standards. The model then corrects for the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) which affect sound propagation from the noise source to the receiver location.

LOADING DOCK NOISE GENERATION

To determine typical noise levels associated with the proposed loading docks, noise level measurement data from the Clearlake Wal-Mart store was used. The noise level measurements were conducted at a distance of 100 feet from the center of the two-bay loading dock and circulation area. Activities during the peak hour of loading dock activities included truck arrival/departures, truck idling, truck backing, air brake release, and operation of truck-mounted refrigeration units.

The results of the loading dock noise measurements indicate that a busy hour generated an average noise level of 61 dBA L_{eq} at a distance of 100 feet from the center of the loading dock truck maneuvering lanes. This analysis conservatively assumes that 50 percent of all proposed loading docks would operate at this level of activity in a busy hour during daytime (7:00 a.m. to 10:00 p.m.) and 25 percent of all proposed loading docks would operate at this level during nighttime (10:00 p.m. to 7:00 a.m.).

PARKING LOT CIRCULATION

Based upon the Project traffic study, the peak hour trips for the Project would be 2,301 autos and 290 tractor-trailers. Based upon noise measurements conducted of vehicle movements in parking lots, the sound exposure level (SEL) for a single passenger vehicle is 71 dBA at a distance of 50 feet while the SEL of a tractor-trailer is 85 dBA at the same distance.

Saxelby Acoustics used the SoundPLAN noise model to calculate noise levels at the nearest sensitive receptors. Input data included the loading dock and parking lot noise generation, as discussed above. Figure 3.11-2 shows the results of this analysis for the site layout in terms of the daytime (7:00 a.m. to 10:00 p.m.) peak hour average (L_{eq}). Nighttime (10:00 p.m. to 7:00 a.m.) peak hour average noise levels (L_{eq}) are shown on Figure 3.11-3.

Figure 3.11-4 shows the results of this analysis in terms of the peak hour maximum noise levels (L_{max}). Due to the nature of loading dock operation and parking lot circulation, the maximum noise levels are the same for both daytime and nighttime.

On-Site Aircraft Noise Environment

The proposed Project is located approximately 850 feet from the runway of the Stockton Metropolitan Airport. The Stockton Metropolitan Airport is a county-owned and operated joint civil-military airport. Noise contours for the Stockton Airport were published by San Joaquin County in the Airport Land Use Compatibility Plan (ALUCP). The noise contours and proposed Project boundaries are reproduced in Figure 3.11-5.

As shown in Figure 3.11-5, the proposed Project site is projected to be exposed to noise levels between 65 and 70 dBA CNEL by the year 2038.

Construction Noise Environment

During the construction of the proposed Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-10, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3.11-10: CONSTRUCTION EQUIPMENT NOISE

EQUIPMENT	*QUANTITY*
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Construction Vibration Environment

The primary vibration-generating activities would be grading, utilities placement, and parking lot construction. Table 3.11-11 shows the typical vibration levels produced by construction equipment.

TABLE 3.11-11: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	*P.P.V. AT 25 FEET (INCHES/SECOND)*	*P.P.V. AT 50 FEET (INCHES/SECOND)*	*P.P.V. AT 100 FEET (INCHES/SECOND)*
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.

INCREASED TRAFFIC NOISE LEVELS AT EXISTING RECEPTORS

As shown in Tables 3.11-8 and 3.11-9, some noise-sensitive receptors located along the Project area roadways are currently exposed to exterior traffic noise levels exceeding the City of Stockton 60 dB L_{dn} exterior noise level standard for residential uses, as well as the San Joaquin County 65 dBA L_{dn} exterior noise standard. These receptors would continue to experience elevated exterior noise levels with implementation of the proposed Project. For example, under Existing conditions, existing sensitive receptors located adjacent to the Project area roadways currently experience exterior noise level of 68.6 to 73.6 dB L_{dn}. This exceeds the City's 60 dB exterior noise standard, as well as County's 65 dB L_{dn} standard. Under Existing Plus Project conditions, exterior traffic noise levels are predicted to be approximately 69.5 to 77.0 dB L_{dn}. This would also exceed the City and County exterior noise level standards.

Under Existing Plus Project conditions, the proposed Project's contribution ranges between 1.0 dB and 4.1 dB, with three roadway segments experiencing increases that would exceed the 3 dB increase threshold. As shown in Table 3.11-8, significant traffic noise increases under the Existing Plus Project Plus traffic conditions include the following segments:

- **Airport Way from Commerce Drive to French Camp Road** – noise levels are predicted to increase by 4.1 dB.
- **Airport Way from French Camp Road to Roth Road** – noise levels are predicted to increase by 3.4 dB.
- **Airport Way from Performance Drive to Arch Road** – noise levels are predicted to increase by 4.6 dB.

In order to reduce this impact, the use of sound walls or quiet pavement would be required. Construction of new six-foot-tall sound walls could be a potential mitigation measure. However, all

of the impacted residential uses along the roadway segments listed above are accessed directly via driveways off the main roadway. As such, a sound wall would require many driveway openings, resulting in partial noise barriers. These openings in the sound wall would substantially reduce the noise barrier performance. Additionally, construction of noise barriers at off-site locations would result in encroachment into private property. Such encroachment would require private property owners to allow permission to enter their property. Therefore, noise barriers are not considered to be a practical option.

Quiet pavements are typically assumed to provide a 3 to 5 dBA reduction. Assuming a minimum reduction of 3 dBA, quiet pavement placed along sensitive receptor areas on the previously-listed roadway segments could reduce Project noise level increases to the following roadway segments:

- **Airport Way from Commerce Drive to French Camp Road** – noise levels are predicted to increase by 4.1 dB without mitigation. Use of quiet pavement would reduce this to a 1.1 dB increase. Approximately 1,000 feet (approximately 0.19 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.
- **Airport Way from French Camp Road to Roth Road** – noise levels are predicted to increase by 3.4 dB without mitigation. Use of quiet pavement would reduce this to a 0.4 dB increase. Approximately 6,600 feet (approximately 1.25 miles) of quiet pavement for two-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.
- **Airport Way from Performance Drive to Arch Road** – noise levels are predicted to increase by 4.6 dB without mitigation. Use of quiet pavement would reduce this to a 1.6 dB increase. Approximately 500 feet (approximately 0.09 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.

Therefore, with implementation of Mitigation Measure 3.11-1, traffic noise impacts would be ***less-than-significant***.

OPERATIONAL NOISE LEVELS AT EXISTING RECEPTORS

Operational noise levels at the existing residential receptors to the west and southwest of the site resulting from the Project are quantified and shown in Figures 3.11-2 through 3.11-4. Figure 3.11-2 shows the daytime (7:00 a.m. to 10:00 p.m.) Project noise contours, Figure 3.11-3 shows the nighttime (10:00 p.m. to 7:00 a.m.) Project noise contours, and Figure 3.11-4 shows the maximum (L_{max}) Project noise contours.

Based upon Figure 3.11-2, the Project would generate daytime (7:00 a.m. to 10:00 p.m.) peak hour noise levels of 48 dBA L_{eq}, or less, at the outdoor activity areas of adjacent residential uses. This would comply with the San Joaquin County non-transportation noise limits of 50 dBA L_{eq} during

daytime hours. Existing ambient noise measurements in the vicinity of these receptors was found to be approximately 59 dBA L_{eq} during daytime hours as shown by Table 3.11-2. At this location, the increase in noise levels due to the Project is estimated to be 0.0 dBA.

As shown in Figure 3.11-3, the Project would generate nighttime (10:00 p.m. to 7:00 a.m.) noise levels of 44.8 dBA L_{eq} or less at the residential uses. This would comply with the San Joaquin County non-transportation noise limits of 45 dBA L_{eq} during nighttime hours. Existing ambient noise measurements in the vicinity of these receptors was found to be approximately 58 dBA L_{eq} during nighttime hours as shown by Table 3.11-2. At this location, the increase in noise levels due to the Project is estimated to be 0.0 dBA.

Based upon Figure 3.11-4, the proposed Project is predicted to generate maximum noise levels of approximately 52 dBA L_{max} at the residential uses to the southwest of the Project. This would comply with the San Joaquin County maximum noise level limits of 70 dBA L_{max} during daytime hours and 65 dBA L_{max} during nighttime hours.

CONSTRUCTION NOISE

During the construction phases of the Project, noise from construction activities would add to the noise environment in the immediate Project vicinity. Based upon the Table 3.11-10 data, the proposed Project is predicted to generate construction noise levels of up to 90 dBA at a distance of 50 feet. The closest sensitive receptor to the Project site is approximately 2,200 feet from the Project area. At this distance, construction noise would attenuate to approximately 57 dBA.

Compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in Mitigation Measure 3.11-2), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, with implementation of Mitigation Measure 3.10-2, temporary construction noise impacts would be ***less-than-significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *To reduce traffic noise increases under Existing Plus Project conditions to less than +3.0 dB, the following roadway segments shall be paved with quiet pavement:*

- ***Airport Way from Commerce Drive to French Camp Road****. Approximately 1,000 feet (approximately 0.19 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.*
- ***Airport Way from French Camp Road to Roth Road****. Approximately 6,600 feet (approximately 1.25 miles) of quiet pavement for two-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.*

- ***Airport Way from Performance Drive to Arch Road**. Approximately 500 feet (approximately 0.09 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.*

*The pavement would be required for any portion of roadway passing a noise-sensitive use, and for a distance of 100 feet on either side of the sensitive-use**.** This requirement shall be noted on the Project improvement plans. Approximate pavement locations are shown on Figure 3.11-6.*

***Mitigation Measure 3.11-2:** To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:*

- *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, shall be selected whenever possible.*
- *All stationery noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*
- *Construction shall be limited to 7:00 a.m. to 10:00 p.m.*
- *Staging areas on the Project site shall be located in areas that maximize, to the extent feasible, the distance between staging activity and sensitive receptors.*

These requirements shall be noted on the Project improvement plans.

Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

With the exception of vibratory compactors, the Table 3.11-11 data indicate that construction vibration levels anticipated for the Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Structures which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 190 feet, or further, from the Project site. Therefore, this is a ***less-than-significant*** impact and no mitigation is required.

Impact 3.11-3: The proposed Project would not expose people residing or working in the Project area to excessive noise levels. (Less than Significant)

The Stockton Metropolitan Airport is a county-owned and operated joint civil-military airport located approximately 850 feet from the proposed Project boundary. Noise contours for the Stockton Airport were published by San Joaquin County in the Airport Land Use Compatibility Plan (ALUCP). The ALUCP was published in May of 2016 and Amended in February of 2018.

As shown in Figure 3.11-5, the Project site is predicted to be exposed to noise levels between 65 and 70 dBA CNEL at the northern boundary by the year 2038. According to the ALUCP, industrial uses may be safely operated within the 70 to 75 dBA CNEL noise contour region. Additionally, the City of Stockton applies a 70 dBA L_{dn}/CNEL standard to industrial uses. Because the Project is located outside of the 70 dBA airport noise contour, this is a ***less-than-significant*** impact, and no mitigation is required.

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-1

Noise Measurement Sites

Legend

- Noise Measurement - Long Term
- Noise Measurement - Short Term

0.0 mi 1.0 mi 2.0 mi 3.0 mi 4.0 mi

Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 07/14/2020

SAXELBY ACOUSTICS
Acoustics · Noise · Vibration

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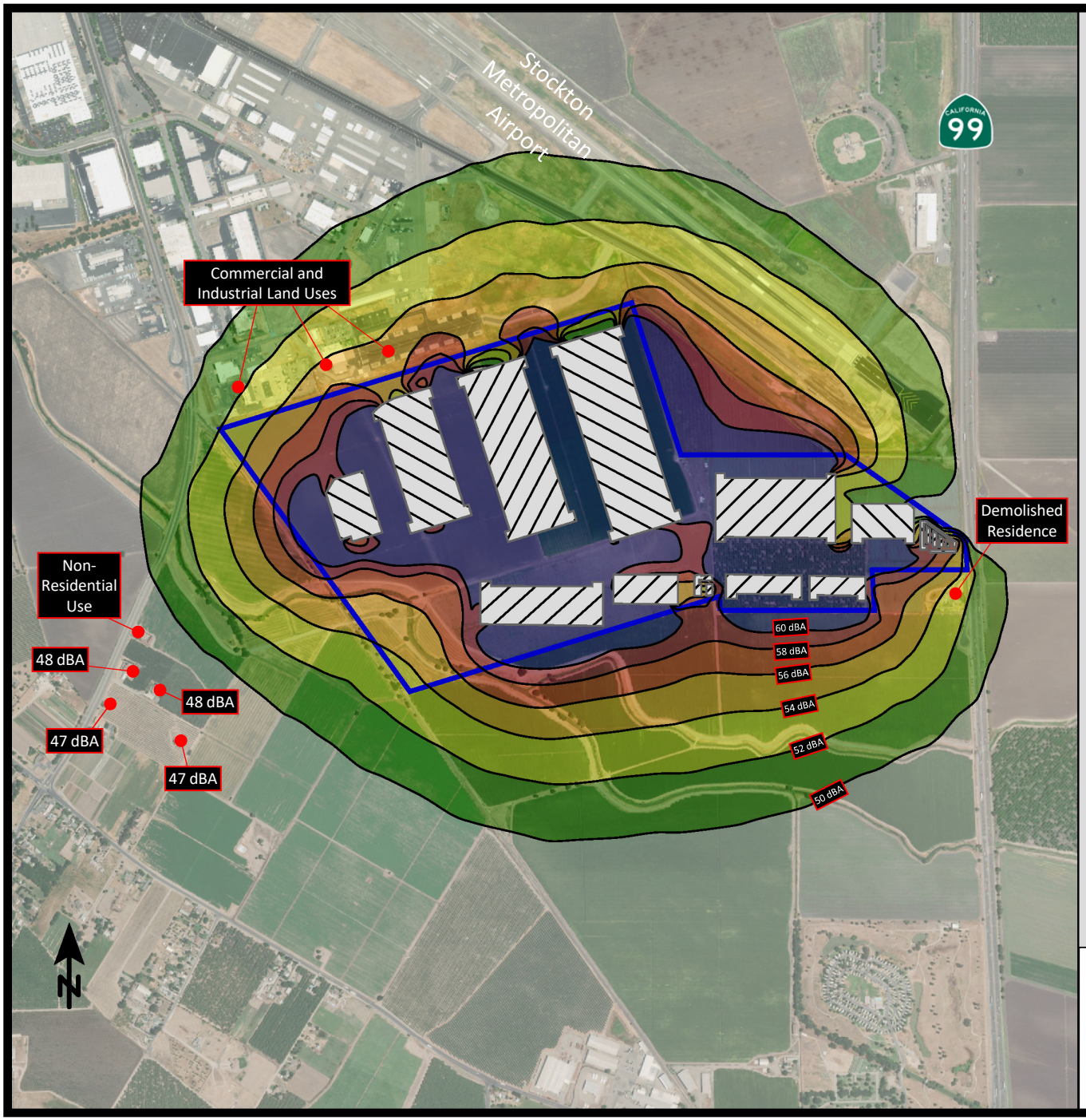

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-2

Daytime (7 AM – 10 PM) Project Noise Contours (dBA L_{eq})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

- <= 50
- 50 - 52
- 52 - 54
- 54 - 56
- 56 - 58
- 58 - 60
- > 60

1 : 1500

0 0.05 0.1 0.2 0.3 0.4 miles

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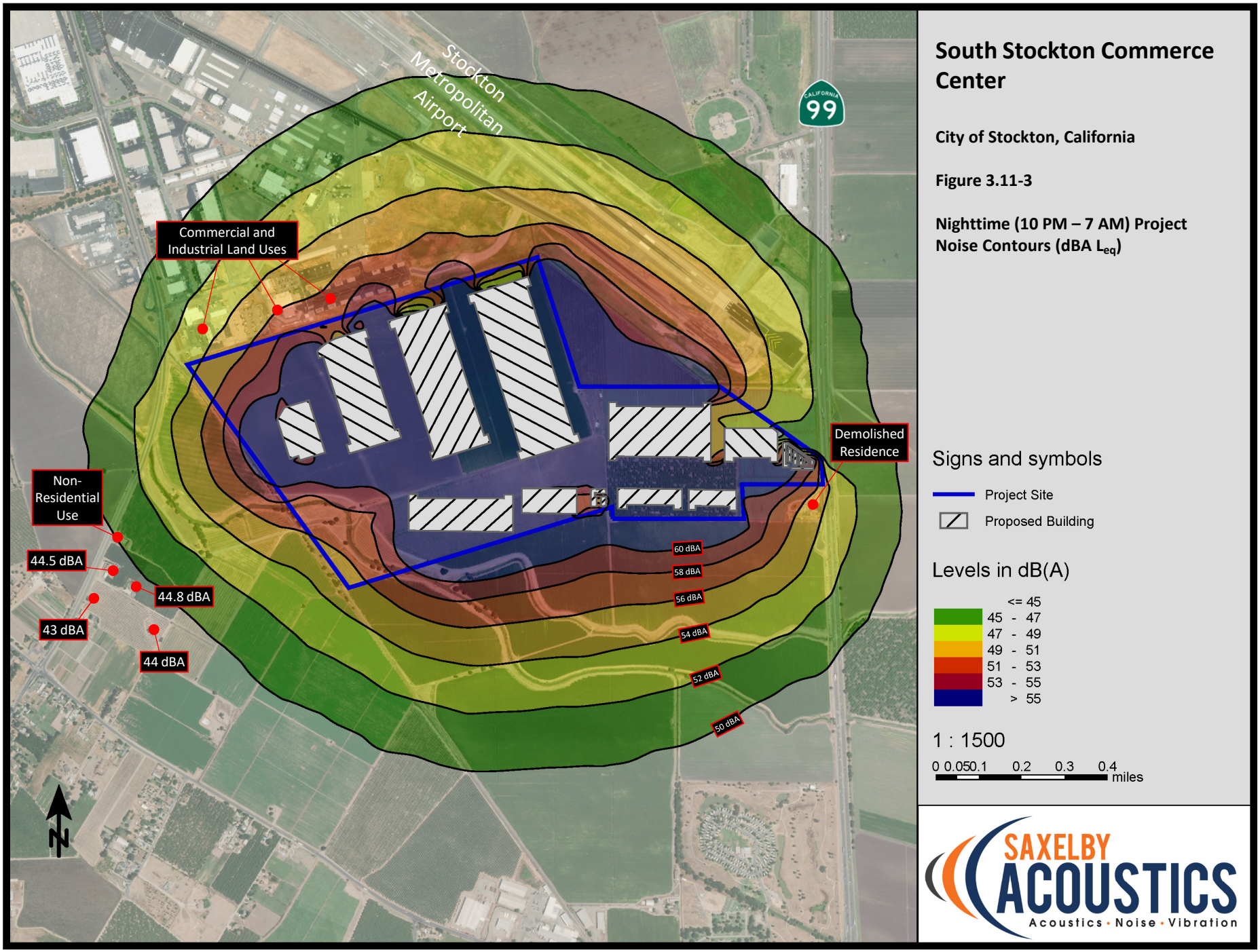
Stockton Metropolitan Airport
99
Commercial and Industrial Land Uses
Demolished Residence
Non-Residential Use
44.5 dBA
44.8 dBA
43 dBA
44 dBA
60 dBA
58 dBA
56 dBA
54 dBA
52 dBA
50 dBA
N
South Stockton Commerce Center
City of Stockton, California
Figure 3.11-3
Nighttime (10 PM – 7 AM) Project Noise Contours (dBA L_{eq})
Signs and symbols
Project Site
Proposed Building
Levels in dB(A)
<= 45
45 - 47
47 - 49
49 - 51
51 - 53
53 - 55
> 55
1 : 1500
0 0.05 0.1 0.2 0.3 0.4 miles
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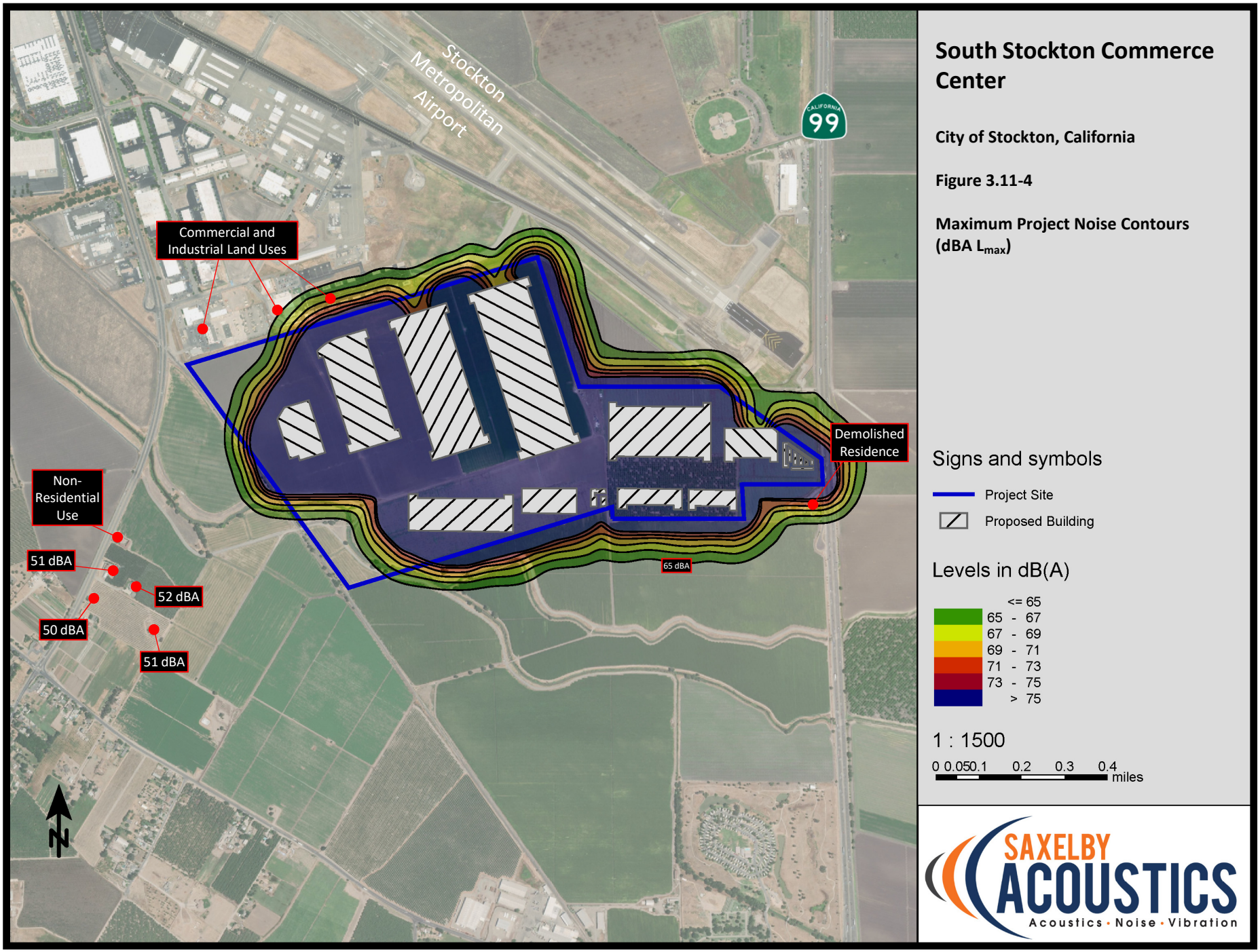

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-4

Maximum Project Noise Contours (dBA L_{max})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

- <= 65
- 65 - 67
- 67 - 69
- 69 - 71
- 71 - 73
- 73 - 75
- > 75

1 : 1500

0 0.05 0.1 0.2 0.3 0.4 miles

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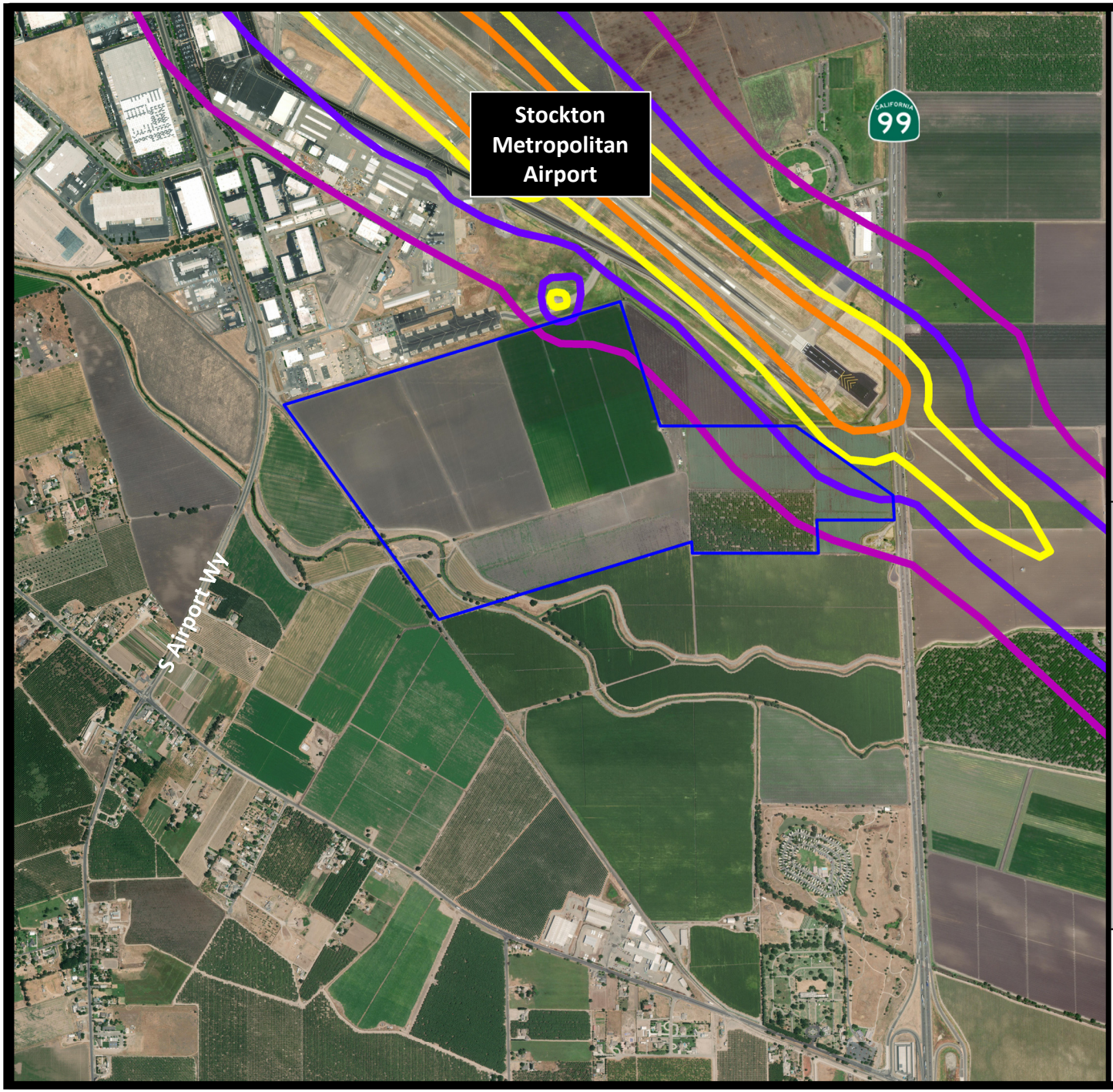

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-5

Airport Noise Contours

Legend

- Project Site
- 60 dBA Contour
- 65 dBA Contour
- 70 dBA Contour
- 75 dBA Contour

0.0 mi 1.0 mi 2.0 mi 3.0 mi 4.0 mi

Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 12/21/2020

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This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, parks and recreation, schools, and other public facilities for the proposed Project. The information in this section is primarily derived from the following: *Envision Stockton 2040 General Plan* (City of Stockton, 2018), *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* (City of Stockton, 2018), and the *City of Stockton Municipal Service Review Public Review Final Draft* (City of Stockton, 2020).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.12.1 ENVIRONMENTAL SETTING

CITY OF STOCKTON SERVICES

The City of Stockton receives funds for the provision of public services through development fees, property taxes, and connection and usage fees. As land is developed within the City, these fees apply. The City of Stockton reviews these fee structures on an annual basis to ensure that they provide adequate financing to cover the provision of city services. The City undertakes long-range planning programs to better plan and budget for needed improvements to services and facilities. The City also conducts a visioning process, in which departments identify staffing, technology, and facility needs for a three-year period, as well as savings and efficiency ideas. The City is preparing to develop a formal Long Range Financial Planning process.

The following public services are expected to be provided to the Project:

- General Government Services: City of Stockton
- Animal Control: City of Stockton
- Road Maintenance: City of Stockton
- Police Protection: Stockton Police Department
- Fire Protection: City of Stockton Fire Department
- Parks and Recreation: City of Stockton
- Schools: Manteca Unified School District (MUSD)
- Libraries: City of Stockton

City of Stockton Police Department

Law enforcement services for the City of Stockton are provided by the Stockton Police Department. The Stockton Police Department service area covers over 56 square miles. The average response time to in-progress life threatening emergencies is 5 minutes. Depending on the nature of the call, the time of day, the location, and the number of on-duty personnel, response times to non-emergency calls can exceed 25 minutes. The Stockton Police Department serves the area of the City limits, while the San Joaquin County Sheriff's Department serves all adjacent unincorporated areas within the Stockton Sphere of Influence.

Stockton's Police Department consists of 485 sworn police officers and 226 civilian staff. With the 2020 estimated population of approximately 318,000, this equates to a ratio of 1.52 sworn staff. This ratio exceeds the City's General Plan minimum standard of 1.5 sworn officers per 1,000 residents.[1] Although Stockton General Plan Policy PFS-7.2 states that the City shall maintain a ratio of 1.5 sworn officers per 1,000 population[2], staffing levels in the City of Stockton ultimately are determined each year by the City Council in consultation with the City Manager and Chief of Police based on the needs of the City. The City's goal is to respond to all priority one emergency calls within an average of five-minutes or less.

The Police Department has both traditional and specialized transportation equipment that it uses to conduct patrols, respond to emergencies, and provide programs. The transportation types include bicycle (12 units), marked vehicles (175 units), unmarked vehicles (209 units), motorcycles (30 units), animal control (8 units), and miscellaneous (28 units).

The Stockton Police Department is organized into two bureaus, Logistics and Operations, and five divisions, including Administrative Services, Field Services (including six Policing Districts), Investigations, Special Operations, and Technical Services. Divisions are coordinated out of two facilities: the Headquarters and Operations Buildings.

The Police Department management team consists of the Chief of Police, who oversees the Office of the Chief of Police, Professional Standards, Fiscal Affairs and Planning, and Public Information Sections, an Assistant Chief of Police, and two Deputy Chiefs of Police, each overseeing a bureau, and five Police Captains, each overseeing a division.

Table 3.12-1 shows the recent crime statistics for the City of Stockton between 2016 and 2019.

TABLE 3.12-1: STOCKTON CRIME STATISTICS (2016-2019)

CATEGORY/CRIME	*2016*	*2017*	*2018*	*2019*
Total Violent Crimes	4,316	4,379	4,383	4,380
Homicide	50	55	33	34
Rape	114	154	193	181
Robbery	1,156	1,208	1,205	1,158
Assault	2,996	2,962	2,952	3,007
Total Property Crimes	11,824	11,229	11,800	12.367
Burglary	2260	2,140	2,329	2,209
Motor Vehicle Theft	1,666	2,049	2,054	1,678
Larceny	7898	7,040	7,417	8,480
Arson	84	208	191	128

SOURCE: FBI CRIME STATISTICS, TABLE 8, 2016, 2017, 2018 AND 2019.

[1] City of Stockton General Plan, Public Facilities and Services Element, PFS-7.2.

[2] According to the Cal. State DOF, Stockton's population 318,522 on January 1, 2020.

City of Stockton Fire Department

The Stockton Fire Department serves the City of Stockton and its surrounding unincorporated area. The Fire Department estimates the total population served is about 336,000. According to the draft Stockton Municipal Service Review Update (February 23, 2017), with 181-line suppression personnel (i.e., firefighters), the ratio of firefighters to population served is 1:1,856. The Department is also supported by 24 civilian employees. The General Plan maintains a response time goal of four minutes for 90% of calls.

The Stockton Fire Department has 12 fire stations located throughout the City and relies on approximately 7,000 hydrants in key locations to provide adequate water for the surrounding development (Draft Municipal Services Review Update, 2017). The Stockton Fire Department maintains one engine company at each fire station and a truck company at Stations 2, 3, and 4. The Department has four trucks: three operational and one reserve apparatus that ensures replacement equipment is available to replace front-line equipment. Training and communication services are quartered at Station 2, which serves as the central fire station. Table 3.12-2 lists the location and equipment/division for each fire station.

TABLE 3.12-2: FIRE STATIONS, EQUIPMENT, AND SERVICES

STATION	*LOCATION*	*EQUIPMENT/DIVISIONS*
2	110 West Sonora Street	1 Engine; 1 Truck; Technical Rescue Unit; USAR; Training; Communications; Battalion Chief; Chief's Operator
3	1116 East First Street	1 Engine; 1 Truck; Hazardous Materials Response Unit; 1 Grass Rig
4	5525 Pacific Avenue	1 Engine; 1 Truck; Battalion Chief
5	3499 Manthey Road	1 Engine; 1 Grass Rig
6	1501 Picardy Lane	1 Engine; Water Rescue Unit; Swift Water & Dive Rescue Team
7	1767 West Hammer Lane	1 Engine 1 Grass Rig
9	550 East Harding Way	1 Engine, 1 Grass Rig
10	2903 West March Lane	1 Engine, 1 Grass Rig
11	1211 East Swain Road	1 Engine
12	4010 East Main Street	1 Engine; 1 Grass Rig
13	3606 Hendrix Dr. 95212	1 Engine; 1 Grass Rig
14	3019 McNabb Place	1 Engine; 1 Grass Rig

SOURCE: EXCERPTS FROM THE DRAFT STOCKTON MUNICIPAL SERVICE REVIEW UPDATE (FEBRUARY 23, 2017); STOCKTON FIRE DEPARTMENT (HTTP://WWW.STOCKTONGOV.COM/GOVERNMENT/DEPARTMENTS/FIRE/DEFAULT.HTML).

Other specialized services are staffed as follows:

- Hazardous Materials Unit – Station 3
- Swift Water and Dive Rescue Team – Station 6
- Urban Search and Rescue Team – Station 2

All 181 Stockton firefighters are certified to at least Emergency Medical Technician (EMT) level. As indicated by Table 3.12-2, all engines are staffed with a -three-person crew, and all trucks are staffed with a crew of four. The Department is divided into two battalions, each of which is overseen by one of the two Battalion Chiefs on duty at all times. The Chief's Operator oversees the Mobile Command

Unit and responds to all structure fires, hazardous material incidences, and large-scale emergency medical service (EMS) calls in the City. The Chief's Operator also schedules the daily staffing requirements.

Fire protection services would be provided to the Project site by the Stockton Fire Department. The existing Company 5, located on Manthey Road, would be the first response team for emergency calls within the Project site. Company 5 is approximately 4.1 miles west of the Project site.

ISO RATING

The Insurance Services Office (ISO) Public Protection Classification Program currently rates the Fire Department as 3 on a scale of 1 to 10, with 1 being the highest possible protection rating and 10 being the lowest. The ISO rating measures individual fire protection agencies against a Fire Suppression Rating Schedule, which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm response and initial attack, and adequacy of local water supply for fire-suppression purposes.

City of Stockton Parks and Recreation Department

Parks and recreation services in the City of Stockton are provided by the Community Service Department, which operates 66 park facilities throughout the City that range in size from 2 to 64 acres. These parks include both neighborhood and community parks, with each facility providing a range of recreational opportunities that includes picnic areas and sports facilities such as baseball, softball, tennis, handball, horseshoe, soccer, and multi-use courts. Five community parks include community centers. The Department also operates several special regional facilities, including the Civic Auditorium, Hebert Field, the new Downtown Arena and Baseball Stadium, Oak Park Ice Area, Pixie Woods Children's Playland, Swenson and Van Buskirk Golf Courses, and the Calaveras River bicycle/jogging path. The City recently completed a new community park facility to the north of McNair High School. The City also recently completed an active sports facility within the San Joaquin Area Flood Control Agency detention basin facility. Additionally, the City has plans to construct several additional new facilities and renovate other existing facilities (i.e., Gleason Park), as necessary. However, the likelihood for these various projects to be developed in the future relies heavily on local economic conditions.

On a regional scale, the City is located in the Sacramento-San Joaquin Delta (Delta), which contains several recreational areas and facilities, primarily for water-based recreation. Regional County parks near the City include the 9.85-acre Dos Reis Regional Park and the 3.7-acre Mossdale Crossing Regional Park, both located along the San Joaquin River. Each of these parks includes boat launch ramps, picnic/barbeque areas, and children's play areas. Dos Reis Regional Park also has camping facilities. Also in the vicinity is the Haven Acres Marina, a private marina located on the San Joaquin River north of Dos Reis Regional Park. This facility provides river access to the San Joaquin River and includes parking areas, a boat ramp, and 10 boat berths.

Under the park standards outlined in the City's General Plan, the City aims to provide 2 acres of neighborhood parkland, 3 acres of community parkland, and 3 acres of regional parkland per 1,000 residents. With the existing population of 320,600 residents, the City is currently deficient in meeting its park service standards in all categories.

OTHER AGENCY SERVICES

Manteca Unified School District

The Manteca Unified School District (MUSD) provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. The District is approximately 113 square miles and serves more than 23,500 students. Within the City of Stockton there are 14 schools serving elementary age and middle school students (grades K-8), one K-6 school, four high schools (grades 9-12), one community day school (grades 7-12), and one vocational high school (grades 11-12). Table 3.13-3 lists MUSD schools, associated grade levels, and the most recent enrollment for each school.

TABLE 3.13-3: PUBLIC SCHOOLS SERVING MUSD

SCHOOL	*GRADES SERVED*	*ADDRESS*	*ENROLLMENT 2018-2019 SCHOOL YEAR*	*ESTIMATED REMAINING CAPACITY*
ELEMENTARY AND MIDDLE SCHOOLS				
George McParland Elementary School	K-8	1601 Northgate Dr	1,163	155
Stella Brockman Elementary School	K-8	763 Silverado Dr	813	329
Brock Elliott Elementary School	K-8	1110 Stonum Ln	838	104
French Camp Elementary	K-8	241 4th Street	584	416
Golden West Elementary School	K-8	1031 North Main St	536	270
Joshua Cowell Elementary School	K-8	740 Pestana Ave	651	335
Lincoln Elementary School	K-8	750 E Yosemite Ave	651	139
Manteca Community Day	K-6	737 W Yosemite Ave	15	--
Neil Hafley Elementary School	K-8	849 Northgate Dr	752	188
New Haven Elementary School	K-8	14600 Austin Rd	535	138
Nile Garden Elementary School	K-8	5700 E Nile Rd	726	30
Sequoia Elementary School	K-8	710 Martha St	815	57
Shasta Elementary School	K-8	751 E Edison St	772	208
Veritas Elementary School	K-8	1600 Pagola Ave	932	-72
Walter Woodward Elementary School	K-8	575 Tannehill Dr	910	-10
HIGH SCHOOLS				
Calla High School	9-12	130 S Austin Rd	162	--
East Union High School	9-12	1700 N Union Rd	1,614	196
Manteca Community Day School	7-12	737 W Yosemite Ave	50	--
Manteca High School	9-12	450 E Yosemite Ave	1,686	17
Sierra High School	9-12	1700 Thomas St	1,471	329
Manteca Unified Vocational Academy (be.tech)	11-12	2271 W. Louise Ave	127	--

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2018-19

District-wide MUSD Schools have a total enrollment of 23,834 students for the 2019-2020 school year. Table 3.13-4 provides a summary of the public-school enrolment by grade within MUSD.

TABLE 3.13-4: ENROLLMENT BY GRADE MUSD (2019-2020)

MANTECA UNIFIED	*GRADE LEVEL*													
	K	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*TOTAL 2019-2020*
Total	1,931	1,645	1,692	1,740	1,740	1,716	1,811	1,883	2,002	2,002	1,859	1,907	1,931	**23,834**

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2018-2019

Library Services

The public library system in Stockton is operated by the City of Stockton and funded jointly by both the City and San Joaquin County. The system includes the downtown Central Library, three branch libraries that serve the City of Stockton, and other branch libraries that serve other San Joaquin County communities. Capital costs of new library development are met through the City's Public Facilities Fee program.

3.12.2 REGULATORY SETTING

STATE

Police Protection

There are no federal or state regulations related to police protection services applicable to the proposed Project.

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

EMERGENCY RESPONSE/EVACUATION PLANS

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

CALIFORNIA FIRE CODE

The 2019 California Fire Code (CFC), known as the California Code of Regulations, Title 24, Part 9, based on the International Fire Code (2018) contains regulations consistent with nationally recognized and accepted practices for safeguarding life and property from the hazards of: fire and explosion; dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; and hazardous conditions in the use or occupancy of buildings or premises.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1710

The purpose of the National Fire Protection Association (NFPA) 1710 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments is to: contain minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by substantially all career fire departments; address functions and objectives of fire department emergency service delivery, response capabilities, and resources; contain general requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning; and address the strategic and system issues involving the organization, operation, and deployment of a fire department and does not address tactical operations at a specific emergency incident. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one (1) minute or less for at least 90 percent of the alarms
- Turnout time of one (1) minute or less for EMS calls (80 seconds for fire and special operations response)
- Fire response travel time of four (4) minutes or less for the arrival of the first arriving engine company at a fire incident and eight (8) minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident
- Eight (8) minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department

Parks/Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. Refer to the *City of Stockton Municipal Code* discussion, below, regarding park land dedications and fees imposed by the City.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such

cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses;
- Traffic and school bus safety issues.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A", reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- **Level I** fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- **Level II** fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.
- **Level III** fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the

amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

The MUSD currently requires Level I fees for residential and commercial construction. The MUSD cannot increase to Level II fees due to the excess capacity at the existing schools located north of State Route 120. However, the MUSD is currently completing a demographic study in order to mitigate for future school facilities located south of State Route 120.

LOCAL

City of Stockton Municipal Code

The City of Stockton Municipal Code, Section 16.72.060(C), Park Land Dedications and Fees, provides for the dedication of land and/or the payment of fees to the City for park and recreational purposes and/or the construction of park and recreational facilities.

Additionally, Section 16.72.260, Public Facilities Fee, of the Municipal Code includes development impact fees to fund municipally owned public facilities, including but not limited to City office space, fire stations, libraries, police stations, community recreation centers, street improvements, and water and sewage facilities, and to pay for acquisition, enhancement, restoration, maintenance, and/or operation of habitat/open space conservation lands.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the following goals and policies related to public services and recreation are applicable to the proposed Project.

GOALS: PUBLIC FACILITIES & SERVICES ELEMENT

- PFS-1. To ensure the provision of adequate facilities and services that maintain service levels are adequately funded and allocated strategically.
- PFS-7. To provide protection to the public through adequate police staffing and related resources, effective law enforcement, and the incorporation of crime prevention features in new development, as approved by the Police Department.
- PFS-8. To provide protection to the public through effective fire protection services and the incorporation of fire safety features in new development.

POLICIES: PUBLIC FACILITIES & SERVICES ELEMENT

- PFS-1.1. Maintain Existing Levels of Services. The City shall give priority to providing services to existing urban areas in order to prevent the deterioration of existing levels-of-service.
- PFS-1.4. Development Impacts to Existing Infrastructure. The City shall ensure that proposed developments do not create substantial adverse impacts on existing infrastructure and that the necessary infrastructure will be in place to support the development.

- PFS-1.5. Funding for Public Facilities. The City shall continue to utilize developer fees, the City's public facilities fees, and other methods (i.e., grant funding and assessment districts) to finance public facility design, construction, operation, and maintenance.
- PFS-1.8. Impact Mitigation. The City shall review development proposals for their impacts on infrastructure (i.e., sewer, water, fire stations, libraries, streets) and require appropriate mitigation measures if development reduces service levels.
- PFS-1.9. Conditions of Approval. During the development review process, the City shall not approve new development unless the following conditions are met:
  - The applicant can demonstrate that all necessary infrastructure will be installed or adequately financed;
  - Infrastructure improvements are consistent with City infrastructure plans.
- PFS-7.1. Police Response Time. The City shall maintain an average response time of 5 minutes or less for priority one calls.
- PFS-7.2. Staffing Ratios. The City shall strive to maintain a minimum ratio of 1.5 sworn officers per 1,000 residents served.
- PFS-7.5. Design Features for Crime Prevention and Reduction. The City shall continue to promote the use of building and site design features as a means for crime prevention and reduction.
- PFS-8.1. Fire Response Time. The City shall work to maintain a fire response time as indicated in Table 9-1, which shall be used to determine future fire station needs.
- PFS-8.2. Insurance Service Organization (ISO) Rating. The City shall continue to maintain an ISO rating of 1.
- PFS-8.3. Provision of Station Facilities and Equipment. The City should provide fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the City's service standards (ISO rating and response time).
- PFS-8.4. Cost Sharing. The City shall require new development to pay all public facility fees (PFF) as a means to provide a fair share of costs to provide fire station facilities and equipment in order to maintain the City's ISO rating of 1. Also, new development may be required to create a Community Facility District (CFD) or other funding mechanisms to pay the costs associated with the operation of a fire station.
- PFS-8.6. Adequate Emergency Access and Routes. The City shall require that new development provide adequate access for emergency vehicles, particularly firefighting equipment, as well as provide evacuation routes.

GOAL: RECREATION & WATERWAYS ELEMENT

- RW-2. To provide a variety of recreational facilities to meet the diverse needs of Stockton's residents, workers, and visitors.

POLICY: RECREATION & WATERWAYS ELEMENT

- RW-2.1. City Park and Recreation Standards. The City shall ensure that park and recreation facilities be provided at a level that meets the standards (net acres/1,000 residents,

minimum net acres/park, service radius) for neighborhood parks, community parks, and regional parks shown in Table 10-1 [Table 3.12-3].

TABLE 3.12-3: CITY OF STOCKTON PARK STANDARDS

TYPE OF PARK	*NET ACRES/1,000 RESIDENTS*	*MINIMUM NET ACRES/PARK*	*SERVICE RADIUS*
Neighborhood	2	5	Up to 0.5-mile radius
Community	3	15	Up to 1-mile radius
Regional	3	30 and over	Region-wide
Public Golf Courses	1 course/40,000	160-230	Region-wide

SOURCE: CITY OF STOCKTON GENERAL PLAN, TABLE 10-1.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on public services and recreation if it would 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:
    - Fire Protection;
    - Police Protection;
    - Schools;
    - Parks; and
    - Other public facilities.
- An increase in 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; or
- If it includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

As noted previously, the Police Department's sworn staff totals 485, a ratio of about 1.52 sworn officers per 1,000 population.[3] This ratio currently exceeds the City's General Plan minimum standard of 1.5 sworn officers per 1,000 residents.[4] However, staffing levels in the City of Stockton ultimately are determined by the City Council in consultation with the City Manager and Chief of Police.

The Project proposes the development of approximately 422-acres of currently undeveloped land with industrial, commercial, open space, public facilities, and public roadway right-of-way land uses within the southern portion of the City. Although the Project does not propose the development of residential uses resulting in a direct increase in the City's population, the creation of new jobs within the City could result in an indirect increase in population associated with the potential for future Project employees (and their families) to relocate to the City. This potential increase in population could contribute to the standard of sworn officers to residents being further exceeded. Further, development of the Project site could increase the demand for police protection services to the site when compared to existing conditions. However, as discussed in Section 3.10, Land Use and Population, development of the Project site, as proposed, would be consistent with the General Plan land use and zoning identified for the site and would not result in significant growth beyond that identified and planned for in the City's General Plan. Although demand for services may increase, the Project would not directly increase demand for police services to the extent that new or physically altered police department facilities would be needed in order to maintain acceptable service ratios, response times, or other performance objectives.

The Project would be subject to Stockton Municipal Code Section 16.72.260, Public Facilities Fee, which requires payment of a public facilities fee on issuance of building permits for development in the City to pay for municipally owned facilities, including but not limited to police stations. Payment of the fee is required in order to implement the goals and objectives of the General Plan and to mitigate the impacts caused by future development in the City. The payment of fees has been identified to finance public facilities and/or compensation measures, and to pay for each development's fair share of the construction costs of these improvements, and/or the costs of the compensation measures. Payment of the public facilities fee in compliance with Municipal Code 17.72.260 would reduce potential impacts associated with the Project's contribution toward the future need for new or physically altered police department facilities. As the Project would not directly require the need for new or physically altered police facilities in order to maintain

[3] According to the Cal. State DOF, Stockton's population 318,522 on January 1, 2020.
[4] City of Stockton General Plan, Public Facilities and Services Element, PFS-7.2.

acceptable service ratios, response times or other performance objective which may cause substantial adverse physical environmental impacts, implementation of the proposed Project would have a ***less than significant*** relative to this topic.

Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The City of Stockton General Plan includes policies and implementation measures to ensure that the Fire Department continues to provide adequate facilities and staffing levels. Below is a list of relevant policies:

- The City shall review development proposals for their impacts on infrastructure (i.e., sewer, water, fire stations, libraries, streets) and require appropriate mitigation measures if development reduces service levels (Policy PFS-1.8).
- The City shall work to maintain a fire response time as indicated in Table 9-1, which shall be used to determine future fire station needs (Policy PFS-8.1).
- The City shall continue to maintain an ISO rating of 1 (Policy PFS-8.2).
- The City should provide fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the City's service standards (ISO rating and response time) (Policy PFS-8.3).
- The City shall require new development to pay all public facility fees (PFF) as a means to provide a fair share of costs to provide fire station facilities and equipment in order to maintain the City's ISO rating of 1. Also, new development may be required to create a Community Facility District (CFD) or other funding mechanisms to pay the costs associated with the operation of a fire station (Policy PFS-8.4).

Continued growth within the city will increase the overall demand on fire protection services in the city. Growth in accordance with buildout of the existing General Plan is expected to generate the typical range of service calls, including structure fires, car fires, electrical fires, emergency medical response and others. Any new facilities would require environmental review once a location and design of such facility is developed. The City's costs to maintain equipment and facilities and to train and equip personnel will also increase. Growth in rural areas and fire districts will also increase the demand for fire protection services in those areas.

Development of the Project, as proposed, could increase demand for fire protection services to the site. The most effective response would be from Station 5, which is the closest to the Project site and located approximately 4 miles northwest of the Project site. The Fire Chief did not indicate that there would be a need for the proposed Project to construct a new fire station or physically alter a fire station, in order to maintain acceptable service ratios, response times, or other performance objectives for public services.

The Project would be subject to Stockton Municipal Code Section 17.72.260, Public Facilities Fee, which requires payment of a public facilities fee on issuance of building permits for development in the City to pay for municipally owned facilities, including but not limited to fire stations. Payment of the fee is required in order to implement the goals and objectives of the General Plan and to mitigate the impacts caused by future development in the City. The payment of fees has been identified to finance public facilities and/or compensation measures, and to pay for each development's fair share of the construction costs of these improvements, and/or the costs of the compensation measures. Payment of the public facilities fee in compliance with Municipal Code 16.72.260 would reduce potential impacts associated with the Project's contribution toward the future need for new or physically altered fire department facilities. As the Project would not directly require the need for new or physically altered fire facilities in order to maintain acceptable service ratios, response times or other performance objective which may cause substantial adverse physical environmental impacts, implementation of the proposed Project would have a ***less than significant*** relative to this topic.

Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The City of Stockton is located within the service boundaries of the MUSD. MUSD provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. MUSD operates 14 elementary and middle schools (grades K-8), four high schools (grades 9-12), one community day school (grades 7-12), and one vocational academy (grades 11-12). District-wide MUSD Schools has a total enrollment of 23,834 students for the 2019-2020 school year.

The Project does not propose residential uses and therefore would not directly result in the addition of school-aged children attending schools within MUSD. However, development of the Project would result in new employment opportunities to the City and there is the potential that some portion of these employees (and their families) would relocate to Stockton and potentially include school-aged children that would attend schools within MUSD. At this time, it is unknown how many people may choose to relocate to the City and where in the City they may choose to reside. Therefore, it is too speculative to know which MUSD schools may receive new school-aged children indirectly associated with employment opportunities at the Project site. As shown in Table 3.13-3, existing elementary and high schools within MUSD have capacity to accommodate additional school-aged children.

The MUSD collects impact fees from new developments under the provisions of SB 50. The Project would be subject to payment of school impact fees in accordance with Senate Bill 50 (SB 50). Pursuant to Government Code Section 65995(3)(h), payment of statutory fees is deemed to be full and complete mitigation of impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use or development of real property…" Developer fees collected by MUSD pursuant to SB 50 are used for the provision of additional and reconstructed or modernized school facilities. The Project Applicant would be required to pay all statutory fees in place at the time and

demonstrate proof of payment to the City. With payment of the fees, the impact of the proposed Project on the need for additional school facilities is ***less than significant***.

Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities (Less than Significant)

As discussed, although the Project does not propose the development of residential uses resulting in a direct increase in the City's population, the creation of new jobs within the City could result in an indirect increase in population associated with the potential for future Project employees (and their families) to relocate to the City. This potential increase in population could result in an increased demand on public facilities, such as community centers and public libraries. However, as discussed in Section 3.10, Land Use and Population, development of the Project site, as proposed, would be consistent with the General Plan land use and zoning identified for the site and would not result in significant growth beyond that identified and planned for in the City's General Plan. Although demand for on public facilities may increase, the Project would not directly increase demand to the extent that new or physically altered facilities would be needed in order to maintain acceptable performance objectives.

The Project would be subject to Stockton Municipal Code Section 16.72.260, Public Facilities Fee, which requires payment of a public facilities fee on issuance of building permits for development in the City to pay for municipally owned facilities, including but not limited to City office space, libraries, and community recreation centers. Payment of the fee is required in order to implement the goals and objectives of the General Plan and to mitigate the impacts caused by future development in the City. The payment of fees has been identified to finance public facilities and/or compensation measures, and to pay for each development's fair share of the construction costs of these improvements, and/or the costs of the compensation measures. Payment of the public facilities fee in compliance with Municipal Code 16.72.260 would reduce potential impacts associated with the Project's contribution toward the future need for new or physically altered public facilities. As the Project would not directly require the need for new or physically altered police facilities in order to maintain acceptable service ratios, response times or other performance objective which may cause substantial adverse physical environmental impacts, implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The proposed Project site is currently agricultural land that is designated for industrial uses. As part of the proposed industrial development, the Project proposes approximately 54 acres of open space areas within the site, which will include approximately seven acres of open space in which a portion of it will be for a habitat setback area located east of the UPRR, south of the future Commerce Drive and along French Camp Slough. The project does not propose any park uses. The potential adverse

physical environmental impacts associated with the proposed open space areas have been addressed within this EIR. The proposed open space would not cause a substantial adverse physical environmental impact. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.12-6: The proposed Project has the potential to 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 (Less than Significant)

The proposed Project site is currently agricultural land and is not directly located adjacent to an existing neighborhood or regional park, or other recreational facility. The Project proposes to develop the site with primarily industrial uses. As no residential uses are proposed, the Project would not result in a direct increase in population with the potential to increase the use of existing neighborhood and regional parks or other recreational facilities. As discussed above, the Project proposes approximately 54 acres of open space areas within the site, which will include approximately seven acres of open space in which a portion of it will be for a habitat setback area located east of the UPRR, south of the future Commerce Drive and along French Camp Slough. Thus, it is not anticipated that employees would utilize other parks and recreational facilities outside of the area.

Indirect population growth that may occur as a result of new employees (and their families) potentially choosing to relocate to the City may increase the use of park and recreational facilities within the City. However, the City accounts for the use of parks and recreational facilities directly resulting from residential development through the requirement for subdivisions to dedicate land and/or provide payment of fees to the City for parks and recreational purposes. Additionally, the City of Stockton receives funds for the provision of public services through development fees, property taxes, and connection and usage fees. The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a ***less than significant*** impact relative to this topic.

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This section analyzes the potential impacts of the proposed Project on the transportation system. This section identifies the potential transportation impacts of future buildout of the Project and recommends mitigation measures to lessen their significance. Information in this section is derived primarily from the following (as well as other information described in this section):

- *South Stockton Commerce Center (SSCC) Project Vehicle Miles Traveled Analysis (VMTA) and Transportation Impact Assessment (TIA)* (Fehr & Peers, February 2021);
- *Envision Stockton 2040 General Plan* (City of Stockton, December 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, June 2018);
- *City of Stockton Bicycle Master Plan* (City of Stockton, December 2017);
- State of California, Governor's Office of Planning and Research (OPR), *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, December 2018);
- *Trip Generation Manual, 10th Edition* (ITE, 2017); and
- *Trip Generation Handbook, 3rd Edition* (ITE, 2017).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: California Department of Transportation (Caltrans) (October 22, 2020), California Department of Justice (November 24, 2020), Marven Norman (October 30, 2020), and Sierra Club, Delta-Sierra Group (October 27, 2020). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

According to Senate Bill (SB) 743, which became effective statewide on July 1, 2020. The legislation associated with this landmark law specified that "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

Therefore, unlike previous Draft EIRs published in Stockton, this Draft EIR uses VMT as the primary significance criteria and Level of Service (LOS) to aid the City of Stockton and Caltrans in the understanding of potential increases in vehicle delay at key signalized intersections (Policy TR-4: Effective Transportation Assessment) and determine improvements to the local and regional transportation system. Pages 22 through 57 of Appendix F present the results of Existing Conditions Impacts and Mitigation Measures and the Cumulative Conditions Impacts and Mitigation Measures.

In December 2018, the California Office of Planning and Research (OPR) published final technical guidance for implementing SB 743. On December 28, 2018, the Resources Agency adopted CEQA Guidelines Section 15064.3. Under that guideline, vehicles miles traveled (VMT) was chosen as the primary metric used to identify transportation impacts. Hence, this chapter includes an extensive review of the Project's VMT. This section also addresses many other important transportation-related areas of concern including pedestrian/bicycle facilities, transit facilities and services, emergency vehicle response, hazardous conditions, and temporary construction-related conditions.

3.13.1 ENVIRONMENTAL SETTING

PROJECT LOCATION

The Project site is comprised of 422.2 acres located in the southeast portion of the City of Stockton, bounded by State Route (SR) 99 to the east, Airport Way to the west, French Camp Road to the south, and Stockton Metropolitan Airport to the north.

The Project site is located west of the SR 99 Frontage Road and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. The Slough continues east under the UPRR and then south across the southwestern portion of the site, before continuing southerly and exiting the Project site. The Project site is currently comprised of active agricultural fields and orchards. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The off-site sewer improvements would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north.

ROADWAY SYSTEM

Regional access to the Project site is provided by Interstate 5 (I-5) at the E. French Camp Road (to and from the north) and Roth Road (to and from the south) interchanges. Access to and from SR 99 is provided at the Arch-Airport Road (to and from the north) and E. French Camp Road (to and from the south) interchanges.

The following are descriptions of the primary roadways in the vicinity of the Project site:

I-5 is a major north-south freeway that traverses the western United States, originating in southern California and continuing north toward Sacramento and beyond. I-5 runs through the western portion of the City of Stockton, west of the Project site. Three mixed-flow lanes are provided in each direction on I-5 in the vicinity of the Project site. Typical daily volumes on I-5 in the vicinity of the Project site are approximately 110,000 vehicles.

SR 99 is a north-south freeway that traverses the central valley of California. It originates south of Bakersfield, branching off of I-5 and continues north to Sacramento, where it reconnects with I-5. SR 99 runs through the eastern portion of the City of Stockton, east of the Project site. Three mixed-flow lanes are provided in each direction on SR 99 in the vicinity of the Project site. Typical daily volumes on SR 99 in the vicinity of the Project site are approximately 70,000 vehicles. North of E. French Camp Road, there are frontage roads on both sides of SR 99.

E. French Camp Road is a two-lane, east-west roadway that extends from west of I-5 to east of SR 99 and forms the southern boundary of the Project site. Left-turn pockets are provided at major intersections. There are no bicycle facilities and limited pedestrian facilities provided on this roadway in the study area.

Sperry Road/Arch-Airport Road is an east-west roadway north of the Project site that extends from west of I-5 to east of SR 99. East of Frank W. Circle, the recently constructed grade-separated segment of Arch-Airport Road is four-lane roadway with a 45 mile-per-hour (mph) speed limit that includes pedestrian facilities. West of S. Airport Way and east of Performance Drive, this roadway is called Sperry Road. Sperry Road is a four-lane roadway with left-turn pockets at major intersections. East of S. Airport Way, Sperry Road becomes Arch-Airport Road with between one and two travel lanes in each direction. There are limited pedestrian facilities on this roadway and no bicycle facilities.

S. Airport Way is a two-way, north-south roadway that connects Downtown Stockton south through the City of Manteca, and bisects the Project site. It is a four-lane facility with right and left-turn lanes and median dividers at most intersections. There are limited pedestrian facilities on this roadway and no bicycle facilities.

Roth Road is a two-lane east-west collector roadway located south of the Project. Roth Road connects Manthey Road with S. Airport Way. An interchange with I-5 is provided at Roth Road. There are limited pedestrian facilities on this roadway and no bicycle facilities.

PEDESTRIAN AND BICYCLE FACILITIES

This section describes the existing pedestrian and bicycle facilities in the vicinity of the Project site.

Pedestrian Facilities

Within the study area, limited pedestrian facilities are provided along S. Airport Way, French Camp Road, Arch-Airport Road, and Roth Road. Crosswalks, pedestrian signal heads and pedestrian call push buttons are provided at the following study intersections:

1. Airport Way/French Camp Road (north side, east side and south side);
2. Airport Way/Commerce Drive (will be provided on the north side, east side and south side);
3. Airport Way/Arch-Airport Road (no crosswalks provided);
4. Airport Way/Roth Road (no crosswalks provided;
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI) (north side of interchange);
6. French Camp Road/SR 99 Southbound Ramps (no crosswalks provided);
7. French Camp Road/SR 99 Northbound Ramps (no crosswalks provided);
8. French Camp Road/Sperry Road (Arch-Airport Road)(north side, west side, east side and south side);
9. French Camp Road/I-5 Southbound Ramps (south side of interchange);
10. French Camp Road/I-5 Northbound Ramps (south side of interchange);
11. Roth Road/I-5 Southbound Ramps (no crosswalks provided); and
12. Roth Road/I-5 Northbound Ramps (no crosswalks provided).

Pedestrian signal heads and pedestrian call push buttons are provided at the following study intersections:

1. Airport Way/French Camp Road (north leg, east leg and south leg);

2. Airport Way/Commerce Drive (will be provided on the north leg, east leg and south leg);
3. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI) (SB off-ramp and NB on-ramp);
4. French Camp Road/Sperry Road (Arch-Airport Road) (north, west, east and south legs); and
5. French Camp Road/I-5 Northbound Ramps (NB off-ramp).

Bicycle Facilities

Bicycle facilities in Stockton include the following general types:

- **Class I: Shared Use Path** - Referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.
- **Class II: Bicycle Lane** – Bicycle lanes provide a restricted right-of-way and are designated for the use of bicycles for one-way travel with a striped lane on a street or highway. Bicycle lanes are generally a minimum of five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.
- **Class III: Bicycle Route** - These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is designated as a bicycle route through the use of signage and optional pavement markings where bicyclists travel on the shoulder or share a lane with motor vehicles. Class III bike routes are utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes.
- **Class IV: Separated Bikeway** - Commonly known as cycle tracks, are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths

There are further distinctions made in the City of Stockton Municipal Code regarding bicycle facilities. A Bicycle Path is a shared bicycle and pedestrian facility parallel to a public street or roadway, a minimum of 75 feet away from the public street/roadway. Additionally, the City of Stockton permits bicyclists to share the sidewalk with pedestrians.

Class I bicycle paths exist on Arch-Airport Road between E. French Camp Road and Sperry Road.

The City has an on-going Class IV separated bikeway project on Airport Way. As of July 2021, the facility has been constructed from Charter Way to the north and 12th Street to the south as part of Public Works Project PW1808. Ultimately, the Class IV project will extend south beyond Arch-Airport Road to Performance Drive / Dixon Street, which is about 0.75 miles north of the South Stockton Commerce Center (SSCC) Project.

TRANSIT SERVICE

Transit service in the area is provided by San Joaquin Regional Transit District (RTD). San Joaquin RTD provides public transit services in the Stockton Metropolitan area, as well as inter-city and rural

transit services countywide. There are limited transit services provided to Project site, with the closest routes, Routes 44, 91 and 510, serving Arch-Airport Road with stops approximately three miles from the Project site.

RAILROAD CROSSING COLLISION ANALYSIS

Accident data was reviewed for the at-grade railroad crossings in the study area. In the immediate study area, there are five at-grade railroad crossings:

1. S. Airport Way, south of Stimson Street;
2. E. French Camp Road, east of Harlan Road;
3. E. French Camp Road, east of Priest Road;
4. Roth Road, west of McKinley Avenue; and
5. Roth Road, west of Intermodal Way.

Accident data at the above crossings was obtained from the Department of Transportation, Federal Railroad Administration (FRA). The accident experience at each crossing is discussed below, with a general description of the crossing, including the number of lanes, the range of train speeds over the crossing, and the typical number of trains per day based on data as of December 2019.

1. **S. Airport Way, south of Stimson Street** – The Airport Way crossing of the UPRR tracks is a four-lane at-grade crossing. No information is available from the FRA for this crossing; however, at other crossings of this line, limited train activity is noted.
2. **E. French Camp Road, east of Harlan Road** – The E. French Camp Road crossing of the UPRR tracks is a two-lane at-grade crossing. There are typically 34 trains per day at this crossing with train speeds of 35 to 70 mph. Gate arms, pavement markings, train signals and mast mounted flashing lights are provided at the crossing. Fatal accidents occurred in 1978 and 1991 and a non-fatal accident occurred in 1997. In the two fatal accidents, the train was traveling faster than 30 mph. In the non-fatal accidents, the train was traveling approximately 10 mph.
3. **E. French Camp Road, east of Priest Road** – This railroad crossing is a two-lane at-grade crossing. There are typically 12 trains per day at this crossing with train speeds of 30 to 60 mph. Gate arms, pavement markings, train signals, and mast mounted flashing lights are provided at the crossing. An injury incident occurred in 1982, and a non-injury incident occurred in 1992.
4. **Roth Road, west of McKinley Avenue** – This crossing is a two-lane at-grade crossing. There are typically 12 trains per day at this crossing with train speed of 30 to 60 mph. Gate arms, pavement markings, train signals, and mast mounted flashing lights are provided. Four incidents occurred at this crossing in 2001, resulting in two injuries and no fatalities. Prior incidents occurred in 1976 and 1979, resulting in one injury. In 2009, a non-injury incident occurred when a pick-up truck stopped on the crossing.
5. **Roth Road, west of Intermodal Way** – This crossing is a two-lane at-grade crossing. There are typically 34 trains per day with train speed of 35 to 70 mph. Gate arms, pavement markings, train signals, and mast mounted flashing lights are provided at the crossing. There are a total of five reported incidents. Fatal accidents occurred in 2006 and 2009 and non-

fatal accidents occurred in 2001, 2015, and 2016. Both fatalities involved the commuter train.

3.13.2 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the Project are summarized below. This information provides a context for the impact discussion related to the Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

STATE

The State of California has enacted several pieces of legislation that outline the State's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with State climate goals. The legislation with applicability to the analysis of the Project includes:

- Assembly Bill (AB) 32 (2006);
- SB 375 (2008); and
- SB 743 (2013).

Each are discussed below, in addition to Caltrans responsibilities and VMT guidance.

Assembly Bill 32

AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that "(a) the statewide GHG emissions limit shall remain in effect unless otherwise amended or repealed; (b) it is the intent of the Legislature that the statewide GHG emissions limit continues in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020; (c) the California Air Resources Board (CARB) shall make recommendations to the Governor and the Legislature on how to continue reductions of GHG emissions beyond 2020." Vehicle emissions are a significant source of GHGs; therefore, GHG reduction targets include reductions in vehicle emissions, providing a nexus between AB 32 and transportation analyses.

Senate Bill 375

SB 375 requires metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their regional transportation plans (RTPs). The SCS demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the Project site and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the CARB.

In 2017, the State Legislature passed SB 150, which requires CARB to prepare a report beginning in 2018 and every four years thereafter analyzing the progress made by each MPO in meeting the

regional GHG emission reduction targets. The San Joaquin Council of Governments (SJCOG) serves as the MPO for Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, Tracy, and San Joaquin County. River Islands is located in the City of Lathrop and therefore is within the SJCOG MPO.

SB 375 also provides streamlining (i.e., limited CEQA review) for certain transit priority projects that are consistent with the SCS.

Senate Bill 743

SB 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under CEQA. First, it directs OPR to amend the CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the new metrics beyond TPAs. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. In the amended CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied their discretion to recommend its use statewide. The amended CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts" and the provisions requiring the use of VMT shall apply statewide as of July 1, 2020. The amended CEQA Guidelines further state that land use "projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less-than-significant transportation impact."

Second, SB 743 establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, SB 743 added section 21099 to the Public Resources Code, which states that automobile delay, as described by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment upon certification of the CEQA Guidelines by the Natural Resources Agency. Since the amended CEQA Guidelines were certified in December 2018, LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment under CEQA.

Lastly, SB 743 establishes a new CEQA exemption for a residential, mixed-use, and employment center project a) within a TPA, b) consistent with a Project for which an EIR has been certified, and c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA

To aid in SB 743 implementation, OPR released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement the SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may

consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches.

The Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT:

- **Small projects** – projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- **Projects near major transit stops** – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- **Affordable residential development** – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- **Local-serving retail** – local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant).
- **Projects in low VMT areas** – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies the following recommended numeric VMT thresholds for residential, office, and retail projects:

- **Residential** development that would generate vehicle travel exceeding 15 percent below existing (baseline) residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- **Office** projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
- **Retail** projects (and other non-residential/non-office projects) that results in a net increase in total VMT may indicate a significant transportation impact.

For mixed-use projects, the Technical Advisory suggests evaluating each component independently and applying the significance threshold for each project type included. Alternatively, the lead agency may consider only the project's dominant use.

The Technical Advisory also provides guidance on impacts to transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but

it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network."

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans.

The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development:

- Smart Mobility Framework (Caltrans February 2010);
- Complete Streets Implementation Action Plan (Caltrans February 1, 2010);
- California Transportation Plan 2040 (Caltrans June 2016);
- Strategic Management Plan 2015-2020 – 2019 Update (Caltrans 2019); and
- State Highway System Management Plan (Caltrans May 2019).

VMT-Focused Transportation Impact Study Guide

On May 20, 2020, the VMT-Focused Transportation Impact Study Guide (TISG) was adopted. The TISG provides guidance on how Caltrans will review land use projects, with focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals. The TISG also identifies land use projects' possible transportation impacts to the SHS and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus, and references OPR's Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance

On July 2, 2020, Caltrans released the Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance. The purpose of the interim guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the SHS and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically Local Roadway Safety Plans (LRSPs) and Systemic Safety Analysis Reports (SSARs), as a model for

safety analysis of the local transportation network. This guidance supports implementation of SB 743 and complements the "VMT-Focused TISG" dated May 20, 2020. The new guidance has two main parts:

- Reactive: a review of Caltrans safety monitoring program data to see what known safety issues may be affected by the project; and
- Systemic: a review of LRSPs, SSARPs, Vision Zero plans, and other plans and assessments to see what safety patterns and improvements may be applicable to Caltrans facilities in the study area.

LOCAL

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan includes several policies and actions that are relevant to transportation and circulation. General Plan policies applicable to the Project are identified below:

POLICIES: TRANSPORTATION ELEMENT

- TR-1.1. Ensure that roadways safely and efficiently accommodate all modes and users, including private, commercial, and transit vehicles, as well as bicycles and pedestrians and vehicles for disabled travelers.
- TR-1.2. Enhance the use and convenience of rail service for both passenger and freight movement.
- TR-2.1. Develop safe and interconnected bicycle and pedestrian facilities, including along "complete" streets that target multiple travel modes.
- TR-2.2. Connect housing and employment development in areas with good transit access through open and inclusive processes where appropriate.
- TR-3.2. Require new development and transportation projects to reduce travel demand and greenhouse gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.
- TR-4.2. Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.

ACTIONS: TRANSPORTATION ELEMENT

- TR-1.1A. Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing any new truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists.
- TR-1.1B. Maintain and periodically update a schedule for synchronizing traffic signals along arterial streets and freeway interchanges to facilitate the safe and efficient movement of people and goods and to provide signal priority for transit vehicles at intersections.

- TR-1.1C. Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.
- TR-1.2C. Provide grade separations at railroad crossings on arterial streets where feasible to ensure public safety and minimize traffic delay.
- TR-2.1A. Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, and shopping and office centers, along with showers and lockers for major employment sites.
- TR-2.2A. Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.
- TR-3.2B. Require commercial, retail, office, industrial, and multifamily residential development to provide charging stations and prioritized parking for electric and alternative fuel vehicles.
- TR-4.2A. To evaluate the effects of new development and determine mitigation measures and impact fees, require projects to evaluate per capita VMT and impacts to transit, bicycle, and pedestrian modes.

POLICY: LAND USE ELEMENT

- LU-6.4. Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).

ACTIONS: LAND USE ELEMENT

- LU-6.4A. Maintain a reasonable balance between potential job generation and local workforce availability with a goal of one job for each employed resident.
- LU-6.4B. Maintain a reasonable proximity and balance (i.e., magnitude) between job-generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.
- LU-6.4C. Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on transportation and circulation if it would result in:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
- Result in inadequate emergency access.

VMT Significance Criteria

According to interim City of Stockton guidelines, a proposed Project's VMT is considered a significant impact if the associated change to the transportation system either:

- Causes an increase in Home-Based Work VMT per worker in relation to Existing (Baseline) Conditions. For the City of Stockton, an SB 743 analysis was completed in which the Citywide Average for Daily Home-Based Work VMT per worker was determined to be 18.56 miles;
- The goal of the City of Stockton is to reduce the Daily Home-Based Work VMT per worker by 15 percent; thereby requiring any project to have an Average Daily Home-Based Work VMT per worker no greater than 15.78 miles.

Other Impacts

Evaluation of potential transportation impacts related to conflict with existing and planned facilities, transportation hazards, emergency access, and construction activity are based on a review of Project changes to the transportation network and a qualitative assessment of whether those changes would conflict with applicable standards or result in detrimental conditions based on the thresholds of significance.

ANALYSIS METHODS

This section provides an overview of the proposed Project components and addresses the proposed Project trip generation, trip distribution, and trip assignment characteristics, all of which were used for the detailed evaluation of Project impacts on the surrounding roadway network. The amount of traffic associated with the Project was estimated using a three-step process.

1. Trip Generation – The amount of vehicle traffic entering/exiting the Project site was estimated.
2. Trip Distribution – The direction trips would use to approach and depart the area was projected.
3. Trip Assignment – Trips were then assigned to specific roadway segments and intersection turning movements.

Project Description

The South Stockton Commerce Center Project proposes a Tentative Map for the 437.45-acre site to create thirteen (13) development lots, two basin lots, two open space lots, one sewer pump station

lot, and off-site sewer improvements. Of the thirteen (13) development lots, twelve (12) will be for development of a mix of industrial uses and one will be for development of commercial uses.

The SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. A conceptual site plan was developed to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and environmental analysis of Vehicle Miles Traveled and Level of Service. Based on a FAR of .47, a maximum of 6,091,551 square feet of industrial type land uses could be developed throughout the site.

The SSCC Tentative Map also proposes approximately 11 acres of general commercial uses located between Airport Way and the UPRR right-of-way. Similar to the industrial uses, a conceptual site plan was developed. Based on a FAR of 0.30, a maximum of 140,350 square feet of commercial land uses could be developed in this area.

The project proposes approximately 54 acres of open space area within the site, which will include approximately seven acres of open space located east of the UPRR and south of the future Commerce Drive (refer to the Circulation Improvements discussion below).

Circulation Improvements

The Project proposes a west-east trending primary road referred to as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the UPRR right-of-way will be constructed to accommodate the primary access road and avoid conflicts with the UPRR rail line.

The majority of Commerce Drive is proposed to have a 78-foot right-of-way with one 16-foot traffic lane in each direction, and a 16-foot center turn lane. Five-foot landscaped areas would separate the traffic lanes from the 8-foot sidewalks on both the north and south sides of the road.

As Commerce Drive approaches the intersection with Airport Way, the right-of-way will be reduced to 77 feet 5 inches and provide one 16-foot westbound traffic lane, a 16-foot left turn lane, a 14-foot eastbound traffic lane, and a 16-foot eastbound traffic lane. Five-foot landscaped areas and 8-foot sidewalks would continue to be provided on both the north and south sides of the road.

The grade separated crossing over the UPRR right-of-way will be 40-feet with one 16-foot travel lane in each direction. An eight-foot pedestrian walkway will be provided on the north side of the overcrossing.

As part of the Project, a 10-foot-wide right-of-way dedication will be provided along Airport Way, adjacent to the Project site.

The Project also proposes to potentially include rail service to up to three large parcels (parcels 2, 3, and 4) within the Project site. A potential railroad spur line would extend east from the UPRR along the Project site's northern edge providing rail access to the parcels.

The 99 Frontage Road will provide access to the Arch Road and SR 99 Interchange. Airport Way will provide access to both the French Camp/Arch Road and Interstate 5 Interchange and the French Camp and the SR 99 Interchange.

Trip Generation

Several sources of trip generation information for light industrial and warehousing land uses from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition (2018 and Supplement in 2020) were reviewed. The 12 industrial land uses documented in the ITE Trip Generation Manual were reviewed and blended trip generation rates were calculated using the following land uses and percentages to determine the Project's daily, AM peak hour, and PM peak hour trip generation:

- ITE Land Use Code 110 – General Light Industrial – 7%
- ITE Land Use Code 130 – Industrial Park – 15%
- ITE Land Use Code 150 – Warehousing – 15%
- ITE Land Use Code 151 – Mini-Warehouse – 3%
- ITE Land Use Code 154 – High-Cube Transload & Short-Term Storage Warehouse – 15%
- ITE Land Use Code 155 – High-Cube Fulfillment Center Warehouse – 15%
- ITE Land Use Code 156 – High-Cube Parcel Hub Warehouse – 15%
- ITE Land Use Code 157 – High-Cube Cold Storage Warehouse – 15%

The blended trip generation rate per 1,000 square feet of industrial/warehousing was determined to be:

- 2.65 vehicle trips on a daily basis;
- 0.30 vehicle trips during the AM peak hour; and
- 0.29 vehicle trips during the PM peak hour.

For the retail/commercial land uses, ITE Land Use Code 820 (Shopping Center) was used to determine the Project's daily, AM peak hour, and PM peak hour trip generation for the retail development.

The trip generation rate per 1,000 square feet of retail/commercial was determined to be:

- 64.01 vehicle trips on a daily basis;
- 3.03 vehicle trips during the AM peak hour; and
- 5.87 vehicle trips during the PM peak hour.

Table 3.13-1 shows that the proposed Project is expected to generate approximately 22,633 net new daily trips, including 2,134 AM (with 1,567 inbound and 567 outbound) and 2,361 PM (with 779 inbound and 1,582 outbound) peak hour trips. Based on the trip generation analysis, the proposed Project is expected to generate 17,081 net new daily passenger car, truck and sport utility vehicle trips, including 1,924 AM (with 1,462 inbound and 462 outbound) and 2,071 PM (with 634 inbound and 1,437 outbound) peak hour trips. The proposed Project is expected to generate 5,552 net new daily truck trips, including 210 AM (with 105 inbound and 105 outbound) and 290 PM (with 145 inbound and 145 outbound) peak hour trips.

TABLE 3.13-1: PROJECT TRIP GENERATION ESTIMATES

LAND USE	*SIZE*	*DAILY TRIPS*	*AM PEAK HOUR*			*PM PEAK HOUR*		
			IN	*OUT*	*TOTAL*	*IN*	*OUT*	*TOTAL*
TRIP GENERATION RATES PER 1,000 SQUARE FEET								
Industrial & Warehousing		2.65	0.23	0.07	0.30	0.08	0.21	0.29
Retail & Commercial		64.01	1.64	1.39	3.03	2.88	2.99	5.87
TRIP GENERATION ESTIMATES								
Industrial & Warehousing	6,091,551 SF	--						
Cars		10,590	1,296	321	1,617	343	1,134	1,477
Trucks		5,552	105	105	210	145	145	290
Retail & Commercial	140,350 SF	--						
Cars		8,984	230	195	425	404	420	824
Internal Trip Reduction - 15%		*1,348*	*35*	*29*	*64*	*61*	*63*	*124*
Retail / Commercial Pass-By Trip Reduction for Traffic Already on Airport Way		*1,145*	*29*	*25*	*54*	*52*	*54*	*106*
Net New Project Generated Trips - Cars		17,081	1,462	462	1,924	634	1,437	2,071
Net New Project Generated Trips - Trucks		5,552	105	105	210	145	145	290
Total Net New Project-Generated Vehicle Trips		***22,633***	***1,567***	***567***	***2,134***	***779***	***1,582***	***2,361***

SOURCE: FEHR & PEERS, 2021.

Trip Distribution

Estimates of Project trip distribution were developed based on the City of Stockton Traffic Demand Model for the Existing + Project and Cumulative + Project scenarios. The trip distribution percentages are summarized in Table 3.13-2. Project trips were assigned to the roadway system based on the directions of approach and departure using the Airport Way/Commerce Drive signalized intersection.

TABLE 3.13-2: PROJECT TRIP DISTRIBUTION PERCENTAGES

DESTINATION	*AM PEAK HOUR*	*PM PEAK HOUR*
North on I-5	24%	23%
North on SR 99	16%	16%
North on S. Airport Way	6%	7%
East on Arch Road	6%	4%
South on I-5	24%	24%
South on SR 99	14%	15%
West on E. French Camp Road	3%	3%
East on E. French Camp Road	2%	2%
South on S. Airport Way	5%	6%
Total	100%	100%

SOURCE: FEHR & PEERS, 2021.

METHODOLOGY

This section describes the analysis methods used to determine impacts associated with transportation and circulation as defined by CEQA and SB 743 that would result from implementation of the Project.

VMT CEQA Guidelines

As discussed previously, LOS can no longer be used for evaluating project traffic impacts under CEQA with the passage of SB 743 and adoption of the amended CEQA Guidelines implementing SB 743 (see CEQA Guidelines Section 15064.3). Per CEQA Guidelines Section 15064.3, subdivision (c), the provisions in Section 15064.3 recommending VMT as the primary metric for analyzing traffic impacts shall apply on July 1, 2020.

This analysis relies on guidance provided in the OPR Technical Advisory (December 2018) to assess the Project's VMT impact. Specifically, this analysis considers the following:

- Does the Project meet one or more of the "screening thresholds" identified in the Technical Advisory, such that a detailed analysis is not necessary?
- If so, what information or data is available to support the conclusion that the Project meets the screening threshold and should be considered to have a less-than-significant transportation impact?

If the Project does not meet one or more of the "screening thresholds," this analysis would proceed to a detailed analysis of the Project's VMT impact. This includes quantifying the Project's VMT generation and determining whether this VMT generation would not meet the recommended thresholds of significance in the OPR Technical Advisory or Envision Stockton 2040 General Plan policies.

VMT SCREENING ANALYSIS

The OPR Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. As described in the Regulatory Setting section, the Technical Advisory suggests the following projects should be expected to have a less-than-significant impact on VMT:

- Small projects;
- Projects near existing major transit stops;
- Affordable residential development;
- Local-serving retail; or
- Projects in low VMT areas.

Of these project types, only the criterion for projects located near major transit stops are codified in the updated CEQA Guidelines. The remaining criteria for small projects, affordable residential development, local-serving retail, or projects in low VMT areas are not codified in the CEQA Guidelines but are suggested by OPR based on research cited in the Technical Advisory.

The Technical Advisory states that "retail development including stores larger than 50,000 square feet might be considered regional-serving." The proposed Project includes 140,350 gross square feet of food, retail, and commercial land uses.

CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies should generally presume projects within ½-mile of an existing major transit stop or a stop along an existing high quality transit corridor will have a less-than-significant transportation impact. As the proposed Project is not located within an area that is served by transit or rail, a VMT analysis and project impacts must be identified

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Significant and Unavoidable)

The proposed Project does not meet the screening criteria described in the OPR Technical Advisory; therefore, a detailed VMT analysis was conducted for the proposed Project. The VMT impact analysis used the City of Stockton Travel Demand Model that was derived from the SJCOG Regional Travel Demand Model.

Roadway improvements and land use projections consistent with the SJCOG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City of Stockton General Plan, San Joaquin County General Plan, City of Lathrop General Plan, and City of Manteca General Plan were included in the City of Stockton Travel Demand Model.

BASELINE AND CUMULATIVE SCENARIOS

A model-wide analysis was performed to obtain daily trips and travel distance by the Transportation Analysis Zones (TAZs) that represent the retail/commercial, food, and industrial/warehousing land uses that comprise the South Stockton Commerce Center Project. The product of daily trips and travel distance was summed up to obtain VMT estimates for home-based work trips. The total VMT was then divided by the projected number of employees and the resulting home-based work VMT per employee was determined. This average home-based work VMT per employee was then compared to Baseline Conditions (18.56 miles) and Goal developed by the City of Stockton (15.88 miles) to determine the potential impact of the proposed SSCC Project to the environments as defined by CEQA and SB 743.

Table 3.13-3 summarizes the results of the VMT analysis for home-based work trips per employee for Baseline and Cumulative With Project Conditions. The following key findings are derived from this table:

- According to the City of Stockton Baseline (Existing) Travel Demand Model, the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker is 18.56 miles. This includes a mix of employees who both live and work in the City of Stockton and employees that travel to and from neighboring cities to work in the City of Stockton.

TABLE 3.13-3: VMT ANALYSIS – BASELINE VERSUS CUMULATIVE PROJECT HOME-BASED VMT PER WORKER

SCENARIO	*AVERAGE HOME-BASED WORK VEHICLE MILES TRAVELED PER WORKER*	*DECREASE / INCREASE IN HOME-BASED WORK VEHICLE MILES TRAVELED PER WORKER*	*PERCENTAGE DECREASE / INCREASE*
Baseline City of Stockton Travel Demand Model	18.56	--	--
General Plan – Envision Stockton 2040	19.73	+1.17	+6.3%
General Plan – Envision Stockton 2040 With SSCC Project	19.69	+1.13	+6.1%
General Plan – Envision Stockton 2040 Goal	15.78	-2.78	-15.0%
South Stockton Commerce Center Project	21.05	+2.49	+13.4%

SOURCE: FEHR & PEERS, 2021.

The following key findings are derived from this table (continued):

- The goal of the City of Stockton is to decrease the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker from 18.56 miles to 15.78 miles, a 15.0% reduction when compared to Baseline (Existing) Conditions.
- According to the Envision Stockton 2040 General Plan Travel Demand Model, the City is projected to add a mix of jobs that would increase employment opportunities for both existing and future residents. This would improve the jobs / housing balance in the City of Stockton and theoretically reduce the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker.
- On the other hand, based on the total increase in population compared to the total increase in employments, the Envision Stockton 2040 General Plan Travel Demand Model is projected to generate a Citywide average daily home-based work VMT per worker (19.73) that is greater than the City of Stockton's Baseline (existing) Citywide average daily home-based work VMT per worker (18.56), an increase of 6.3%.
- The proposed South Stockton Commerce Center Project would add a total of 3,200 new jobs (2,880 industrial, 130 food and 190 retail) to the southern part of the City, which is greater than what was included in the Envision Stockton 2040 General Plan Travel Demand Model for the Traffic Analysis Zones that represent the SSCC project site.
- The South Stockton Commerce Center Project's average daily home-based work vehicle miles traveled per worker is projected to be 21.05 mile for the industrial, food and retail employees that either live and work in the City of Stockton and employees that travel to and from neighboring cities to work at the SSCC Project. This is 2.49 miles (13.4%) higher when compared to Baseline (Existing) Conditions.
- The primary result of the daily home-based work VMT per worker VMT analysis is that although the proposed SSCC project's is greater than the Envision Stockton 2040 threshold (21.05 versus 19.73), the overall benefit of the SSCC project is improving the jobs / housing balance for City of Stockton residents and reducing the average home-based work vehicle miles traveled per worker from 19.73 to 19.69 (a 0.2% reduction).

CONCLUSION

The Project proposes 6,091,551 gross square feet of industrial and warehousing space, with up to 2,880 employees, and 140,350 gross square feet of food and retail space, with up to 320 employees. Based on the location of the Project site in the southeast area of the City of Stockton, the distance to and from existing and future workers who both live and work in the City of Stockton results in an average travel distance that is greater than Baseline (Existing) conditions.

Therefore, per the Technical Advisory, non-residential/non-office projects that results in a net increase in total VMT may indicate a significant transportation impact.

Implementation of the proposed Project would result in additional vehicle travel generated by the food, retail/commercial, and industrial/warehousing land uses. This would result in the average home-based work VMT per worker of 21.05 miles. This is greater than the Baseline (Existing) of 18.56 miles or Envision Stockton 2040 goal of 15.88 miles. Therefore, the impact of the proposed Project on VMT would be **potentially significant**.

Mitigation Measure 3.13-1, which requires travel demand management (TDM) strategies, would be required. Implementation of Mitigation Measure 3.13-1 is feasible because it is within the applicant's purview to implement and has been found effective in previous academic studies. However, the precise effectiveness of specific TDM strategies can be difficult to accurately measure due to a number of external factors such as types of tenants, employee responses to strategies, and changes to technology. Additionally, it is noted that with the current planned growth and development in the City of Stockton, the City's jobs-housing ratio is expected to increase in 2040, and city-wide home-based work VMT per worker is projected to increase. TDM strategies alone cannot eliminate VMT increases caused by land use imbalance in the rest of the City and greater San Joaquin County geographic area.

Within the City of Stockton and San Joaquin County, there is a requirement to prepare a TDM plan for large employers (over 150 employees). However, specific vehicle trip reduction targets or monitoring of the effectiveness of the Project-specific TDM Plan are not required by San Joaquin County as of February 2021.

The City of Stockton is currently developing Transportation Impact Analysis Guidelines (TIAG Draft 2021) that will include strategies that are intended to reduce vehicular travel to meet the requirements of SB 743. The TIAG includes provisions for TDM strategies to reduce the amount of vehicle traffic generated by new employment development by creating measures, strategies, incentives, and policies to shift employees from driving alone and have these employees be aware of and look into the ability of using other travel modes including carpooling, transit (bus and commuter tail), cycling, and walking. In addition, employees who initially arrive in a vehicle would also be encouraged to use alternative travel modes (walking and bicycling).

As part of this on-going effort, a TDM Plan will be developed based on California Air Pollution Control Officers Association (CAPCOA) strategies that evaluate any project against mode split targets and other elements outlined by the City of Stockton.

In order to monitor the effectiveness of the TDM Plan, there are several viable options that may be required by the City of Stockton as part of the TIAG, including annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees.

As part of Mitigation Measure 3:13-1, the proposed Project would be required to monitor and evaluate the effectiveness of the Project's TDM Plan and provide the results to the City of Stockton. Based on the results of the evaluation, modifications to the TDM Plan may be required by the City in order to improve effectiveness toward achieving the home-based work VMT per worker target identified in the City's TIAG.

Based on the current status of the City of Stockton's TIAG, even with the implementation of Mitigation Measure 3.13-1, the impact would remain ***significant and unavoidable*** when compared to the City of Stockton's VMT goal of reducing average home-based work VMT per worker from 18.56 miles to 15.66 miles.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-1: *The Project applicant shall work with the City of Stockton to implement feasible Transportation Demand Management (TDM) strategies, which would decrease the VMT generated by the Project. Specific potential TDM strategies include, but are not limited to, the following:*

- *Provide public transit service, including improving San Joaquin Rapid Transit District (RTD) transit service connecting workers with existing and future residential developments;*
- *Implement a fair value commuting program or other pricing of vehicle travel and parking;*
- *TDM coordinator for large employers;*
- *Provide carpool and/or vanpool incentive programs;*
- *Provide on-site lockers and showers for workers who take alternative transportation;*
- *Promote walking and bicycling for employees who live and/or work in the area through the preparation of an Active Transportation Plan;*
- *Incentivize the use of alternative travel modes for travel within the project site through shared use of e-bikes and e-scooters;*
- *Allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours; and*
- *Employer coordination to SJCOG's DIBs program for workers.*

The TDM Plan shall be submitted to the City for review, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if necessary. The TDM Plan shall include the TDM strategies which will be implemented during the lifetime of the SSCC Project and shall outline the anticipated effectiveness of the strategies. The effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City.

Impact 3.13-2: Project implementation would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (Less than Significant)

Implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

As described in the Environmental Setting, there is currently no existing pedestrian, bicycle, or transit service/facility within the undeveloped Project area. The Envision Stockton 2040 General Plan consists of an interconnected, hierarchical system of sidewalks, on-street bike lanes, and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Stockton. The Project's transportation and circulation system is designed to accommodate access to and from Airport Way via the signalized Airport Way/Commerce Drive intersection, a grade-separated Commerce Drive/UPRR overcrossing, and pedestrian/bicycle facilities connecting each of the buildings to Commerce Drive. Therefore, this impact would be ***less than significant***.

Impact 3.13-3: Project implementation would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Less than Significant)

Implementation of the proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards for the City of Stockton. The Project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design.

The Project does not propose any new roadways or transportation facilities that would be inconsistent with applicable design standards for the City of Stockton. The Project proposes an increased land use density, which would result in increased travel activity, including vehicle (cars and trucks), bicycle, pedestrian, and potentially transit trips. In order to provide access to and from the Project site, the signalized Airport Way/Commerce Drive intersection will be designed to serve all travel modes and Surface Transportation Assistance Act (STAA) vehicles. These Project-generated trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes. Therefore, the proposed Project would not result in a change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned roadways and transportation facilities. This impact would be ***less than significant***.

Impact 3.13-4: Project implementation would not result in inadequate emergency access (Less than Significant)

Implementation of the proposed Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The Airport Way/Commerce Drive intersection and internal transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency.

Several emergency (police and fire) services are located within the Project study area. The signalized Airport Way/Commerce Drive intersection will provide emergency vehicle pre-emption (EVP) capabilities to ensure emergency vehicle response times are maintained. In addition, the internal transportation network is designed to maintain high levels of emergency vehicle accessibility and mobility, which ensures vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from Airport Way or from the secondary access point via the SR 99 frontage road will have unimpeded access to the Project site. Therefore, this impact would be ***less than significant***.

Impact 3.13-5: Project implementation would not cause impacts due to construction (Less than Significant)

Implementation of the proposed Project would involve construction activities that could cause temporary impacts to transportation facilities, including temporary roadway closures, degrading roadway pavement conditions, and temporary degradation in traffic operations during construction of the Airport Way/Commerce Drive signalized intersection. The majority of the construction activity would occur on the Project site, including the construction of the Commerce Drive/UPRR overcrossing and the internal transportation system.

Implementation of the proposed Project would consist of construction of industrial/warehousing, retail, and commercial buildings which will span over several years. During construction, there may be periods of active construction in one or more areas of the Project site, depending on the location of each building and the individual timelines for Project components. The construction of the Airport Way/Commerce Drive signalized intersection will include Traffic Management Plans (TMPs) to reduce potential impacts to the Airport Drive corridor. Once this intersection is completed, the majority of the construction activity would occur on the Project site. Therefore, this impact would be ***less than significant***.

INTERSECTION AND FREEWAY ASSESSMENT

Even though Level of Service (LOS) is no longer the primary significance criteria for a CEQA document, the City of Stockton and Caltrans will continue to use LOS to aid in the understanding of potential major increases to vehicle delay at key signalized intersections (Policy TR-4: Effective Transportation Assessment) and determine improvements to the local and regional transportation system. Pages 22 through 57 of Appendix F present the results of Existing Conditions Impacts and Mitigation Measures and the Cumulative Conditions Impacts and Mitigation Measures.

The following intersection impacts would occur with the SSCC Project under Existing AM and PM Peak Hour Conditions:

- Impact TR-6: Intersections 11 and 12, Roth Road at I-5 Ramps
    - Implementation of identified improvements would result in LOS C/D operations during both AM and PM peak hour conditions; and
    - It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a ***significant and unavoidable*** level.

The following intersection impacts would occur with the SSCC Project under Cumulative With Project AM and PM Peak Hour Conditions.

- Impact TR-7: Intersection 1, Airport Way at French Camp Road
    - The implementation of improvements would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.
- Impact TR-8: Intersection 3, Airport Way at Arch-Airport Road
    - The implementation of improvements would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.
- Impact TR-9: Intersections 11 and 12, Roth Road at I-5 Ramps
    - Implementation of additional identified improvements would result in LOS C/D operations during both AM and PM peak hour conditions; and
    - It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a ***significant and unavoidable*** level.
- Impact TR-10: Airport Way At-Grade Railroad Crossing
    - Contribute a fair share towards planned grade separated crossings in the area. With implementation of this measure, the impact would be reduced to a less-than-significant level. However, as these improvements are not fully funded, the impact would remain ***significant and unavoidable.***

Under Existing Conditions, all freeway segments evaluated operate at LOS D or better and would continue to do so with the addition of South Stockton Commerce Center project-generated traffic.

In the cumulative condition, several sections of Interstate 5 are projected to operate at level of Service E during either the AM or PM peak hour. The project would increase traffic on these freeway segments by less than 5 percent, resulting in less-than-significant project-specific freeway impacts in the cumulative condition. The addition of project traffic, in combination with traffic from other approved and pending projects, cumulatively contributes to the need to improve the freeway system within Stockton. Although no project specific freeway impacts were identified, the project would pay local and regional transportation impact fees to fund improvements to the regional roadway system.

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This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from Project implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. This section is based in part on the following documents, reports and studies:

- *California's Groundwater,* CalRecycle *Solid Waste Information System,* CalRecycle *Jurisdiction Diversion/Disposal Rate Summary*;
- *City of Stockton 2020 Sphere of Influence Plan/Municipal Service Review* (City of Stockton, April 2020);
- *2010 City of Stockton Urban Water Management Plan* (City of Stockton, 2011);
- *Water Master Plan* (Stockton, 2008), *City of Stockton Conceptual Storm Drain Master Plan* (City of Stockton, 2008);
- *City of Stockton NPDES Municipal Stormwater Program Stormwater Management Plan* (2009), *2035 Wastewater Master Plan* (City of Stockton, 2008);
- *Proposed Project Conditions Hydrologic and Hydraulic Assessment* (KSN, December 31, 2020);
- *Water Supply Assessment for the South Stockton Commerce Center Project* (Municipal Utilities Department, 2020).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: Central Valley Regional Water Quality Control Board (CVRWQCB) and the California Department of Justice (CAL DOJ). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.14.1 WASTEWATER SERVICES

ENVIRONMENTAL SETTING

Wastewater service is provided by the City of Stockton via their network of collection infrastructure and the Stockton Regional Wastewater Control Facility (RWCF), which is located on Navy Drive in southwest Stockton. The RWCF provides secondary and tertiary treatment of municipal wastewater from throughout the City. The remainder of the City is served by on-site septic systems, or lie outside the urban service area. As of 2015, RWCF processes an average of 33 million gallons per day (mgd). The treated wastewater is discharged into the San Joaquin River.

Wastewater Conveyance

Municipal wastewater treatment and collection services in the Stockton city limits are provided by the City of Stockton Municipal Utilities Department (COSMUD). The existing City of Stockton wastewater collection system is divided into 10 designated sub-areas or "systems." Systems 1 through 7 have been in existence for at least 15 years, and encompass the majority of the City. System 8 was intended to serve southern areas of the City, and has been partially developed; however, the majority of the area remains undeveloped. System 9 is intended to serve currently

undeveloped areas at the eastern edge of the City along Highway 99; the backbone trunk sewer and pump stations for System 9 were completed in 2007. System 10 is intended to serve northern areas of the City, and has been partially constructed; however, the majority of the area remains undeveloped. Available capacity is greatest in the northern and southern areas of the City, which largely correspond to System 10 and System 8, respectively.

The collection system in the city is comprised of gravity flow pipes sized between 6 and 36 inches. In places where topography is relatively flat or adverse for the use of gravity sewers, force mains ranging in size from 6 to 24 inches.

GRAVITY SEWERS

Current City standards call for all gravity sewers to be designed for full-pipe gravity flow. Surcharging results in sewers that do not meet this criterion under a given flow condition. For planning purposes, the available capacity is zero in gravity sewers with a predicted peak flow equal to or greater than the full-pipe gravity flow capacity. The following standards are used in the design of gravity sewers. Pipes must be sloped to produce a minimum of 2 feet per second at peak flow. Flatter slopes (as low as 0.0006 ft/ft) have been allowed for some designs in Stockton to accommodate project-specific constraints. It can be difficult to maintain the desired grade during construction of pipelines at slopes less than 0.001 ft/ft. Initial flows during the early years will be lower than the design flows, causing velocities to be lower. During design, steeper slopes should be considered where feasible. Additional maintenance or other measures may be required to control odors in sewers with initially low velocities.

FORCE MAINS

Force mains convey flow from pump stations to a downstream gravity sewer. There are approximately 158,000 lineal feet of force mains in the model, representing all city-owned force mains of significant length as well as some private pumping and force main systems. City design standards recommend that force main velocities should be limited to “around 7 feet per second (fps)” for lengths up to 300 ft, and “around 5 fps” for lengths in excess of 1,000 ft.

EXISTING PUMP STATIONS

Wastewater pumping stations are located throughout the City and are integral to the wastewater collection system. Most of the pump stations discharge to pressure sewers (force mains) that convey flow under pressure either directly to the RWCF or to a downstream gravity sewer. An existing sewer pump station is located to the west of the Project site along Airport Way.

Wastewater Treatment

Wastewater from the City is currently treated at the City of Stockton RWCF. The City owns and operates the RWCF. The City's *2035 Wastewater Master Plan* (Stockton, 2008), *City of Stockton 2008 Municipal Service Review* (Stockton, 2008), *City of Stockton Sewer System Management Plan (SSMP) (2011-2015)*, and *CRWQCB Central Valley Waste Discharge Requirements for the City of Stockton Regional Wastewater Control Facility* are the primary documents that outline the City’s long term

strategy for meeting future discharge and capacity requirements for a planning horizon that extends to build-out of the General Plan. The RWCF effluent is currently regulated by CVRWQCB Order No. R5-2020-007, NPDES CA0079138. Currently, the Facility is designed to provide a discharge of up to 55 million gallons per day of tertiary treated wastewater to the San Joaquin River, within the Sacramento-San Joaquin Delta[1]. The Facility consists of tertiary level wastewater treatment. After primary and secondly treatment, the wastewater undergoes tertiary treatment in facultative lagoons, constructed wetlands, two nitrifying biotowers, dissolved air floatation, mixed-media filters, and is disinfected using chlorination/dechlorination facilities. It should be noted that an amendment to the Facility's waste discharge requirements was provided in 2014, under Order R5-2020-007. Under this order, effluent limitations for electrical conductivity are removed.

WASTEWATER QUALITY

The RWCF provides primary treatment consisting of screening, grit removal, and primary sedimentation, and secondary treatment consisting of high rate trickling filters and secondary clarifiers. The secondary treated effluent is piped under the San Joaquin River to the tertiary level treatment facility, which consists of facultative ponds, engineered wetlands, two nitrifying biotowers, dissolved air flotation, mixed-media filters, and chlorination/dechlorination facilities. Several of the ponds are operated in a stand-by mode of operation as necessary, to achieve improved effluent quality by decreasing solids loading on the downstream treatment process, and by maintaining stable ammonia loading to the nitrifying biotowers.

Sludge is removed from the primary and secondary sedimentation processes to gravity thickeners for preliminary water removal, and then pumped to anaerobic digesters. After digestion, the treated sludge is pumped to a lagoon where anaerobic digestion continues. A dredge is used to pump the concentrated material from the bottom of the lagoon to a belt filter press and dewatered biosolids are removed by a private contractor for off-site agricultural reuse. Wastewater is discharged from Discharge Point No. 001 to the San Joaquin River, within the Sacramento-San Joaquin Delta.

The RWCF discharges directly into the southern portion and just upstream of the Stockton Deep Water Ship Channel (DWSC). There are two Water Quality Limited Segments (WQLSs) in this Channel, which are 303(d)-listed for: chloropyrifos, DDT, Diazinon, Dioxin, EC, exotic species, furan compounds, group A pesticides, mercury, pathogens, PCBs, and unknown toxicity. Effluent limitations for EC, mercury, pathogens, and toxicity are included in the CVRWQCB Order No. R5-2020-007, NPDES CA0079138.

The Waste Discharge Requirements, under Order No. R5-2020-007, NPDES CA0079138, specify that effluent from the RWCF shall not exceed the quantities presented in Table 3.14-1 (Effluent Limitations).

[1] See: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/san_joaquin/r5-2014-0054_res.pdf

TABLE 3.14-1: EFFLUENT LIMITATIONS

CONSTITUENT	*UNITS*	*30 DAY AVERAGE*
Aluminum, Total Recoverable	µg/L	311
Ammonia, Total (as N)	mg/L	2
Bis(2-ethylhexyl)phthalate	µg/L	1.8
Chlorodibromomethane	µg/L	5.0
Total Coliform Organisms	MPN/100ml	-
Cyanide, Total Recoverable	µg/L	4.1
Dichlorobromomethane	µg/L	6.8
Manganese, Total Recoverable	µg/L	-
Molybdenum, Total Recoverable	µg/L	-
Nitrate plus Nitrite (as N)	Mg/L	40
pH	s.u.	--
Total Suspended Solids (TSS)	mg/L	10
5-Day CBOD @ 20 degree C	mg/L	10

SOURCE: 2035 WASTEWATER MASTER PLAN, PG 7-2.

Future Demand

Projected wastewater flows and loads to the RWCF at build-out conditions are provided by the Wastewater Master Plan. Domestic/commercial flow projections for average day dry weather conditions based upon a projected buildout population of 580,717 persons and a per capita flow contribution of 112.0 gallons per capita per day. Domestic/commercial Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) contributions at average conditions were based upon per capita contributions of 0.31 and 0.30 pounds per capita per day, respectively. Average ammonia loads are based upon the current observed influent concentration of 25 mg/l. Peak flows and loads in Table 3.14-2 are based upon the use of existing observed peaking factors applied to the projected average daily loading conditions.

TABLE 3.14-2: PROJECTED WASTEWATER FLOWS AND LOADS GENERATED IN THE MASTER PLAN SERVICE AREA AT BUILDOUT CONDITIONS

PARAMETER	*UNITS*	*AVERAGE DRY WEATHER FLOW*	*AVERAGE DAY MAX PER MONTH*	*PEAK DAY MAX PER MONTH*	*PEAK HOUR WET WEATHER*
Flow	mgd				
Domestic/Commercial		6.5	78	126.8	164.1
Wet Industrial		5.0	7.2	11.5	12.6
Recycle		1	1.1	0.9	2.5
Totals		*71.0*	*86.3*	*139.2*	*179.2*
BOD	Lbs/day				
Domestic/Commercial		180,000	180,000	180,000	NA
Wet Industrial		24,000	62,000	24,000	NA
Recycle		-	12,000	16,000	NA
Totals		*204,000*	*254,000*	*220,000*	*NA*
TSS	Lbs/day				
Domestic/Commercial		174,000	174,000	183,000	NA
Wet Industrial		6,200	27,000	7,000	NA
Recycle		0	12,000	17,000	NA
Totals		*180,200*	*213,000*	*207,000*	*NA*
Ammonia-N	Lbs/day				
Domestic/Commercial		13,600	16,300	27,400	NA
Wet Industrial		1000	1200	2,000	NA
Recycle		200	200	300	NA

PARAMETER	*UNITS*	*AVERAGE DRY WEATHER FLOW*	*AVERAGE DAY MAX PER MONTH*	*PEAK DAY MAX PER MONTH*	*PEAK HOUR WET WEATHER*
Totals		*14,800*	*17,700*	*29,700*	*NA*

SOURCE: 2035 WASTEWATER MASTER PLAN, PG 7-2.

REGULATORY SETTING

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

The City's current NPDES Permit, which regulates the wastewater effluent quantity and quality upon discharge, was issued by the Central Valley Regional Water Quality Control Board, Central Valley Region, and is Order R5-2020-007 and Order CA0079138.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and

objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the policies related to wastewater that are applicable to the proposed Project.

POLICIES: PUBLIC FACILITIES & SERVICES ELEMENT

- PFS-2.3: Water Treatment Capacity. The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.
- PFS-3.1: Sanitary Sewer Service Area. The City shall require that all new urban development is served by an adequate collection system to avoid possible contamination of groundwater from onsite wastewater disposal (septic) systems.
- PFS-3.2: Wastewater Treatment Standards. The City shall continue to take actions necessary to meet water quality discharge standards in the operation of the regional wastewater treatment plant.
- PFS-3.3: Compliance with Federal Standards for Surface Water Protection. The City shall comply with the requirements of the Clean Water Act with the intent of minimizing the discharge of pollutants to surface waters.
- PFS-3.4: Wastewater Facility Sizing. The City shall ensure through the development review process that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs, pursuant to a master plan, to avoid the need for future replacement to achieve upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future.
- PFS-3.5: Wastewater Collection System Rehabilitation. The City shall ensure that when infrastructure rehabilitation projects are undertaken, upsizing of the facility and cost sharing are considered in order to accommodate upstream planned growth in accordance with an approved master plan.
- PFS-3.6: Wastewater Reuse. The City shall continue to discharge treated effluent to the Delta and reuse that water through the City's California Water Code Section 1485 water right.
- PFS-3.7: Security. City shall seek to minimize vulnerability of its wastewater collection and treatment systems to unauthorized tampering.

- PFS-3.8: Timing of Future Development. Prior to approval of any tentative subdivision map for a proposed residential project, the City shall formally consult with the wastewater system provider that would serve the proposed subdivision to make a factual showing or impose conditions in order to ensure an adequate wastewater removal system necessary for the proposed development. Prior to recordation of any final small lot subdivision map, or prior to City approval of any project-specific discretionary approval or entitlement required for nonresidential land uses, the City or the project applicant shall demonstrate, based on substantial evidence, the availability of a long-term, reliable wastewater collection system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary nonresidential approval or entitlement. Such a demonstration shall consist of a written verification that existing treatment capacity is or will be available and that needed physical improvements for treating wastewater from the Project site will be in place prior to occupancy.

City of Stockton Municipal Code

The City of Stockton Municipal Code, Title 13 (Public Services), Chapter 13.12 (Wastewater User Charges and Fees) contain regulations associated with sewer management. Title 13 (Public Services), Chapter 13.12 (Wastewater User Charges and Fees), Section 13.12.190 (Payment of Fees – Responsible Party – Responsibilities of Property Owner) requires developers of property to pay a sewer facility development fee.

Utility Master Plans

The City of Stockton maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2015 City of Stockton Urban Water Management Plan* (Stockton, 2011), *2035 Wastewater Master Plan* (Stockton, 2008), *Water Master Plan* (Stockton, 2021), *City of Stockton Conceptual Storm Drain Master Plan* (Stockton, 2008), and the *City of Stockton NPDES Municipal Stormwater Program Stormwater Management Plan* (2009).

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

2. Require or result in the construction of new wastewater treatment and/or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

3. Result in a determination by the wastewater treatment and/or collection provider which serves or may serve the Project that is does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The proposed Project has the potential to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (Less than Significant)

WASTE DISCHARGE REQUIREMENTS (WDRS) CVRWQCB ORDER NO. R5-2020-007, NPDES CA0079138.

The City of Stockton owns and operates a wastewater collection, treatment, and disposal system, and provides sanitary sewerage service to the City of Stockton. On April 1, 2020, the RWQCB adopted Waste Discharge Requirements (WDRs) Board Order Number R5-2020-0007, NPDES CA0079138, prescribing waste discharge requirements for the City of Stockton RWCF.

The RWCF provides secondary and tertiary treatment of municipal wastewater from throughout the City. The remainder of the City is served by on-site septic systems, or lie outside the urban service area. As of 2015, RWCF processes an average of 33 mgd. The treated wastewater is discharged into the San Joaquin River.

As described previously, the RWCF provides primary treatment consisting of screening, grit removal, and primary sedimentation, and secondary treatment consisting of high rate trickling filters and secondary clarifiers. The secondary treated effluent is piped under the San Joaquin River to the tertiary level treatment facility, which consists of facultative ponds, engineered wetlands, two nitrifying biotowers, dissolved air flotation, mixed-media filters, and chlorination/dechlorination facilities. Several of the ponds are operated in a stand-by mode of operation as necessary, to achieve improved effluent quality by decreasing solids loading on the downstream treatment process, and by maintaining stable ammonia loading to the nitrifying biotowers.

Sludge is removed from the primary and secondary sedimentation processes to gravity thickeners for preliminary water removal, and then pumped to anaerobic digesters. After digestion, the treated sludge is pumped to a lagoon where anaerobic digestion continues. A dredge is used to pump the concentrated material from the bottom of the lagoon to a belt filter press and dewatered biosolids are removed by a private contractor for off-site agricultural reuse. Wastewater is discharged from Discharge Point No. 001 to the San Joaquin River, within the Sacramento-San Joaquin Delta.

To account for the additional wastewater flows in the Project area after the construction of the proposed Project, additions to the existing wastewater infrastructure will be needed. The sanitary sewer collection will be by an underground collection system installed as per the City of Stockton standards and specifications. Sanitary sewer disposal will flow to the City's RWCF for treatment. Improvements include connection to existing sanitary sewer lines.

The City of Stockton's wastewater treatment system is currently in compliance with the waste discharge requirements of Order Number R5-2020-0007, NPDES CA0079138. The wastewater treatment system options covered under this Order include: City of Stockton RWCF, including discharge to the San Joaquin River. The development of the proposed Project under this permitted

option would not exceed the wastewater discharge requirements in this Order. The proposed Project is anticipated to have a ***less than significant*** impact relative to this topic. The allocation of wastewater service capacity is discussed in the following impact topic.

Impact 3.14-2: The proposed Project has the potential to result in a determination by the wastewater treatment and/or collection provider which serves or may serve the Project that is does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments (Less than Significant)

The City's *2035 Wastewater Master Plan* includes projected wastewater generation factors for commercial and industrial land uses. The *Water Master Plan Update* also provides overall projected water demand for the City of Stockton Municipal Utilities District (COSMUD) service area. Current dry weather flows at the facility are estimated to be on the order of 35 mgd. Recent improvements to the RWCF increased the average the dry weather flow capacity of the RWCF to 48 mgd. As noted previously, the Stockton RWCF uses approximately 80% of its existing permitted capacity. Future capacity improvements are planned as part of the City's ongoing commitment to provide adequate wastewater capacity for all users within its service area. Based on the generation factors for commercial and industrial lands uses in the City of Stockton, the proposed Project is estimated to generate approximately 199,240 gpd of wastewater or approximately 0.5% of the City's current 35 MGD current dry weather flow.

Municipal wastewater collection and treatment will be provided by the City of Stockton. The site is within the City Urban Service Area and has been included in the City's Wastewater Collection System Master Plan. The proposed Project would be located within System 8 sub-area of the City of Stockton wastewater collection system. This plan has anticipated the extension of municipal wastewater collection and treatment service for the Project site. Certain unit processes within the City's wastewater treatment facility are approaching their functional capacity, and expansion of the treatment facility to meet anticipated demands resulting from growth in Stockton is the subject of an ongoing planning and engineering effort. The treatment plant has adequate capacity to serve anticipated short-term development within the City, and expansion plans provide for creation of additional capacity over time to meet anticipated demands generated from the annexation area and other growth areas of the City.

Occupancy of the proposed Project would be prohibited without sewer allocation, as required by section 13.12.100, Mandatory Sanitary Service Required, of the City's Municipal Code. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the RWCF with a subsequent allocation of capacity to the proposed Project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Mitigation Measure 3.14-1 requires the Project proponent to secure adequate wastewater treatment

capacity/allocation prior to occupancy of any building which would require wastewater treatment services. Implementation of Mitigation Measure 3.14-1 would reduce this potential impact to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.14-1: *Prior to occupancy of any building that would require wastewater treatment services, the Project proponent shall secure adequate wastewater treatment capacity/allocation.*

Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. A sewer pump station is proposed to be located at the northeast corner of Airport Way and the future Commerce Drive. A sewer line (ranging from 8 to 24 inches) will be located within the proposed Commerce Drive right-of-way. Within the western portion of Parcel 2, the sewer line within the Commerce Drive right-of-way will shift north outside of the Commerce Drive right-of-way into Parcel 2 and extend west along the southern edge of Parcel 1, continuing under the UPRR right-of-way. West of the UPRR right-of-way, the sewer line will extend into the proposed Commerce Drive right-of-way. The 24-inch sewer line within Commerce Drive will connect to a proposed 36-inch sewer line within Airport Way whereupon it will flow to a proposed regional sewer pump station located at the intersection of Airport Way and Commerce Drive. The off-site sewer improvements (including upsized gravity sewer pipeline and sanitary sewer force mains) would be located along the western site frontage on Airport Way, head north along Airport Way, and terminate in Airport Way and Industrial Drive to the north. Specifically, an 18-inch force main within Airport Way will extend from the regional sewer pump station to the intersection of Arch Airport Road and Airport Way where it will connect to a gravity pipeline. This gravity pipeline will be upsized from an existing 33-inch gravity sewer pipeline to a 48-inch gravity sewer pipeline. The 48-inch gravity pipeline will extend to the intersection of Industrial Drive. The existing facilities, including the Stockton RWCF, have undergone environmental review and have waste discharge permits from the State.

New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvements plans which undergo a review by the Public Works Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system

installed as per the City of Stockton standards and specifications. Sanitary sewer disposal and treatment will be to the RWCF.

Wastewater from the Project site will be collected and conveyed via a network of gravity flow sewer main lines serving the development. An internal pipe collection system having various diameters will be installed within the Project site and associated off-site improvement areas. These future on-site effluent collection facilities will discharge into the City system.

The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed Project. While the Project would require construction of new wastewater collection and distribution facilities, the construction of these facilities would not result in significant environmental effects. The location of the facilities is contained within the boundary of the Project site and associated off-site improvement areas, and the environmental impacts of the new facilities are analyzed throughout this EIR. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

3.14.2 WATER SUPPLIES

ENVIRONMENTAL SETTING

The Project site is located within the Stockton city limits. The City of Stockton will be the water purveyor for the proposed Project. The City's water system service area includes all areas within the city limits.

The following information is contained in the Urban Water Management Plan (City of Stockton Municipal Utilities Department, 2017). The City's most recently adopted *Urban Water Management Plan* (UWMP) (the City's 2015 UWMP) was adopted by the City Council on July 12, 2016. The City's 2015 UWMP included existing and projected water demands for existing and projected future land uses to be developed within the City's Sphere of Influence through 2040. The water demand projections in the City's 2015 UWMP included existing City water demands and future water demands within the service area.

City of Stockton Water Service

This section presents the City's water service area including history and growth information for the City.

CITY OF STOCKTON WATER SERVICE AREA

As described in the City's 2015 UWMP, the City is located in the heart of the fertile central valley of California. The climate ranges from summer temperatures routinely exceeding 100°F with low humidity, and winter temperatures dipping into the 30s. Average annual rainfall is approximately 14 inches.

Dense fog is common in the area during the winter. Occasional dust storms, triggered by barren agricultural land coupled with Delta winds gusting to 30 mph, occur primarily from about March through September. Average temperature and precipitation data for Stockton is obtained from the Western Regional Climate Center (WRCC) website (www.wrcc.dri.edu). The WRCC has maintained historical climate records for from 10/1/1948 to 9/30/2010 for the Stockton area.

The City of Stockton Metropolitan Area (COSMA) is comprised of the three City of Stockton water retailers (COSMUD, California Water Service Company [Cal-Water], and San Joaquin County) and their respective service areas. The term COSMA is used only for convenience when grouping the water retailers and should not be construed as a legal entity.

The City has provided water service to North Stockton since 1954 and South Stockton since 1984. The City created COSMUD in the late 1970's for purposes of constructing, operating, and maintaining water, wastewater, and drainage facilities within the City service areas. The central Stockton water service area is owned and operated by Cal Water, which is an investor-owned public utility company regulated by the California Public Utilities Commission (CPUC). In addition, there are smaller developed areas served by San Joaquin County as two small maintenance districts within the City boundaries. Over the past 20 years, the City's responsibilities have been focused on providing

adequate wastewater and drainage service within City limits, and water service to growing areas of Stockton outside the franchise boundaries of Cal Water and the County maintenance districts.

The COSMUD currently serves 170,417 residents through approximately 49,387-metered services. Based on the total number of accounts, residential users make up about 95 percent of the total customer base, commercial, industrial and institutional users account for approximately three percent, and the remaining two percent of connections is for landscape irrigation.

CITY OF STOCKTON WATER SUPPLIES

EXISTING POTABLE WATER SUPPLIES

The City's 2015 UWMP describes the City's available water supplies. The City's water supplies include purchased water, surface water, and groundwater. The City currently receives treated water from Stockton East Water District (SEWD). In addition, a purchase agreement with the Woodbridge Irrigation District (WID) for water supply from the Mokelumne River was executed in 2008. A summary of the actual supply sources and quantities in 2015 is provided in Table 3.14-6.

TABLE 3.14-6: ACTUAL 2015 WATER SUPPLY FOR THE CITY OF STOCKTON (AFY)

WATER SUPPLY	*ACTUAL VOLUME*	*WATER QUALITY*	*TOTAL RIGHT OR SAFE YIELD*
Purchased water (SEWD)	4,159[1]	Drinking water	6,380
Purchased water (WID)	4,628	Raw rater	6,500
Supply from storage	--	--	--
Groundwater	6,628	Raw water	50,000
Surface water	9,428	--	33,600
Recycled water	0	--	0
Desalinated water	0	--	0
Stormwater use	0	--	0
Transfers	0	--	0
Exchanges	0	--	0
Total	24,843	--	96,480

NOTE: [1] THE 1,486 AFY WATER WHEELED FROM SEWD TO SAN JOAQUIN COUNTY WATER SYSTEMS IS NOT INCLUDED.
SOURCE: STOCKTON 2015 UWMP (2016), TABLE 5-6.

PURCHASED WATER

The City purchases water from SEWD and WID as described in the following section.

Stockton East Water District

The City currently receives treated water from SEWD. As described in detail in SEWD's 2015 UWMP, this supply is made up of surface water from New Melones Reservoir and New Hogan Reservoir as well as groundwater. Per the terms of the Second Amended Contract with SEWD, the City's supply allocation from SEWD is based on the amount of water delivered in the previous year. Approximately three months prior to the beginning of the water year, the City reviews their current year SEWD treated water deliveries and determines whether they desire to change the agreement for the upcoming year, compared to what they received in the current water year.

With the commencement of the operation of the Delta Water Supply Project (DWSP) in 2012, the City's planned delivery and allocation of SEWD treated water was 17,500 AFY, which was 37.6

percent of SEWD's total supplies. For 2015, due to the drought and a reduction in the SEWD's supplies, the City's planned SEWD delivery and allocation was amended to 6,380 AFY, which was 31.9 percent of total SEWD supplies. The City used 5,634 AF of the SEWD supply in 2015. The City has entered into another allocation agreement with all of the parties resulting in 6,000 AF for 2016 for the City, or 30 percent of SEWD supplies during 2016. Moving forward the City will use approximately 6,000 AFY from SEWD.

If SEWD is not able to supply the City the total amount requested, the City will be allocated a proportional reduction in the amount of SEWD treated water requested for the subsequent water year.

Woodbridge ID

In 2008, the COSMUD executed a 40 year purchase agreement with WID for 6,500 AFY of water from the Mokelumne River for municipal and industrial water use within the City. This supply will augment the DWSP supply if the San Joaquin River water is not available due to environmental issues. The water is conveyed to the DWSP water treatment plant (WTP) for treatment and pumping to the water distribution system. Under this contract an additional 6,500 AFY of WID supply will become available to the City as WID-served agricultural lands in the northern part of the City are annexed to the City for municipal and industrial use at a rate of 3.0 AFY. For the analysis within the UWMP, it is assumed the WID supply will increase from 6,500 AFY to 13,000 AFY by 2025. It is assumed that the WID supply is cut back by approximately 30 percent in single dry years and the third year of a dry year period, similar to what occurred in 2015.

GROUNDWATER

The City currently has groundwater wells located in the City's North and South systems. Groundwater is used conjunctively with the City's other supply sources. With the DWSP WTP now online, the City uses less groundwater in wet and average years and increases groundwater use in dry years to make up for reductions in surface water deliveries. Groundwater is managed for long-term sustainability and supply through conjunctive use with surface water supplies. The City has determined that the sustainable groundwater yield is 0.75 AF/acre/yr, equivalent to a groundwater yield of approximately 50,000 AFY. To establish the projected groundwater supply that is reasonably available, COSMUD assumes that the reasonably available groundwater for the current water service area (38,524 acres) is pumped at 0.6 AF/acre/yr, equivalent to an annual groundwater supply of 23,100 AFY.

SURFACE WATER

The City has developed a new surface water supply, Delta water at the DWSP intake facility, from the San Joaquin River. The objective of this supply is to achieve a long-term reliable water supply from the Delta for existing and future customers. The City has rights to Delta water because portions of the COSMA fall within the legally defined Delta and the area of origin. The City's water rights application addressed a long-term planning horizon through the year 2050, requesting an ultimate diversion of 160 million gallons per day (mgd) (125,900 AFY). The State Water Resources Control Board (SWRCB) divided the water rights application into two separate applications, Application

30531A and 30531B. Application 30531A covers the initial phase of the DWSP up to 30 mgd (33,600 AFY) and the place of use is confined to the current 1990 General Plan boundary. The initial phase was granted a water right under California Water Code Section 1485. The City has a permit from the SWRCB issued on March 8, 2006 for a 33,600 AFY supply from the Sacramento/San Joaquin Delta.

The DWSP intake and water treatment plant was operational in 2012 with an initial capacity of 30 mgd (33,600 AFY). The projected capacity of the DWSP by 2035 is 90 mgd with an annual production of approximately 50,000 AFY. The DWSP will expand as needed up to 120 mgd provided water rights are granted.

The City's supply from the San Joaquin River is curtailed annually from February through June of each year due to U.S. Department of Fish and Wildlife Service and Department of Fish and Game restrictions.

California Water Code (CWC) Section 1485 Water Rights allows the City to take out of the Delta as much water as the City's wastewater treatment plant discharges into the Delta. This quantity, which fully covers the 33,600 AFY, is not restricted as long as the same amount of wastewater is discharged into the Delta. Section 1485 water may be subject to pumping restriction in some months due to fish protection.

City of Stockton Water Demand

CITY PROJECTED WATER DEMAND

The City's 2015 UWMP describes the projected City water demand through 2040. The City has developed potable water demand projections, shown in Table 3.14-5.

TABLE 3.14-5: CITY OF STOCKTON TOTAL WATER DEMAND PROJECTION

YEAR	*HISTORICAL DEMAND*	*PROJECTED DEMAND[1]*	*PROJECTED DEMAND[2]*	*PROJECTED DEMAND[3]*
2005	34,149	34,149	--	--
2006	34,806	--	--	--
2007	40,076	--	--	--
2008	38,143	--	--	--
2009	36,646	--	--	
2010	33,333	--	--	--
2011	N/A	--	--	--
2012	N/A	34,961	34,961	34,961
2013	N/A	34,394	34,394	34,394
2014	N/A	29,627	29,627	29,627
2015	24,843	24,843	24,843	24,843
2016	--	26,510	--	--
2017	--	28,177	--	--
2018	--	29,844	--	--
2019	--	31,511	--	--
2020	--	33,178	34,948	33,178
2021	--	33,618	--	--
2022	--	34,059	--	--
2023	--	34,499	--	--
2024	--	34,940	--	--
2025	--	35,380	37,925	35,380

TABLE 3.14-5: CITY OF STOCKTON TOTAL WATER DEMAND PROJECTION

YEAR	HISTORICAL DEMAND	PROJECTED DEMAND[1]	PROJECTED DEMAND[2]	PROJECTED DEMAND[3]
2026	--	36,147	--	--
2027	--	36,915	--	--
2028	--	37,682	--	--
2029	--	38,450	--	--
2030	--	39,217	39,800	37,743
2031	--	39,723	--	--
2032	--	40,230	--	--
2033	--	40,736	--	--
2034	--	41,243	--	--
2035	--	41,749	42,473	40,274
2036	--	42,292	--	--
2037	--	42,835	--	--
2038	--	43,379	--	--
2039	--	43,922	--	--
2040	--	44,465	45,325	42,989

NOTES:
(1) DEMANDS BASED ON UNIT WATER DEMANDS AND PROJECTED NUMBER OF CONNECTIONS (AFY), AS PROVIDED BY THE 2015 UWMP.
(2) 2015 UWMP VALUES BEFORE SBX7-7 (AFY) (3) 2015 UWMP VALUES AFTER SBX7-7 (AFY).
SOURCE: WATER SUPPLY ASSESSMENT FOR THE SOUTH STOCKTON COMMERCE CENTER DEVELOPMENT PROJECT (CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT, 2020)

Several steps, including demand reduction, are being taken to help ensure an adequate water supply for the City. The City's 2015 UWMP provides a discussion of how the City is evaluating and implementing the eight Demand Management Measures (DMM) required by the Urban Water Management Planning Act. These DMMs include water waste prohibition, metering, conservation pricing, public education and outreach, programs to assess and manage COSMUD distribution system real loss, water conservation program coordination and staff support, other demand management measures, and planned implementation to achieve water use targets.

Summary

The COSMA has and will continue to meet annual demands during differing hydrologic periods with surface water, groundwater, water conservation, and/or other potential water supplies such as non-potable supplies from local communities, raw surface water from local irrigation districts, and/or water from future groundwater storage projects. Currently, the COSMUD, along with the other COSMA retailers, are pursuing an extension of a raw surface water transfer agreement with local irrigation districts and municipalities. The City recently completed a feasibility study and is currently investigating the possible use of tertiary treated recycled water from the City of Lodi for use as a non-potable source for irrigation of public landscape areas. Any future surface water transfer supplies would be diverted for treatment at the SEWD WTP or the DWSP WTP.

GROUNDWATER BASIN

The groundwater basin underlying San Joaquin County is part of the contiguous Central Valley aquifer system, which supplies groundwater to agricultural, domestic, and industrial water users extending from about Redding to Bakersfield. The basin consists of Pre-Tertiary igneous and metamorphic rocks of the Sierra Nevada that continue west beneath the valley floor. Marine sediments, thousands of feet thick, overlie the basement rocks. Continental deposits overlie the

marine rocks and act as the primary freshwater aquifer in the study area. In local areas, fresh water may be present in both marine and continental deposits, and saline water may be found in continental deposits.

DWR Bulletin 146 identifies the usable aquifer in the eastern portion of San Joaquin County as the continental deposits of Miocene and younger age. The usable aquifer is present within the boundaries of the county in distinct geologic formations that include the Mehrten Formation, the Laguna Formation, the Victor Formation, flood basin deposits, and alluvial fan and stream channel deposits. The thickness of the usable aquifer ranges from less than 100 feet in the eastern edge of the county to over 3,000 feet in the southwestern edge, and is approximately 1000 feet beneath Stockton.

Groundwater in the County area moves from sources of recharge to areas of discharge. Most recharge to the aquifer system occurs from the Delta and along active stream channels where extensive sand and gravel deposits exist. Consequently, the highest groundwater elevations typically occur near the Delta, the Stanislaus River, and the Mokelumne River. Other sources of recharge within the Project area include subsurface recharge from fractured geologic formations to the east, as well as deep percolation from applied surface water and precipitation.

Municipal and agricultural uses of groundwater within the County contribute to an overall average yield of groundwater estimated to be 761,828 AFY for agricultural uses and 47,493 AFY for municipal and industrial uses (DWR Bulletin 118, 2006). Historically, groundwater elevations have declined from about 40 to 60 feet averaging approximately 1.7 feet per year. As a result, a regional cone of depression has formed in Eastern San Joaquin County creating a gradient that allows saline water underlying the Delta region to migrate northeast within the southern portions of the City. Groundwater underlying the City generally flows to the east due to the regional cone of depression.

COSMUD Groundwater

The COSMUD currently exercises (and will continue to exercise) its rights as an overlying groundwater appropriator to extract groundwater from the groundwater basin underlying the COSMA for delivery to its customers.

Water Reliability

This section provides a comparison of normal, single dry, and multiple dry water year supplies and demands for the City. Water supply reliability is an important component of the water management planning process. Factors contributing to inconsistency in the City's water supplies include legal limitations due to water rights and contracts limiting the quality of water available to the City, environmental constraints, and reductions in availability due to climatic factors.

It is assumed that the City's groundwater supply will be used conjunctively with the surface water and purchased water supplies. In years when surface water and purchased water is available, they will be used to the fullest extent. This will allow the City to minimize the use of groundwater.

DRY YEAR WATER SUPPLY AVAILABILITY AND RELIABILITY

The Stockton area has experienced drought conditions twice in the past 30 years. The first drought was in 1977, the first year the SEWD Water Treatment Plant (WTP) went on-line. Groundwater supplies were critically overdrafted during this time, raising higher concerns of saline intrusion and pesticide migration. The second was a prolonged drought from 1987 to 1994. During this period, a reduced amount of surface water was available for the City. As a result of the reduced surface water through SEWD, the City's urban water retailers relied heavily on groundwater to meet customer water demands. The groundwater level during this time dropped approximately 10 to 30 feet at various well sites.

The City Council adopted a Water Conservation Ordinance in 1988. Stockton Municipal Code, Sections 13.28 and 13.32 include both voluntary and mandatory conservation stages. From 1990 to 1992, mandatory water reduction stages were in force due to the prolonged years of drought. The City initiated a voluntary reduction stage in 1993 and has maintained a voluntary reduction stage since that time.

TABLE 3.14-7: SUMMARY OF PROJECTED WATER SUPPLY DURING HYDROLOGIC NORMAL, SINGLE-DRY, AND MULTI-DRY YEARS FOR CITY OF STOCKTON AT 2040 (AFY)

	NORMAL YEAR	*SINGLE DRY YEAR*	*MULTIPLE DRY YEARS – YEAR 1*	*MULTIPLE DRY YEARS – YEAR 2*	*MULTIPLE DRY YEARS – YEAR 3*
SEWD	6,000	4,000	6,000	6,000	4,000
DWSP	13,000	9,000	13,000	13,000	9,000
DELTA	50,000	50,000	50,000	50,000	50,000
GROUNDWATER	23,100	23,100	23,100	23,100	23,100
RECYCLED WATER	0	0	0	0	0
TOTAL SUPPLY	92,100	86,100	92,100	92,100	86,100
DEMAND TOTAL	*44,465*	*44,465*	*44,465*	*44,465*	*44,465*
DIFFERENCE	*47,635*	*41,635*	*47,635*	*47,635*	*41,635*

SOURCE: STOCKTON 2015 UWMP (2016), TABLES 6-4, 6-5, AND 6-6.

WATER SUPPLY AND DEMAND COMPARISON

Based on the analysis described above, the City's existing and projected potable water supplies are sufficient to meet the City's existing and projected future potable water demands, including those future water demands associated with the Project, to the year 2040 under all hydrologic conditions.

A comparison of the City's projected water supplies and demands is shown in Table 3.14-8 for Normal, Single Dry, and Multiple Dry Years. As can be seen on Table 3.14-8, there is no projected supply deficit under the projected hydrologic conditions through 2040.

TABLE 3.14-8: CITY OF STOCKTON - NORMAL YEAR PROJECTED WATER SUPPLY AND DEMAND COMPARISON (AFY)

YEAR	*2020*	*2025*	*2030*	*2035*	*2040*
WATER DEMAND VERSUS SUPPLY FOR NORMAL HYDROLOGIC YEARS					
Supply Totals	69,200	75,700	75,700	92,100	92,100
Demand Totals	34,564	36,856	39,217	41,749	44,465
Difference	34,546	38,844	36,483	50,351	47,635
WATER DEMAND VERSUS SUPPLY FOR SINGLE-DRY HYDROLOGIC YEARS					
Supply Totals	65,200	69,700	69,700	86,100	86,100
Demand Totals	34,654	36,856	39,217	41,749	44,465
Difference	30,546	32,844	30,483	44,351	41,635
WATER DEMAND VERSUS SUPPLY FOR MULTIPLE-DRY HYDROLOGIC YEARS (YEAR 3)					
Supply Totals	65,200	69,700	69,700	86,100	86,100
Demand Totals	34,654	36,856	39,217	41,749	44,465
Difference	30,546	32,844	30,483	44,351	41,635

SOURCE: STOCKTON 2015 UWMP (2016), TABLES 6-4, 6-5, AND 6-6.

REGULATORY SETTING

Safe Drinking Water Act

The federal Safe Drinking Water Act, as passed in 1947 and amended in 1986 and 1996, is the Country's primary law regulating drinking water quality and is implemented by the United States Environmental Protection Agency (US EPA). The Safe Drinking Water Act authorizes the US EPA to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the California Department of Public Health (CDPH), Division of Drinking Water and Environmental Management. Drinking Water regulations are set forth in the California Code of Regulations (CCR), Titles 7 and 22.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954).

Consistent with California Water Code Sections 11950 – 11954, the City has implemented various water conservation efforts, as well as Water Shortage Contingency Plan that identifies actions that can be taken to respond to catastrophic interruption of water supply.

California Water Code

Water Code section 10910 states:

> *10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).*

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

Additionally, Water Code section 10910 states:

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long term overdraft condition.

10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

Senate Bill (SB) 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the

California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the Urban Water Management Plan (UWMP), which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a Water Supply Assessment required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a Water Supply Assessment if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system.

Based on the following assumptions, SB 610 does apply to the proposed Project:

1. The proposed Project is subject to CEQA and an EIR is required.
2. The proposed Project, having more than 650,000 square feet of floor area, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (5) as defined for industrial development.

The proposed Project has not been the subject of a previously adopted Water Supply Assessment (WSA) and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Project. The Water Supply Assessment is included in Appendix F of this EIR.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the policies related to water supply that are applicable to the proposed Project.

POLICY: LAND USE ELEMENT

- LU-1.13. Growth Phasing. The City shall phase growth based on the availability of adequate water supplies, market forces, infrastructure financing capacity, and the timing of the design, approval, and construction of water supply and transportation facilities and other infrastructure.

POLICIES: PUBLIC FACILITIES AND SERVICES ELEMENT

- PFS-2.1. Water Conservation. The City shall continue to implement water conservation programs that save significant amounts of water at a reasonable cost.
- PFS-2.2. Water Supply. The City shall evaluate long-term water supply strategies, including acquiring or developing additional water supplies that would be available during drought periods, to offset the shortages anticipated from existing supplies, and improved water conservation and re-use. For new development, the City will require the installation of non-potable water infrastructure for irrigation of large landscaped areas where feasible and cost effective. Conditions of approval will require connection and use of non-potable water supplies when available at the site.
- PFS-2.5. Water Quality. The City shall monitor water quality regularly to ensure that safe drinking water standards are met and maintained in accordance with State and EPA regulations and take necessary measures to prevent contamination.
- PFS-2.6. Level of Service. The City shall maintain adequate levels of water service by preserving, improving, and replacing infrastructure as necessary.
- PFS-2.7. Water Supply for New Development. The City shall ensure that water supply capacity and infrastructure are in place prior to granting building permits for new development.
- PFS-2.8. Delta Water Supply. The City shall not approve new development that relies on water from the Delta Water Supply Project until this Delta water is allocated through a water right to the City by the State of Water Resources Control Board or a replacement water supply is secured.
- PFS-2.10. Sustainability of Surface Water Supplies. The City shall work in concert with other water purveyors in the region to seek long-term renewable surface water contracts, and shall take actions to acquire, protect, and expand surface water rights to serve growing water demands.

- PFS-2.11. Sustainability of Groundwater Supplies. The City shall work in concert with other water purveyors in the region to achieve the target yield (0.6 AF/year) of the drinking water aquifer, and shall limit its long-term average groundwater withdrawals to this target yield.
- PFS-2.12. Water for Irrigation. The City shall encourage the use of non-potable water supplies for irrigation of landscape.
- PFS-2.13. Timing of Future Development. Prior to approval of any tentative small lot subdivision map for a proposed residential project of more than 500 dwelling units, the City shall comply with Government Code Section 66473.7. Prior to approval of any tentative small lot subdivision map for a proposed residential project of 500 or fewer units, the City need not comply with Section 66473.7 or formally consult with the public water system that would provide water to a proposed subdivision, but shall nevertheless make a factual showing or impose conditions similar to those required by Section 66473.7 in order to ensure an adequate water supply for development authorized by the map. Prior to recordation of any final small lot subdivision map, or prior to City approval of any project-specific discretionary approval or entitlement required for nonresidential land uses, the City or the project applicant shall demonstrate, based on substantial evidence, the availability of a long-term, reliable water supply from a public water system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary nonresidential approval or entitlement. Such a demonstration shall consist of a written verification that existing sources are or will be available and that needed physical improvements for treating and delivering water to the Project site will be in place prior to occupancy.

Utility Master Plans

The City of Stockton maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2010 City of Stockton Urban Water Management Plan* (Stockton, 2011), *2035 Wastewater Master Plan* (Stockton, 2008), *Water Master Plan* (Stockton, 2021), *City of Stockton Conceptual Storm Drain Master Plan* (Stockton, 2008), and the City of Stockton NPDES Municipal Stormwater Program Stormwater Management Plan (2009).

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
2. Have insufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements are needed.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-4: The proposed Project has the potential to require construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

The provision of public services and the construction of onsite infrastructure improvements will be required to accommodate the development of the proposed Project. Water distribution will be by an underground distribution system to be installed as per the City of Stockton standards and specifications.

The Project proposes a 24-inch water line to be located within the proposed Commerce Drive right-of-way. The proposed water line will connect to the existing City of Stockton water main in Airport Way and travel east along the proposed Commerce Drive right of way to the 99 Frontage Road. At this point, as part of the Newcastle Road and South Airport Way Water Transmission Main Project, the 24-inch water line will travel east to Newcastle Road and tie into the City's existing water line. Environmental impacts associated with the Newcastle Road and South Airport Way Water Transmission Project installation and operation were analyzed as part of a Mitigated Negative Declaration (SCH No. 2009042082), dated April 2010. It is noted that the alignment for this water transmission line is being realigned from what was originally anticipated. A portion of the realignment is within the Project site and analyzed as part of the overall infrastructure for the proposed Project. The balance of the water transmission line realignment that is outside of the Project site is being analyzed under a separate CEQA document that is currently being prepared.

The Project also proposes a 12-inch water service line to be located with the Commerce Drive right of way, parallel to the 24-inch water transmission main. The proposed 12-inch water line will connect to the proposed 24-inch water line just west of the 99 Frontage Road and will travel west along the proposed Commerce Drive right of way. The 12-inch line will connect back into the 24-inch transmission line on the east of the existing railroad tracks before the start of the grade separated structure. Water services for the proposed project will tie directly into the proposed 12-inch main, unless an alternative method is approved by the City of Stockton through a Water Master Plan. An example of a possible alternative method would be to provide services to the Project through 12-inch minimum diameter service stubs connected directly to the 24-inch transmission main. This would eliminate the need for a separate, parallel water main within Commerce Drive.

The proposed Project would require extension of offsite water conveyance infrastructure to the Project site for potable water and irrigation water. All offsite water utility improvements will be in or adjacent to existing roadways along the perimeter of the Project site, thereby limiting any potential impact to areas that were not already disturbed. Water supply will be provided by the City of Stockton, which includes surface and ground water supplies. Water distribution will be by an underground distribution system installed as per the City of Stockton standards and specifications. Underground potable water pipelines (24 inch) would be extended to the Project site as part of the Newcastle Water Main Extension Project.

The proposed Project would also require the construction of new onsite water conveyance infrastructure for potable water and irrigation water. The Newcastle Water Line Project, an approved Capital Improvement Project within the City of Stockton, will run through the Project site within the future right-of-way of Commerce Drive to serve existing and future development in the area. This Capital Improvement Project is intended to accommodate additional projects and induce growth outside of the proposed Project area. However, this Capital Improvement Project was previously analyzed and contemplated for growth and service capacity within the City's Water Master Plan and therefore, construction of the onsite potable water infrastructure would not have the potential to induce growth beyond what was already analyzed within the City's Master Plans. It should be noted that the potential environmental impacts associated with off-site infrastructure improvements associated with the larger Tidewater Crossing Project, which included the SSCC Project site, were analyzed as part of the Tidewater Crossing Project Environmental Impact Report (SCH No. 2005122101) certified on October 28, 2008. The Tidewater Crossing Project and the associated infrastructure improvements are considered baseline conditions.

The proposed Project would not require the construction of new water treatment facilities or expansion of existing water treatment facilities for water service. While the Project would require construction of new water collection and distribution facilities, the construction of these facilities would not result in significant environmental effects. The environmental impacts of the new facilities are analyzed throughout this EIR. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.14-5: The proposed Project has the potential to have insufficient water supplies available to serve the Project from existing entitlements and resources (Less than Significant)

PROJECT WATER DEMAND

Based on the analysis described in table 3.13-7, the WSA conducted as part of the EIR analysis demonstrates that the City's existing and projected potable water supplies are sufficient to meet the City's existing and projected future potable water demands, including those future water demands associated with the Project, to the year 2040 under all hydrologic conditions.

A comparison of the City's projected water supplies and demands is shown in Table 3.14-8 for Normal, Single Dry, and Multiple Dry Years. As can be seen on Table 3.14-8, there is no projected supply deficit under the projected hydrologic conditions through 2040.

The proposed Project, if approved by the City, is capable of being served by the City from the City's existing and future portfolio of water supplies. The water supply for the proposed Project will have the same water supply reliability and water quality as the water supply available to each of the City's other existing and future water customers.

The City has adequate water supplies to support existing demand in the City in addition to the proposed Project under average daily and maximum daily demand conditions. Water demand for current and proposed uses in the City of Stockton is approximately 26,319 AFY (in Year 2015). The City has a total supply of 96,480 AFY (Year 2015), leaving 70,161 AFY available.

According to the WSA prepared for the project, the proposed Project's water demand would be approximately 626 AFY.

A comparison of the City's projected water supplies and demands is shown in Table 3.14-8 for Normal, Single Dry, and Multiple Dry Years. The supply-demand difference in Table 3.14-8 indicates that the City will have sufficient water to meet its customers' needs through 2040.

CONCLUSION

The Water Supply Assessment completed for the proposed Project demonstrates that the City's existing and additional potable water supplies are sufficient to meet the City's existing and projected future potable water demands to the year 2040 under all hydrologic conditions.

As identified above, the proposed Project would not result in insufficient water supplies available to serve the project from existing entitlements and resources. Therefore, the proposed Project would result in a ***less than significant*** impact to water supplies.

3.14.3 STORM WATER

ENVIRONMENTAL SETTING

The following information was provided in the *City of Stockton Conceptual Storm Drain Master Plan* (2008), the *City of Stockton NPDES Stormwater Management Plan* (2009), the *City of Stockton National Pollutant Discharge Elimination System Municipal Stormwater Program* (2015), the C*ity of Stockton Municipal Service Review* (2008), and contained in other City resources.

Existing City Facilities

The City of Stockton provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

The City of Stockton Stormwater Utility Division operates and maintains 620 miles of pipe, 72 pump stations, and over 100 discharge pipes that collect and route runoff from the City of Stockton's streets and gutters and into local rivers, creeks, and sloughs. The City of Stockton operates under Municipal Stormwater Permit Requirements Order No. R5- 2016-0040.

The Stormwater Utility Division also manages the City's National Pollutant Discharge Elimination Permit (NPDES) and all the monitoring, testing, education, and programs required under the permit.

The NPDES Stormwater Program regulates stormwater discharges from three potential sources:

- construction activities,
- industrial activities, and
- municipal stormwater system.

CITY OF STOCKTON MUNICIPAL STORMWATER SYSTEM

The City of Stockton Sphere of Influence (SOI) is situated just east of the Sacramento-San Joaquin Delta, a low-lying region of sloughs and channels connecting local waterways with the Suisan Bay and the San Francisco Bay. The city and surrounding areas within the SOI depend on creeks, rivers, and sloughs to collect and convey storm runoff to the San Joaquin River and the Delta. The primary watercourses that drain the SOI include: San Joaquin River, Bear Creek, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, Calaveras River and Stockton Diverting Canal, Smith Canal, and French Camp and Walker Sloughs. Most storm drains and pump stations within the service area have adequate capacity to collection stormwater drainage (City of Stockton MSR, 2008).

Stormwater runoff occurs when precipitation from rain and snow melts and does not absorb into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, and other pollutants that could adversely affect water quality. Stockton's stormwater is collected in catch basins and transported, untreated, directly into our local rivers, creeks, and sloughs, and eventually to the Delta. Best

management practices (BMPs) are the primary method to stop contaminants from entering the system.

Municipal Separate Storm Sewer System (MS4) permits are required under the Clean Water Act and require the discharger to develop and implement a Storm Water Management Plan to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). The management plans specify what BMPs will be used to address certain program areas: such as public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations.

Each year, the City is required to provide an Annual Report to the State on their Stormwater Program and BMPs.

CONSTRUCTION ACTIVITIES

Operators of construction sites that are one acre or larger, including smaller sites part of a larger common plan of development, are monitored under the State's Construction General Permit. The Stormwater Program also requires specific control measures for post-construction runoff from new developments and redeveloped areas.

The Stormwater Quality Control Criteria Plan (SWQCCP) provides development standards on these controls, including general site control measures, site-specific source control measures, and treatment control measures for the following:

- Home subdivisions with 10 or more housing units
- Commercial developments with impervious areas greater than 5,000 sq. ft.
- Automotive repair shops with impervious areas greater than 5,000 sq. ft.
- Restaurants
- Parking lots greater than 5,000 sq. ft. or with 25 or more parking spaces
- Streets and roads with one acre or more of impervious area
- Retail gas outlets with 5,000 or more sq. ft. of impervious area

INDUSTRIAL ACTIVITIES

The Stormwater Program works with local industries to prevent stormwater pollution using:

- Inspections of industrial sites,
- Record review of Stormwater Pollution Prevention Plans (SWPPPs) annual reports, and conditions of acceptance,
- Wet and dry weather sampling, and
- Complaint investigation.

Industrial companies may require authorization under an NPDES industrial stormwater permit for stormwater discharges.

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the Stockton Planning Area. In the Stockton Planning Area, the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the Stockton Planning Area were established by the RWQCB and are listed in its Basin Plan.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

A new Phase II Small Municipal Separate Storm Sewer (MS4) General Permit was adopted by the State Water Resources Control Board on February 20, 2020 and became effective April 1, 2020. The Permit has numerous new components and the City is required to implement these components in stages over the five year period of the Permit.

Federal Emergency Management Agency (FEMA)

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Department of Water Resources

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and

surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

> (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
>
> > (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
> >
> > (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
> >
> > (3) A person operating, or proposing to construct, an injection well.
>
> (b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.
>
> (c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

200-Year Flood Protection in Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2015 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2028. SB 5 prohibits a city or county within the Central Valley Flood Protection Plan area from approving a development agreement, discretionary permit or entitlement, tentative map or parcel map for any property within a flood hazard zone unless they can demonstrate any of the following:

- the project has already achieved the applicable level of flood protection:
- conditions have been imposed on the project approval that will eventually result in the applicable level of flood protection: or
- adequate progress is being made towards achievement of the applicable level of flood protection.

Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;

2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the policies related to stormwater that are applicable to the proposed Project.

POLICY: COMMUNITY DESIGN ELEMENT

- CD-6.5. Storm Water Design. The City shall ensure that storm water facilities, such as detention basins, ditches and outfalls, be planned and design to support citywide and district urban design objectives.

POLICIES: PUBLIC FACILITIES ELEMENT

- PFS-4.1: Creek and Slough Capacity. The City shall require detention storage with measured release to ensure that the capacity of downstream creeks and sloughs will not be exceeded. To this end:
    - Outflow to creeks and sloughs shall be monitored and controlled to avoid exceeding downstream channel capacities;
    - Storage facilities shall be coordinated and managed to prevent problems caused by timing of storage outflows.
- PFS-4.2: Watershed Drainage Plans. The City shall require the preparation of watershed drainage plans for proposed developments within the urban services boundary. These plans shall define needed drainage improvements and estimate construction costs for these improvements. The plans will also identify a range of feasible measures that can be implemented to reduce all public safety and/or environmental impacts associated with the construction, operation, or maintenance of any required drainage improvements (i.e., drainage basins, etc.).
- PFS-4.3: Best Management Practices. The City shall require, as part of watershed drainage plans, Best Management Practices (BMPs), to reduce pollutants to the maximum extent practicable.
    - As of November 25, 2003, the City shall require that all new development and redevelopment projects to comply with the post-construction Best Management Practices (BMPs) called for in the Stormwater Quality Control Criteria Plan (SWQCCP), as outlined in the City's Phase 1 Stormwater NPDES permit issued by the California Water Quality Control Board, Central Valley Region (Order No. R5-20020-0181). Also the

owners, developers, and/or successors-in-interest must establish a maintenance entity acceptable to the City to provide funding for the operation, maintenance, and replacement costs of all post-construction BMPs.

- The City shall require, as part of its Storm Water NPDES Permit and ordinances, to implement the Grading Plan, Erosion Control Plan, and Pollution Prevention Plan (SWPPP) during construction activities of any improvement plans, new development and redevelopment projects for reducing pollutants to the maximum extent practicable.

- PFS-4.4: Regional Basins. The City shall define drainage service areas and encourage and support the use of regional stormwater facilities, including stormwater detention and stormwater quality basins within these service areas.
- PFS-4.5: Public Facilities Fees. The City shall develop a Stormwater Management Utility fee that will financially support the stormwater system operation, the Stormwater Management Plan, and maintenance and management program activities.
- PFS-4.6: Stormwater Facility Sizing. The City shall ensure through the development review process that public facilities and infrastructure are designed to meet ultimate capacity needs, pursuant to a master plan, to avoid the need for future replacement to achieve upsizing. For facilities subject to incremental sizing, the initial design shall include adequate land area and any other elements not easily expanded in the future.
- PFS-4.7: Storm Water Discharge. The City shall require for new development within the horizontal surface boundary of the Stockton Metropolitan Airport that any storm water detention basin be designed to discharge as rapidly as possible to minimize the attraction of birds in the vicinity of the airport.
    - PFS-4.8: Low Impact Development. The City shall incorporate low impact development (LID) alternatives for stormwater quality control into development requirements. LID alternatives will include: (1) conserving natural areas and reducing imperviousness, (2) runoff storage, (3) hydro-modification (to mimic pre-development runoff volume and flow rate), and (4) public education.

City of Stockton Municipal Code

TITLE 13 CHAPTER 13.16 STORM WATER MANAGEMENT AND DISCHARGE CONTROL

This establishes uniform requirements for protecting and enhancing the water quality of our watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Clean Water Act. This chapter is also intended to promote the future health, safety, general welfare, and protection of property of the City citizens by establishing requirements for:

A. Operating and maintaining the municipal stormwater system.
B. Eliminating non-stormwater discharges to the municipal separate storm drain.
C. Controlling the discharge to municipal separate storm drains from spills, dumping, or disposal of materials other than stormwater.
D. Reducing pollutants in stormwater discharges to the maximum extent practicable. (Prior code § 7-801)

TITLE 13 CHAPTER 13.20 STORMWATER QUALITY CONTROL CRITERIA PLAN

This chapter establishes requirements for:

A. Selection of post-construction stormwater quality controls (BMPs) that reduce pollutants from new development and redevelopment to the maximum extent practicable (MEP) in a manner that is complimentary to the City's stormwater management program and satisfy the requirements of the California General Construction Activities Stormwater Permit and other regulatory requirements.
B. Definition of evaluation criteria to ensure that the BMPs can be rated in a comparative manner and that the pollutant reduction credit assigned is consistent with the City's stormwater management goals and objectives.
C. Definition of eligibility standards, procedures, and administrative practices to ensure that stormwater pollutant prevention credits (SWPPC) resulting from the implementation of the selected BMPs are real, permanent, and surplus.
D. Provide an administrative mechanism for SWPPC to be created and used as required by City regulations to meet the post-construction water quality objectives of the Stormwater Management Program. (Prior code § 7-859.1)

TITLE 13 CHAPTER 13.24 STORMWATER INDUSTRIAL FACILITIES MONITORING PLAN

This plan:

A. Establishes guidelines for identifying and ranking of priority industrial facilities (PIFs) for purposes of inspection and monitoring, and for categorizing these facilities as a major or minor PIF.
B. Defines standards and procedures for the City to issue and enforce conditions of acceptance for stormwater discharge from priority industrial facilities.
C. Defines standards, procedures, and practices for the inspection of priority industrial facilities.
D. Defines a progressive enforcement plan designed to ensure industry compliance with the City industrial condition of acceptance.
E. Establishes the need for an industrial outreach program to educate local industry about stormwater pollution control.
F. Establishes standards, procedures, and practices for and industrial investigation/compliance monitoring program for priority industrial facilities, and a monitoring exemption certification program. (Prior code § 7-860.1)

Utility Master Plans

The City of Stockton maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2015 City of Stockton Urban Water Management Plan* (Stockton, 2011), *2035 Wastewater Master Plan* (Stockton, 2008), *Water Master Plan* (Stockton, 2021), *City of Stockton Conceptual Storm Drain Master Plan* (Stockton, 2008), and the *City of Stockton NPDES Municipal Stormwater Program Stormwater Management Plan* (2009).

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

IMPACTS AND MITIGATION MEASURES

Impact 3.14-6: The proposed Project has the potential to require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater. The RD-17 levee system is designed to a 100-year protection standard. The Project site is currently located in Zone X protected by levee, which by definition indicates an area protected by levees from the 1% annual chance flood; AE, which are areas that present a 1% annual chance of flooding according to FEMA.; AO, which is the zone that corresponds to the areas of 1% annual shallow flooding chance (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. The Project site is not located within the 200-year floodplain as delineated on the most recent 200-year flood plain maps for Stockton.

The Project proposes to construct two storm drain detention basins to provide flood control. The primary basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. The Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5. The drainage channel will connect to a proposed outfall to the primary detention basin, generally located within the northeast area of the basin. In the event that Weber Slough overflows, the flood waters will spill into the flood channel and be directed to the northern onsite basin. Onsite stormwater runoff will be directed into an underground pipe system which will collect the runoff and direct it to the onsite basins.

A storm drain (ranging from 15 to 96 inches) is proposed within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 and connect to the proposed outfall to the detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the detention basin, generally located within the northeast area of the basin. An outfall from the secondary basin to French Camp slough will also be constructed

just east of the secondary basin. Two options are being considered. One, is an overland flow discharge where the water will be released into a rock lined structure to slow flow velocities before flowing into French Camp Slough. The second option, is a more tradition outfall structure and rock rip rap placed on the banks of French Camp Slough.

The City will require that a maintenance entity be established to provide for the operation, maintenance, and replacement costs of the detention pond system and other water quality features of the Project. The perimeter of the detention facilities will be landscaped to temper and screen views of the detention basins. Additionally, fencing would be constructed around the detention basin areas for safety and security purposes.

Areas of proposed development within the Project site will be required to meet the "volume reduction" and "trash control" requirements of the City's most recent stormwater NPDES permit. Units of development would incorporate design features that would divert storm water to the groundwater system and/or detain runoff before it reaches the collection system. These design features would include measures also described as Low Impact Development (LID) and Volume Reduction Measures, such as grassy swales, porous pavement, rain barrels, and rain gardens, among others. Compliance with the City's stormwater standards will require that storm drainage from new development be reduced below "existing runoff" rates. In addition, units of development would incorporate design features to comply with the City's stormwater standards for trash control. Examples of potential design features include hydrodynamic separators, trash screens, or LID measures which hare capable of trapping all particles five millimeters in size or great.

The proposed Project includes development of a new storm drainage system to serve the proposed uses as described above. The potential environmental effects resulting from construction of the storm drainage system are analyzed throughout this Draft EIR, and in some cases, there are potentially significant impacts associated with construction of this infrastructure. Where impacts are identified for each environmental topic, mitigation measures are developed to avoid, minimize, or compensate for the impact to the extent practicable. All mitigation measures presented throughout this EIR will be implemented to reduce impacts to the extent practicable. There will not be any significant impacts beyond what is disclosed in the other chapters of this document. Overall, compliance with Federal, State, and local standards and regulations as well as implementation of Mitigation Measures 3.9-1 and 3.9-2 would ensure that that the proposed Project would not result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff and that the impact would be ***less than significant***.

3.14.4 SOLID WASTE

ENVIRONMENTAL SETTING

The City of Stockton Public Works Department (Solid Waste & Recycling Division) provides solid waste hauling service for the City of Stockton. This agency would serve the proposed Project. Waste collection services are provided weekly on a day, as specified by the waste haulers that serve the City, which include Republic Services and Waste Management. Customers with brown-colored carts are served by Republic Services, and those with green-colored carts are served by Waste Management.

Solid waste from Stockton is primarily landfilled at the Forward Sanitary Landfill, located southeast of Stockton. Other landfills used include Foothill Sanitary and North County Landfills. All three landfills are summarized in Table 3.14-13 below. Table 3.14-14 summarizes the City of Stockton's disposal rate targets, as identified by Cal Recycle.

TABLE 3.14-13: CITY OF STOCKTON LANDFILL SUMMARY

LANDFILL	*LOCATION*	*MAXIMUM DAILY THROUGHPUT (TONS/DAY)*	*REMAINING CAPACITY (CUBIC YARDS)*	*ANTICIPATED CLOSURE YEAR*
Forward Sanitary	Manteca	8,668	22.1 Million	2021[1]
Foothill Sanitary	Linden	1,500	125 Million	2055
North County	Lodi	1,200	35.4 Million	2048

NOTE: [1] TO INCREASE THE LIFESPAN OF THE FORWARD LANDFILL, FORWARD, INC. IS PLANNING TO EXPAND ITS DISPOSAL FOOTPRINT FROM ABOUT 355 ACRES TO 366 ACRES. THIS EXPANSION WOULD INVOLVE THE RELOCATION OF 3,200 FEET OF THE SOUTH BRANCH OF THE SOUTH FORK OF LITTLE JOHNS CREEK AND INCREASING THE CURRENT LANDFILL CAPACITY FROM ABOUT 20 MILLION CY (AS OF FEBRUARY 2014) TO ABOUT 27.7 MILLION CY. A 17.3-ACRE EXPANSION WAS APPROVED IN JANUARY OF 2020 INSIDE THE LANDFILL'S EXISTING BOUNDARIES ALONG AUSTIN ROAD EAST OF STOCKTON METROPOLITAN AIRPORT. THE LIFESPAN OF THE LANDFILL WILL EXTEND FROM 2030 TO 2036 AND AN ADDITIONAL 8.2 MILLION CUBIC YARDS OF WASTE WILL BE PROCESSED ON TWO SITES, AN 8.7-ACRE PARCEL IN THE NORTHEAST CORNER AND AN 8.6-ACRE PARCEL ON THE SOUTH END OF THE PROPERTY. THE NEW OPERATIONS WILL NOT INFRINGE THE ADJACENT 184-ACRE BROCHINNI PARCEL ACQUIRED BY REPUBLIC FORWARD SERVICES INC. & AUSTIN ROAD LANDFILLS IN 2011 AND PROPOSED IN 2012.
SOURCE: CAL RECYCLE, 2019.

TABLE 3.14-14: CITY OF STOCKTON WASTE DISPOSAL RATE TARGETS (POUNDS/DAY)

POPULATION		*EMPLOYMENT*	
Target	Annual	Target	Annual
6.9	6.5	21.0	20.4

SOURCE: CAL RECYCLE, 2019.

REGULATORY SETTING

AB 939: California's Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. In order to achieve this goal, AB 939 requires that each City

and County prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 939 also established requirements for cities and counties to develop and implement plans for the safe management of household hazardous wastes. In order to achieve this goal, AB 939 requires that each city and county prepare and submit a Household Hazardous Waste Element.

AB 341 (75 Percent Solid Waste Diversion)

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to divert 75 percent of the solid waste generated in the state from disposal by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by January 1, 2012, and also streamlines various regulatory processes.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 1826 (Mandatory Organics Recycling)

Beginning April 1, 2016, the State's Mandatory Organic Waste Recycling law (AB 1826) requires businesses, based on the amount and type of waste the business produces weekly.

- Businesses that generate 8 cubic yards of organic waste per week arrange organic recycling services.
- Businesses that generate 4 cubic yards of organic waste per week arrange organic waste recycling services.
- Businesses that generate 4 cubic yards or more of commercial solid waste per week arrange organic waste recycling services.
- **If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

Envision Stockton 2040 General Plan

The Envision Stockton 2040 General Plan contains the policies related to solid waste that are applicable to the proposed Project.

POLICIES: PUBLIC FACILITIES AND SERVICES ELEMENT

- PFS-5.1 Solid Waste Reduction. The City shall promote the maximum feasible use of solid waste reduction, recycling, and composting of wastes and strive to reduce commercial and industrial waste on an annual basis.
- PFS-5.2 Recycling Program. The City shall continue to require recycling in public and private operations to reduce demand for solid waste disposal capacity.
- PFS-5.3 City Usage of Recycled Materials and Products. The City should use recycled materials and products where economically feasible.
- PFS-5.4 Private Usage of Recycled Products. The City shall work with recycling contractors to encourage businesses to use recycled products in their manufacturing processes and encourage consumers to purchase recycled products.
- PFS-5.5 Recycling of Hazardous Materials. The City shall require the proper disposal and recycling of hazardous materials.
- PFS-5.6 Recycling of Construction Debris. The City shall require the recycling of construction debris.
- PFS-5.7 Development Requirements. The City shall ensure that all new development has appropriate provisions for solid waste storage, handling, and collection pickup.

City of Stockton Municipal Code, Chapter 8.04

Chapter 8.04 of the Municipal Code regulates the management of garbage, recyclables, and other wastes. Chapter 8.04 sets forth solid waste collection, disposal, and diversion requirements for residential, commercial, industrial, and other uses and addresses yard waste, hazardous materials, recyclables, and other forms of solid waste.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

1. Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs.
2. Comply with federal, State, and local statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-7: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste (Less than Significant)

The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. The total permitted capacity of the Forward Landfill is 51.04 million cubic yards, which was expected to accommodate an operational life until January 1, 2021. An expansion was approved by the Board of Supervisors in early 2020 to extend the life of the landfill, extending its lifespan from 2030 to 2036 according to Republic Services[2]. The remaining capacity is 22,100,000 cubic yards. Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use (discussed below). The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day. The remaining capacity is 125,000,000 cubic yards with an anticipated closure year of 2055. The permitted maximum disposal at the North County Landfill is 1,200 tons per day. The remaining capacity is 35,400,000 cubic yards with an anticipated closure year of 2048.

The commercial portion of the project site is estimated to generate roughly five pounds per day per 1,000 square feet. It is estimated that the 140,350 square feet of commercial space would generate approximately 702 pounds per day of solid waste.

The industrial portion of the project site is estimated to generate roughly five pounds per day per 1,000 square feet. It is estimated that 6,091,551 square feet of industrial space would generate roughly approximately 30,458 pounds per day of solid waste. Note, this estimate of the square footage for the commercial and industrial space is considered a worst-case scenario and may very well prove to be an overestimate.

The total solid waste generated by the proposed project is estimated to be 15.58 tons per day. As previously described, solid waste generated in the City is disposed at the Forward Landfill. This landfill was projected to close in the year 2021. As mentioned above, an expansion was approved by the Board of Supervisors earlier this year to extend the life of the landfill, from 2030 to 2036 according to Republic Services. The City's solid waste per capita generation has decreased since 2007 due to the waste diversion efforts of the City. The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. The permitted vehicle limit is 620 vehicles per day; however, the landfill averages 212 daily trucks.[3] The remaining capacity of the landfill is 22.1 million cubic yards. The addition of solid waste associated with the proposed Project, approximately 15,537.5 pounds

[2] E.A. Crunden, Republic Landfill Expansion Moves Ahead in California After Failed Appeal. WasteDive. Published January 10, 2020. Accessed: <https://www.wastedive.com/news/republic-landfill-expansion-california-san-joaquin/570033/>

[3] San Joaquin County Community Development Department. Draft Environmental Impact Report – Forward Landfill Expansion (SCH#2008052024). September 2012. Page III-13.

or 7.77 tons per day (9.17 cubic yards per day) at total buildout, to the Forward Landfill would not exceed the landfill's remaining capacity.

All development in the City of Stockton is required to have solid waste service pursuant to Section 8.04.020 of the City Municipal Code. Solid waste service for the proposed Project would be provided by the City's contracted providers. Therefore, impacts related to solid waste would be ***less than significant***.

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The California Environmental Quality Act (CEQA) requires an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, and significant and unavoidable impacts associated with the proposed Project.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual 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 defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative setting uses growth projections listed in the general plan, municipal services review, other planning documents and Department of Finance statistics. Table 4.0-1 shows growth projections.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	*ESTIMATED POPULATION (STOCKTON)*	*ESTIMATED POPULATION (SAN JOAQUIN COUNTY)*	*ESTIMATED POPULATION (CALIFORNIA)*
2020	318,522	766,644	40,619,346
2025	352,239	822,755	42,373,301
2030	374,939	893,354	44,085,600
2035	401,961	966,889	45,747,645
2040	432,627	1,037,761	47,233,240

SOURCES: CITY OF STOCKTON (2016), DEPARTMENT OF FINANCE (2020), UNIVERSITY OF THE PACIFIC (2016).

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative settings are identified under each cumulative impact analysis. Cumulative settings vary because the area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise. Cumulative Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area.

Project Assumptions

The proposed Project's contribution to environmental impacts under cumulative conditions is based on development of the Project site consistent with the development assumptions identified in Chapter 2.0, Project Description, which establishes a target floor area ratio (FAR) and maximum development potential for industrial and commercial land uses. See Chapter 2.0, Project Description, for a complete description of the proposed Project.

Cumulative Impacts

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, utilities, noise and air quality (the latter two of which are associated with traffic volumes and operations associated with the proposed land uses), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

The cumulative setting for aesthetics is the City of Stockton and surrounding areas of San Joaquin County.

Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway (Less than Significant and Less than Cumulatively Considerable)

As described in Section 3.1, Aesthetics and Visual Resources, one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 to Interstate 205. This route traverses the edge of the Coast Range to the west and Central Valley to the east. The City of Stockton, including the Project site, is not visible from this roadway segment, which is located approximately 20 miles southwest of the site.

Cumulative development in the city would not impact a State Scenic Highway. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts relative to scenic resources would be a ***less than cumulatively considerable contribution*** and no mitigation is required.

Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region (Cumulatively Considerable and Significant and Unavoidable)

Project implementation would introduce industrial uses, as well as supporting infrastructure into an area that is currently undeveloped and is primarily occupied by agricultural uses. The proposed Project would include visual components that would assist in enhancing the appearance of the site following site development. Landscaping improvements, such as new street trees and other vegetation landscaping, would be provided throughout the Project site, including along the site boundary. Additionally, the proposed Project would also include approximately 54 acres of open space near French Camp Slough in order to minimize conflicts between the uses, maintain the habitat area along the Slough, and provide a visual shield. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Under cumulative conditions, buildout of the General Plan for Stockton and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Stockton through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. It is noted that although the Project site is undeveloped and currently occupied by agricultural uses, the General Plan designates a majority of the site for Industrial and Commercial uses. Additionally, the surrounding areas to the north, east, south, and west are designated for urban uses (including mainly Institutional and Industrial uses) by the General Plan. As such, the General Plan and associated EIR anticipated development of the Project area for similar uses as proposed by the Project.

Development within the City would be required to be consistent with the General Plan policies and City Municipal Code, both of which cover aesthetics and visual characteristics. Further, the Municipal Code contains development standards that address the visual character of a development project, such as building height, massing, setbacks, lighting, and landscaping. Although implementation of these requirements would reduce the impacts associated with development, the impacts would remain significant and unavoidable. As such, this is a ***cumulatively considerable contribution*** and a ***significant and unavoidable*** impact.

Impact 4.3: Cumulative Impact on Light and Glare (Less than Significant and Less than Cumulatively Considerable)

Implementation of the proposed Project would introduce new sources of light and glare into the vacant Project site. Compliance with the lighting plan required by Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to Section 16.32.070, Light and Glare, of Chapter 16.32, General Performance Standards, of the City Municipal Code and the required design review (required by Chapter 16.120, Design Review, of the City Municipal Code) would ensure that excessively reflective building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare.

Future projects within Stockton, Lathrop, and San Joaquin County would be subject to the light and glare standards established by the individual jurisdictions. These regulations are designed to

minimize potential light and glare impacts of new development. Implementation of these regulations would ensure that future projects minimize their potential light and glare impacts resulting in a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to nighttime lighting and daytime glare would be a ***less than cumulatively considerable contribution***, and no mitigation is required.

AGRICULTURAL RESOURCES

The cumulative setting for agriculture and forest resources is all of San Joaquin County. According to the Department of Conservation, the County had 744,835 acres of farmland in 2016, the majority of which is identified as Prime Farmland. The remaining agricultural land is comprised of Farmland of Statewide Importance (11 percent), Unique Farmland (11 percent), Farmland of Local Importance (9 percent), and Grazing Land (18 percent).

Impact 4.4: Cumulative Impact on Agricultural Resources (Cumulatively Considerable and Significant and Unavoidable)

As described in Section 3.2, Agricultural Resources, development of the proposed Project would result in a permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland to non-agricultural use. The loss of Important Farmland as classified under the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) is considered a potentially significant environmental impact.

Mitigation of agricultural land conversion losses would be provided through the county-wide adoption of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and its local adoption by the City of Stockton. The SJMSCP requires the payment of a per-acre fee for loss of wildlife habitat, which in San Joaquin County is largely integral with agricultural use. The City's Agricultural Land Mitigation Program requires that future development pay the agricultural mitigation fee, currently $12,822 per acre, to mitigate the conversion of agricultural land to urban use. The San Joaquin Council of Governments (SJCOG) would then use these funds to purchase conservation easements on agricultural and habitat lands that are placed over agricultural land, such as alfalfa and row crops in the Project vicinity.

The purchase of conservation easements and/or deed restrictions through the City's Agricultural Land Mitigation Program and the SJMSCP allows the agricultural landowner to retain ownership of the land and continue agricultural operations, and preserves such lands in perpetuity.

While the proposed Project will contribute fees toward the purchase of conservation easements on agricultural lands, as required by Mitigation Measure 3.2-1, those fees and conservation easements would not result in the creation of new farmland to offset the loss that would occur with Project implementation. As such, the loss of Important Farmland would be a ***cumulatively considerable contribution*** and a ***significant and unavoidable*** impact.

AIR QUALITY

The cumulative setting for air quality impacts is the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties, stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south.

Impact 4.5: Cumulative Impact on the Region's Air Quality (Cumulatively Considerable and Significant and Unavoidable)

Under buildout conditions in the San Joaquin County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, operational emissions would exceed the SJVACPD thresholds of significance for NOx, ROG, and PM_{10}. Therefore, the proposed Project is required to implement all feasible mitigation to reduce criteria pollutant emissions to below the applicable SJVAPCD thresholds of significance. The proposed Project would implement Mitigation Measure 3.3-1 included in Section 3.3, which would ensure that individual projects that are approved as part of the proposed Project would reduce emissions to less than the applicable SJVAPCD thresholds of significance.

As discussed in Impact 3.3-2 in Section 3.3, Project annual NOx construction emissions would exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. Implementation of the Mitigation Measure 3.3-2 through 3.3-6 included in Section 3.3 would further reduce proposed Project construction related emissions to the extent possible.

This Project is located in an area that is designated attainment and attainment-unclassified for carbon monoxide. No Project-level conformity analysis is necessary for CO. Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site.

Additionally, as discussed in Impact 3.3-4 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of TACs for this type of project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-9 in Section 3.3, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

Overall, even with the application of the mitigation measures included in Section 3.3, emissions levels would remain above the defined thresholds of significance. As such, implementation of the proposed Project would have a ***cumulatively considerable contribution*** and ***significant and unavoidable*** impact from air emissions.

BIOLOGICAL RESOURCES

The cumulative setting for biological resources includes the Project site and the greater San Joaquin County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in San Joaquin County, including the Project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout. Additionally, local land use authorities in San Joaquin County require development to participate in the SJMSCP, which is a habitat conservation plan and natural community conservation plan for San Joaquin County that provides a mechanism for compensatory mitigation for habitat and species loss in accordance with federal and State laws.

Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Significant and Less than Cumulatively Considerable)

Under cumulative conditions, buildout of the General Plan(s) within San Joaquin County will result in impacts to biological resources associated with new development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible and the SJMSCP has been established to provide a mechanism for compensatory mitigation and standardized avoidance and minimization measures as needed.

As described in Section 3.4 Biological Resources, construction in the Project site has the potential to result in impacts to special-status species in the region. The California Natural Diversity Database (CNDDB) currently contains records for Swainson's hawk, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species, including those discussed in Section 3.4.

Mitigation Measure 3.4-1 requires participation with the SJMSCP, which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage.

The ongoing operational phase of the proposed Project requires discharge of stormwater into the City storm drainage system, which ultimately discharges into the Delta. The discharge of stormwater could result in indirect impacts to special status fish and wildlife if stormwater was not appropriately treated through BMPs prior to its discharge to the Delta. Mitigation Measure 3.9-1 in Section 3.9 requires the Project applicant to implement nonstructural BMPs that focus on preventing pollutants from entering stormwater.

Implementation of Mitigation Measures 3.4-1 in Section 3.4 and Mitigation Measure 3.9-1 in Section 3.9 would reduce potentially cumulative impacts to a ***less than significant*** level. As such, impacts to biological resources would be a ***less than cumulatively considerable contribution***.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural resources impacts can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The cumulative setting for cultural resources includes all of the San Joaquin County. There are extensive cultural sites located in the region.

Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources (Less than Significant and Less than Cumulatively Considerable)

Cumulative development anticipated in the City of Stockton, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.5, Cultural and Tribal Resources, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the NRHP. As such, the Project site does not contain a "historical resource" as defined in CEQA Guidelines Section 15064.5.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to their respective General Plans (i.e., City of Stockton, City of Lathrop, and San Joaquin County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition, all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA.

Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to cultural resources would result in a ***less than cumulatively considerable contribution***.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and

building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Stockton and vicinity.

Impact 4.8: Cumulative Impact on Geologic and Soils Resources (Less than Significant and Less than Cumulatively Considerable)

As discussed in Section 3.6 Geology and Soils, implementation of the proposed Project has limited potential for liquefaction, liquefaction induced settlement, and lateral spreading. However, mitigation measures provided in Section 3.6 ensure impacts related to soil hazards will be less than significant. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. Seismic activity could come from a known active fault such as the Vernalis fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the City of Stockton has incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and Project-specific. With the mitigation measures presented in Section 3.6, implementation of the proposed Project would not result in increased risks or hazards related to geologic conditions in the cumulative setting area, nor would it result in any off-site or indirect impacts. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to geologic and soil resources would result in a ***less than cumulatively considerable contribution***.

GREENHOUSE GASES AND CLIMATE CHANGE

The cumulative setting for greenhouse gas emissions and climate change impacts for this analysis is San Joaquin County, which is the boundary for the California Air Resources Board's (CARB) regional greenhouse gas emissions reduction targets.

Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions (Significant and Unavoidable and Cumulatively Considerable)

Greenhouse gas emissions from a single Project will not cause global climate change; however, greenhouse gas emission from multiple projects throughout a region or state could result in a cumulative impact with respect to global climate change.

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by

CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Additionally, the City of Stockton Climate Action Plan (CAP) was approved by the Stockton City Council on December 2, 2014. The Climate Action Plan summarizes the City's GHG emissions inventory and provides 26 GHG emissions reduction measures. The CAP relies on numerous voluntary measures for both existing and new development, but also includes mandatory measures where required by other state or local existing mandates and other City initiatives. The CAP also provides implementation strategies for the emissions reduction measures provided within the CAP.

As presented in Table 3.7-2 in Section 3.7, short-term construction emissions of GHGs are estimated at a maximum of approximately 13,236 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year. As shown in Table 3.7-3, the annual mitigated operational emissions of GHGs associated with the proposed Project would be approximately 125,072 MT CO_2e. The Project would generate GHG emissions, directly and indirectly, that would exceed the 4.84 MT CO2e/SP/year in 2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Although the implementation of the mitigation measures presented in Section 3.3: Air Quality of this EIR would reduce the overall annual GHG emissions associated with the proposed project, the proposed project would be required to implement additional mitigation to ensure emissions are reduced to below the applicable threshold.

The proposed project is required to implement Mitigation Measure 3.7-1, which would require the applicant to demonstrate that the individual project does not exceed the applicable SJVAPCD GHG thresholds for project operations. If the SJVAPCD GHG thresholds for an individual project is exceeded, the project applicant would be required to develop a reasonably feasible offsite mitigation strategy to reduce long-term air quality impacts to below the applicable SJVAPCD thresholds of significance. However, even with implementation of all feasible mitigation, it may not be feasible for all individual projects within the South Stockton Commerce Center to reduce operational emissions below the applicable thresholds. Therefore, implementation of the proposed Project would have a ***significant and unavoidable*** cumulative impact relative to this environmental topic. As such, impacts related to climate change and greenhouse gas emissions would result in a ***cumulatively considerable*** contribution.

HAZARDS AND HAZARDOUS MATERIALS

The cumulative context for the analysis of cumulative hazards and human health impacts is San Joaquin County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e., Stockton, Lathrop, and San Joaquin County). As discussed in Section 3.8, Hazards and Hazardous Materials, implementation of the proposed Project would not result in any significant impacts related to this environmental topic with the implementation of the mitigation measures provided in Section 3.8.

Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant and Less than Cumulatively Considerable)

The proposed Project, in conjunction with cumulative development in the region, would include areas designated for a variety of urban, agricultural, and open space uses as defined by the applicable General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would

inevitably increase the use of hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

The Project site is not associated with any existing hazardous materials spills; however, after agricultural operations cease, and development is anticipated to occur, the applicant or future project proponent would be required to hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.

Implementation of the proposed Project would not result in significant increased risks of hazards in the cumulative setting area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to hazards and hazardous materials would result in a ***less than cumulatively considerable contribution***.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the cumulative setting is based on San Joaquin County which is located in the San Joaquin River Hydrological Region. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the San Joaquin River Hydrologic Region. The City of Stockton and much of the surrounding area is located in the Eastern San Joaquin River Groundwater Basin. This groundwater basin covers approximately 1,105 square miles. Any matter that may affect water quality draining from the Project site will eventually end up in the Delta or within the groundwater basin.

Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project site (Less than Significant and Less than Cumulatively Considerable)

Implementation of the proposed Project would increase the amount of impervious surfaces in the Project site, which could increase peak stormwater runoff rates and volumes on and downstream of the Project site. However, the proposed Project includes an extensive system of on-site stormwater collection facilities to accommodate the increased stormwater flows that would originate in the Project site.

The Project proposes to construct two storm drain detention basins to provide flood control (flood control basins). The primary flood control basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. Additionally, the Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5 of the Project's Tentative Map (see Figure 2.0-7). The flood control channel will connect to a proposed outfall to the primary flood control basin, generally located within the northeast area of the basin. A storm drain (ranging from 15 to 84 inches) is proposed within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 of the Project's Tentative Map and connect to the proposed outfall to the primary detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary flood control basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the flood control basin, generally located within the northeast area of the basin. An outfall from the basin to French Camp Slough will also be constructed.

According to the City of Stockton Stormwater Quality Control Criteria Plan (SWQCCP), the Project is considered a priority project as it would result in the development of more than 5,000 square feet of industrial/commercial developments. Priority projects are required to prepare and submit a Project Stormwater Quality Control Plan that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. In particular, the Project Stormwater Quality Control Plan will need to specify BMPs the project will use and design specifications for selected BMPs. The Project Stormwater Quality Control Plan must be submitted for review and approval by the City of Stockton Department of Municipal Utilities, as required by Mitigation Measure 3.9-2.

With the design and construction of flood control improvements, the proposed Project would not increase peak stormwater runoff. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to stormwater runoff would result in a ***less than cumulatively considerable contribution***.

Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant and Less than Cumulatively Considerable)

The proposed Project, along with several of the related projects within the City of Stockton, would ultimately discharge stormwater runoff to the nearby Delta waterways. This would potentially degrade the water quality of the system.

Construction of the proposed Project would contribute to a cumulative increase in urban pollutant loading, which could adversely affect water quality. Cumulative development in the Stockton area, including the proposed Project, would also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution

include: runoff from roadways and parking lots; runoff from landscaping areas; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides.

The proposed Project will be required to comply with Mitigation Measure 3.9-1 which requires the development and approval of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include Best Management Practices (BMPs) to regulate stormwater quality for the Project site which will be designed in accordance with the City of Stockton's NPDES issued by the Regional Water Quality Control Board (RWQCB).

While there are no assurances that other projects in the County would incorporate the same degree or methods of treatment as the proposed Project, several of the projects within the City of Stockton would phase out existing agricultural runoff discharges from their respective sites and, similar to the proposed Project, could provide some level of water quality improvement. Also, each related Project that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the RWQCB, which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality. Therefore, while a greater quantity of urban runoff may be discharged to the Delta system with implementation of the related projects, because of an increase in impervious surfaces, the associated surface water quality impacts would be expected to be less than significant because of improved or similar quality of runoff compared to existing conditions.

Compliance with City and County water quality protection regulations, approval from the RWQCB, and Mitigation Measure 3.9-1 would ensure that the proposed Project minimizes impacts to surface water quality. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to water quality would result in a ***less than cumulatively considerable contribution***.

Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

The Project site is located in the Eastern San Joaquin County Groundwater Basin. The basin is not adjudicated; however, a groundwater management plan and groundwater sustainability plan have been prepared for the subbasin. In 2005, Stockton adopted the Eastern San Joaquin Groundwater Basin Groundwater Management Plan (San Joaquin County Department of Public Works, 2004) prepared by the Northeastern San Joaquin County Groundwater Banking Authority, replacing the 1995 Groundwater Management Plan. Given the subbasins critical state of overdraft, the Eastern San Joaquin Groundwater Authority (ESJGWA) was formed in 2017 and the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan was adopted in November 2019.

The City of Stockton Metropolitan Area (COSMA) has three water retailers including the City of Stockton Municipal Utilities District (COSMUD), California Water Service Company (Cal Water), and San Joaquin County within their respective service areas. The Project site will receive its water from the COSMUD, which relies on purchased water from the Calaveras, Stanislaus, and Mokelumne Rivers; surface water from the San Joaquin Delta; and groundwater. According to the Water Supply Assessment (WSA) prepared by COSMUD for the Project, sufficient water supplies exist to meet the Project's build-out water demand as well as all existing and reasonably foreseeable water demands. Additionally, the WSA concludes that the existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin underlying the COSMA (COSMUD, October 2020).

Much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra snowmelt flowing downstream. Precipitation in the region is 13.81 inches, most of which falls between November through April. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into the Delta. While the proposed Project would reduce the amount of pervious surfaces within the project site, the proposed project is designed to promote infiltration of groundwater in areas with pervious surface. Storm drainage flows in the Project site would be directed to one of two drainage basins, which include outfalls into the French Camp Slough. Additionally, the Project includes a drainage channel for flood control. In the event that Weber Slough overflows, the flood waters will spill into the flood channel and be directed to the northern onsite basin. Onsite stormwater runoff will be directed into an underground pipe system which will collect the runoff and direct it to the onsite basins. Upon compliance with Mitigation Measure 3.9-2, the Project will have incorporated site design measures, landscape features, and approved engineered treatment facilities (typically bioretention facilities) for water quality treatment that minimizes imperviousness, retains or detains stormwater, slows runoff rates, and reduces pollutants in post-development runoff consistent with the *City of Stockton NPDES SWMP*.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Impact 4.14: Cumulative Impacts Related to Flooding (Less than Significant and Less than Cumulatively Considerable)

According to the Project's Hydrologic and Hydraulic Assessment, a majority of the Project site is located in Federal Emergency Management Agency (FEMA) designated Zone AO, where flood depths can reach one or more feet deep. A small portion of the Project site is also located within the New Melones Dam Inundation Area, as shown in Figure 3.9-3. The Hydrologic and Hydraulic Assessment included an analysis to determine potential impacts to the floodplain from placing fill to bring the finished floor elevation to three feet above highest adjacent grade. The Hydrologic and Hydraulic

Assessment determined that there are no offsite impacts which would cause an increase in water surface greater than 0.05 feet due to Project implementation. (KSN, December 2020).

In addition to the above analysis, the Hydrologic and Hydraulic Assessment also included an evaluation of the proposed flood control system for the Project to determine if the proposed flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from a 100-year flood event. The analysis was conducted under the assumption that the flood control basins would not be drained during the actual flood event. According to the Hydrologic and Hydraulic Assessment, the results of the analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin (KSN, December 2020). Therefore, the Hydrologic and Hydraulic Assessment notes the applicant shall apply for a Conditional Letter of Map Revision based on Fill (CLOMR-F) based upon the effective FEMA floodplains, as required by Mitigation Measure 3.9-3.

The Project would not result in a flood hazard or result in the release of pollutants due to on- or off-site flooding due to development of the proposed Project upon implementation of Mitigation Measure 3.9-3. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

LAND USE AND POPULATION

The cumulative setting for land use and population impacts is the City of Stockton.

Impact 4.15: Cumulative Impact on Communities and Local Land Uses and Population (Less than Significant and Less than Cumulatively Considerable)

Land Use: Cumulative land use impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and Project-specific. The land uses, as proposed, are consistent with the General Plan. Although the proposed Project is consistent with the site's existing General Plan designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment of the two areas between Airport Way and the Union Pacific Railroad right-of-way. As seen on Figures 2.0-5 and 2.0-6 in Chapter 2.0, these areas are currently designated Commercial and Industrial and are zoned Commercial, General (CG) and Industrial, Light (IL), respectively. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be designated Commercial and zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial and zoned IL. Figure 2.0-8 and Figure 2.0-9 in Chapter 2.0 show the proposed boundary modifications to the General Plan land use designations and Zoning districts for these two areas.

The Project is located within the City of Stockton City limits and will provide for employment-generating uses that will promote employment and economic development, and a mix of non-employment generating land uses, including open space, public facilities, and public roadway right-of-way land uses. The Project is consistent with the General Plan land use policies that encourage

an orderly pattern of development in the areas surrounding the Airport and encourage employment- and tax-generating businesses that support the economic diversity of the City.

Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Envision Stockton 2040 General Plan land use requirements and would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to the Stockton General Plan.

The Stockton Zoning Code implements the General Plan. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). Similar to the above, although the proposed Project is consistent with the site's existing Zoning designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way. These areas are currently zoned CG and IL, respectively. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be zoned IL. Figure 2.0-9 in Chapter 2.0 shows the proposed boundary modifications to the Zoning districts for these two areas.

These proposed zone changes would ensure that zoning would be consistent with the proposed General Plan designations within the Project site. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site.

The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the zone change would ensure that the proposed Project would be consistent with the Zoning Code and will have a ***less than significant*** and ***less than cumulatively considerable*** relative to this topic.

Population: Continued development in Stockton and San Joaquin County will result in housing unit and population increases in the region. The Project would not directly introduce new residents to the City as no housing is proposed as part of the Project. It is noted, however, that some portion of the proposed Project employees could become Stockton residents.

The proposed Project is expected to require approximately 2,964 full-time and part-time employees. It is anticipated that the employment growth would be met both by existing residents and through the attraction of new residents. The Project would establish a variety of business opportunities that can support the skilled and educated workforce of Stockton and the local area. Estimating the number of these future employees who would relocate to the City would be highly speculative, because many factors influence personal housing location decisions (i.e., family income levels and

the cost and availability of suitable housing in the local area). Thus, the number of new employees who may relocate to the City to fill the newly created positions is unknown.

Infrastructure needed to support development of the Project site and the subsequent employment increases expected through implementation of the Project have already been planned and evaluated. The employment-generating land uses proposed by the Project would not change from what was analyzed in the General Plan EIR. The proposed Project is not anticipated to exceed the planned growth (directly or indirectly) in the area beyond what is anticipated in the City's General Plan.

The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts. The proposed Project would not have cumulatively considerable impacts associated with population and housing. As such, implementation of the proposed Specific Plan would have a ***less than significant*** and ***less than cumulatively considerable*** contribution to impacts to population.

NOISE

The cumulative setting for noise impacts consists of the existing and future noise sources that could affect the Project site or surrounding uses.

Impact 4.16: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development (Less than Significant and Less than Cumulatively Considerable)

Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total noise impact of the proposed Project would be fairly small and would not be a substantial increase to the existing future noise environment. Thus, the proposed Project would result in a less-than-significant cumulative impact.

Operational Noise: Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways and on-site activities resulting from operation of the proposed Project. The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks. Table 3.11-9 in Section 3.11, Noise, shows cumulative traffic noise levels with and without the proposed Project. As discussed in Section 3.11, the Project would not result in significant increases in traffic noise levels at existing sensitive receptors under the Cumulative Plus Project condition. Non-transportation noise would also comply with the maximum noise level limits. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to cumulative operational noise would result a ***less than cumulatively considerable contribution***.

Construction Noise: Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. Compliance with the City's permissible hours of construction, as well as implementing the best management noise

reduction techniques and practices (both outlined in Mitigation Measure 3.11-2), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to cumulative construction noise would result a ***less than cumulatively considerable contribution***.

Cumulative Conclusion: The operational noise from the proposed Project is not expected to produce noise levels that would exceed City or County standards. Consequently, the total noise impact of the proposed Project would not be a substantial increase to the future noise environment. The proposed Project would result in a ***less-than-significant*** cumulative impact.

PUBLIC SERVICES AND RECREATION

Cumulative setting would include all areas covered in the service areas of the City of Stockton Fire Department, Police Department, Parks and Recreation Department, the Manteca Unified School District, and any other relevant public services.

Impact 4.17: Cumulative Impact on Public Services (Less than Significant and Less than Cumulatively Considerable)

Implementation of the proposed Project would contribute toward an increased demand for public services and facilities within the City of Stockton. It has been determined that the impacts to the Stockton Police, Stockton Fire, Parks and Recreation Department, and Manteca Unified School District would be less-than-significant. The proposed Project would be subject to all fees that are paid toward the enhancement of public services within the region. Payment of the applicable development fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would assist in maintaining existing fire, police, schools, and park services. Implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. As such, impacts related to public services would result in a ***less than cumulatively considerable contribution***.

TRANSPORTATION AND CIRCULATION

The cumulative setting for this analysis including the City of Stockton Sphere of Influence (SOI) and nearby areas of the County. The analysis models the overall change in vehicle-miles-traveled (VMT) in Stockton as a result of forecast development, with the addition of the proposed Project. The intent is to understand how the proposed Project will influence travel behavior in light of future conditions, and to identify possible significant future impacts. The year 2040 is the horizon year for cumulative condition impact analyses.

Impact 4.18: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Significant and Unavoidable and Cumulatively Considerable)

Analysis for the cumulative scenarios was completed using the Envision Stockton 2040 General Plan Travel Demand Model. The cumulative year model reflects roadway improvements and land use projections consistent with the SJCOG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), City of Stockton General Plan, and the surrounding San Joaquin County General Plan, City of Manteca General Plan, and City of Lathrop General Plan.

Table 3.13-3 in Section 3.13 summarizes the results of the VMT analysis for home-based work trips per employee for Baseline and Cumulative With Project Conditions. The following key findings are derived from the VMT analysis:

- According to the City of Stockton Baseline (Existing) Travel Demand Model, the Citywide average daily home-based work VMT per worker is 18.56 miles. This includes a mix of employees who both live and work in the City of Stockton and employees that travel to and from neighboring cities to work in the City of Stockton.
- According to the Envision Stockton 2040 General Plan Travel Demand Model, the City is projected to add a mix of jobs that would increase employment opportunities for both existing and future residents. This would improve the jobs/housing balance in the City of Stockton and theoretically reduce the Citywide average daily home-based work VMT per worker.
- On the other hand, the General Plan – Envision Stockton 2040 Travel Demand Model is projected to generate an average daily home-based work VMT per worker (19.73) that is greater than the City of Stockton's Baseline (existing) average daily home-based work VMT per worker (18.56).
- Regardless of this projected increase in the average daily home-based work VMT per worker, the goal of the City of Stockton is to decrease the Citywide average daily home-based work VMT per worker from 18.56 miles to 15.78 miles, a 15.0 percent reduction when compared to Baseline (Existing) Conditions.
- According to the Envision Stockton 2040 General Plan Travel Demand Model, the proposed Project would result in a total of 3,200 new jobs (2,880 industrial, 130 food and 190 retail). The Project's average daily home-based work VMT per worker is projected to be 21.05 mile. This is 2.49 miles (13.4 percent) higher when compared to Baseline (Existing) Conditions.

Mitigation Measure 3.13-1, which requires travel demand management (TDM) strategies to reduce the increase in VMT associated with the proposed Project, would be required. Nevertheless, the impact is considered **significant and unavoidable** and **cumulatively considerable.**

Impact 4.19: Under Cumulative conditions, the proposed Project would not adversely affect pedestrian and bicycle facilities (Less than Significant and Less than Cumulatively Considerable)

Implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the Project would not

interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** *impact relative to this topic.*

UTILITIES AND SERVICE SYSTEMS

The cumulative setting includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services. Under General Plan buildout conditions, the City would see an increased demand for water service, sewer service, solid waste disposal services, and stormwater infrastructure needs.

Impact 4.20: Cumulative Impact on Wastewater Utilities (Less than Significant and Less than Cumulatively Considerable)

The City of Stockton owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to the City of Stockton. On April 1, 2020, the RWQCB adopted Waste Discharge Requirements (WDRs) Board Order Number R5-2020-0007, NPDES CA0079138, prescribing waste discharge requirements for the City of Stockton Regional Wastewater Control Facility (RWCF).

The City of Stockton's wastewater treatment system is currently in compliance with the waste discharge requirements of Order Number R5-2020-0007, NPDES CA0079138. The wastewater treatment system options covered under this Order include: City of Stockton RWCF, including discharge to the San Joaquin River. The development of the proposed Project under this permitted option would not exceed the wastewater discharge requirements in this Order as described under Impact 3.14-1 in Section 3.14. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's approved Tidewater Crossing Sewer Master Plan requirements. The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. A sewer pump station is proposed to be located at the northeast corner of Airport Way and the future Commerce Drive. A sewer line (ranging from 8 to 24 inches) will be located within the proposed Commerce Drive right-of-way. Within the western portion of Parcel 2, the sewer line within the Commerce Drive right-of-way will shift north outside of the Commerce Drive right-of-way into Parcel 2 and extend west along the southern edge of Parcel 1, continuing under the UPRR right-of-way. West of the UPRR right-of-way, the sewer line will extend into the proposed Commerce Drive right-of-way. The 24-inch sewer line within Commerce Drive will connect to a proposed 36-inch sewer line within Airport Way whereupon it will flow to a proposed regional sewer pump station located at the intersection of Airport Way and Commerce Drive. The off-site sewer improvements (including upsized gravity sewer pipeline and sanitary sewer force mains) would be located along the western site frontage on Airport Way, head north along Airport Way, and

terminate in Airport Way and Industrial Drive to the north. Specifically, an 18-inch force main within Airport Way will extend from the regional sewer pump station to the intersection of Arch Airport Road and Airport Way where it will connect to a gravity pipeline. This gravity pipeline will be upsized from an existing 33-inch gravity sewer pipeline to a 48-inch gravity sewer pipeline. The 48-inch gravity pipeline will extend to the intersection of Industrial Drive. The existing facilities, including the Stockton RWCF, have undergone environmental review and have waste discharge permits from the State.

New wastewater collection and conveyance infrastructure needed for the proposed Project would require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. All onsite wastewater utility improvements would be within existing agricultural lands or land currently developed with roadways (i.e., Airport Way), the impacts of which are discussed in Section 3.2 Agricultural Resources and throughout this EIR. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Based on the generation factors for commercial and industrial lands uses in the City of Stockton, the proposed Project is estimated to generate approximately 199,240 gallons per day (gpd) of wastewater or approximately 0.5% of the City's current 35 million gallons per day (MGD) current dry weather flow. The proposed Project would increase the amount of wastewater requiring treatment. The wastewater would be treated at the RWCF. Occupancy of the proposed Project would be prohibited without an issuance of sewer allocation as required by Stockton Municipal Code Section 13.12.100, Mandatory Sanitary Service Required. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

The Project by itself does not exceed the existing capacity of the wastewater treatment plant. The Project and any future cumulative projects would be required to secure adequate wastewater treatment capacity/allocation prior to occupancy of any building which would require wastewater treatment services. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Impact 4.21: Cumulative Impact on Water Utilities (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would require extension of offsite water conveyance infrastructure to the Project site for potable water and irrigation water. All offsite water utility improvements will be in or adjacent to existing roadways along the perimeter of the Project site, thereby limiting any potential impact to areas that were not already disturbed. The proposed Project would also require the construction of new onsite water conveyance infrastructure for potable water and irrigation water.

Water supply will be provided by the City of Stockton, which includes surface and ground water supplies. Water distribution will be by an underground distribution system installed as per the City of Stockton standards and specifications. Underground potable water pipelines (24 inch) would be

extended to the Project site as part of the Newcastle Water Main Extension Project. The proposed Project will also be required to provide the City with a 0.5-acre well site for the development of a future potable water well to serve area needs.

The proposed Project would also require the construction of new onsite water conveyance infrastructure for potable water and irrigation water. The Newcastle Water Line Project, an approved Capital Improvement Project within the City of Stockton, will run through the Project site within the future right-of-way of Commerce Drive to serve existing and future development in the area. This Capital Improvement Project is intended to accommodate additional projects and induce growth outside of the proposed Project area. However, this Capital Improvement Project was previously analyzed and contemplated for growth and service capacity within the City's Water Master Plan and therefore, construction of the onsite potable water infrastructure would not have the potential to induce growth beyond what was already analyzed within the City's Master Plans. It should be noted that the potential environmental impacts associated with off-site infrastructure improvements associated with the larger Tidewater Crossing Project, which included the SSCC Project site, were analyzed as part of the Tidewater Crossing Project Environmental Impact Report (SCH No. 2005122101) certified on October 28, 2008. The Tidewater Crossing Project and the associated infrastructure improvements are considered baseline conditions.

The proposed Project would not require the construction of new water treatment facilities or expansion of existing water treatment facilities for water service. The City has adequate water supplies to support existing demand in the City in addition to the proposed Project under average daily and maximum daily demand conditions. Water demand for current and proposed uses in the City of Stockton is approximately 26,319 acre-feet per year (AFY) (in Year 2015). The City has a total supply of 96,480 AFY (Year 2015), leaving 70,161 AFY available. According to the WSA prepared for the project, the proposed Project's water demand would be approximately 626 AFY.

The Water Supply Assessment completed for the proposed Project demonstrates that the City's existing and available potable water supplies are sufficient to meet the City's existing and projected future potable water demands to the year 2040 under all hydrologic conditions. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Impact 4.22: Cumulative Impact on Stormwater Facilities (Less than Significant and Less than Cumulatively Considerable)

The Project proposes to construct two storm drain detention basins to provide flood control. The primary basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. The Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5. The drainage channel will connect to a proposed outfall to the detention basin, generally located within the northeast area of the basin. A storm drain (ranging from 15 to 84 inches) is proposed within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 and connect to the proposed outfall to the detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the detention basin, generally located within the northeast area of the basin. An outfall from the basin to French Camp Slough will also be constructed (exact size and location to be determined).

The potential environmental effects resulting from construction of the storm drainage system are analyzed throughout this Draft EIR, and in some cases, there are potentially significant impacts associated with construction of this infrastructure. Where impacts are identified for each environmental topic, mitigation measures are developed to avoid, minimize, or compensate for the impact to the extent practicable. All mitigation measures presented throughout this EIR will be implemented to reduce impacts to the extent practicable. There will not be any significant impacts beyond what is disclosed in the other chapters of this document. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Impact 4.23: Cumulative Impact on Solid Waste Facilities (Less than Significant and Less than Cumulatively Considerable)

Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use (discussed below). The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day. The remaining capacity is 125,000,000 cubic yards with an anticipated closure year of 2055. The permitted maximum disposal at the North County Landfill is 1,200 tons per day. The remaining capacity is 35,400,000 cubic yards with an anticipated closure year of 2048.

The commercial portion of the Project site is estimated to generate roughly five pounds per day per 1,000 square feet. It is estimated that the 467,834 square feet of commercial space would generate 2,339 pounds per day of solid waste.

The industrial portion of the Project site is estimated to generate roughly five pounds per day per 1,000 square feet. It is estimated that 12,960,747 square feet of industrial space would generate roughly 64,803 pounds per day of solid waste. Note, this estimate of the square footage for the commercial and industrial space is considered a worst-case scenario and may prove to be an overestimate.

The total solid waste generated by the proposed Project is estimated to be 33.57 tons per day. Solid waste generated in the City is disposed at the Forward Landfill. This landfill is projected to close in the year 2020. An expansion was approved by the Board of Supervisors earlier this year to extend the life of the landfill. When the Forward Landfill no longer has capacity, the City can utilize the Foothill Landfill as a location for solid waste disposal. The City's solid waste per capita generation has decreased since 2007 due to the waste diversion efforts of the City. The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. The permitted vehicle limit is 620 vehicles per day; however, the landfill averages 212 daily trucks.[1] The remaining capacity of the landfill is 22.1

[1] San Joaquin County Community Development Department. Draft Environmental Impact Report – Forward Landfill Expansion (SCH#2008052024). September 2012. Page III-13.

million cubic yards. The addition of solid waste associated with the proposed Project, approximately 15,537.5 pounds or 7.77 tons per day (9.17 cubic yards per day) at total buildout, to the Forward Landfill would not exceed the landfill's remaining capacity.

The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. In conclusion, implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic. Thus, impacts related to solid waste facilities would be a ***less than cumulatively considerable contribution***.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the proposed Project would result in the conversion of approximately 422 acres of land comprised of active agricultural fields for the development of industrial, commercial, open space, public facilities, and public roadway right-of-way land uses. Development of the proposed Project would constitute a long-term commitment to these uses. It is unlikely that circumstances would arise that would justify the return of the land to its previous condition as agricultural or vacant rural land.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for the initial construction, infrastructure installation and connection to existing utilities, and its continued maintenance. Construction of the proposed Project would require the commitment of a variety of other non-renewable or slowly renewable natural

resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the proposed Project. The introduction of industrial uses to the Project site will result in an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the proposed Project will increase consumption of available supplies, including gasoline and diesel. These energy resource demands relate to initial Project construction, Project operation and site maintenance and the transport of people and goods to and from the Project site.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed Project are discussed in Chapters 3.1 through 3.14 and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

- Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character
- Impact 3.2-1: The proposed Project would result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses
- Impact 3.7-1: Project implementation would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases
- Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)
- Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region
- Impact 4.4: Cumulative Impact on Agricultural Resources
- Impact 4.5: Cumulative Impact on the Region's Air Quality
- Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions
- Impact 4.18: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)

5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

PROJECT OBJECTIVES

The principal objective of the proposed Project is the approval and subsequent implementation of the South Stockton Commerce Center (SSCC) Project (the proposed Project). The proposed Project involves the development of approximately 422-acres of land which will include: industrial uses, commercial uses, open space, public facilities, and public roadway right-of-way land uses, as described below.

The Project area aims to develop in multiple phases, a well-planned industrial type project that will attract businesses to the City of Stockton and provide for local employment opportunities. The Project also provides for a seamless expansion of the existing industrial area located in southeast Stockton, in the vicinity of the Stockton Airport, and creates the opportunity for rail served parcels from the adjacent Union Pacific rail line.

The following objectives have been identified for the proposed SSCC Project:

- Logical Expansion of Industrial Area: Seamless expansion of the existing industrial area around the Stockton Airport and being positioned to easily access multiple forms of transportation (i.e., rail, air, multiple state highways (I-5 and SR-99) and local road network).
- Develop a Class A Industrial Complex and Amenities: The large-scale development (298 acres of industrial uses) provides for a class A-type industrial complex with a variety of building sizes suited for a variety of end users, landscaped roadways and open space elements along French Camp Slough.
- Employment Opportunities: Provide for local and regional employment opportunities that take advantage of the Project area's high level of accessibility, allow for the expansion of the City's economic base, help create a jobs/housing balance, and reduce the commute for regional residents.
- Improve Circulation: Create safe access to the industrial area by constructing an overpass of the Union Pacific Railroad line.
- Enhance Transportation: Create the ability to develop rail service to the three largest parcels within the SSCC Project Area, if needed.
- Public Facilities and Services: Provide infrastructure and services that meet City standards and integrate with existing and planned facilities.

- Phasing: Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed Project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

The City of Stockton considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the Project would be avoided or substantially lessened?
- Is there a site available within the City's Sphere of Influence with the appropriate size and characteristics such that it would meet the basic Project objectives?

The City's consideration of alternative locations for the Project included a review of previous land use planning and environmental documents in Stockton including the General Plan. The search included a review of lands in the south part of Stockton that are located within the Sphere of Influence and is otherwise suitable for development. It was found that much of the undeveloped land located to the west of the Project site is located within a 100-, 200-, or 500-year flood plain. The areas within the 200-year flood plain are severely constrained and are not developable until the City of Stockton is able to design, fund, and construct a solution to protect this area from the 200-year flood plain. The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. The City has determined that alternative locations outside the Sphere of Influence would not be feasible because an expansion of the Sphere of Influence would induce unplanned growth and cause impacts greater than development on the Project site. For these reasons, the City of Stockton determined that there are no feasible alternative locations.

In addition, as discussed in Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 (Goleta II), where a project is consistent with an approved general plan, no off-site alternative need be analyzed in the EIR. The EIR "is not ordinarily an occasion for the reconsideration or overhaul of fundamental land-use policy." (Goleta II, supra, 52 Cal.3d at p. 573.) In approving a general plan, the local agency has already identified and analyzed suitable alternative sites for particular types of development and has selected a feasible land use plan. "Informed and enlightened regional planning does not demand a project EIR dedicated to defining alternative sites without regard to feasibility. Such ad hoc reconsideration of basic planning policy is not only unnecessary, but would be in contravention of the legislative goal of long-term, comprehensive planning." (Goleta II, supra, 52 Cal.3d at pp. 572-573.) The proposed Project is generally consistent with the types of uses considered in the Stockton General Plan and associated EIR. Further, the proposed Project is

consistent with the site's existing General Plan designations, but due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment for the two areas between Airport Way and the Union Pacific Railroad right-of-way. These areas are currently designated Commercial and Industrial. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be designated Commercial and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial.

Thus, in addition to the reasons discussed above, an off-site alternative need not be further discussed in this EIR.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Three alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Reduced Project Alternative:** Under this alternative, the proposed Project would be developed with the same types of commercial, industrial, open space, and public facility uses as described in the Project Description, but the commercial and industrial square footage would decrease by 25 percent, the amount of open space would decrease by 25 percent, and the amount of developed land would decrease by 25 percent.
- **Agriculture Protection Alternative:** Under this alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. The Project site is currently comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives identified by the City of Stockton.

REDUCED PROJECT ALTERNATIVE

Under the Reduced Project Alternative, the proposed Project would be developed with the same types of commercial, industrial, open space, and public facility uses as described in the Project Description, but the commercial and industrial square footage would decrease by 25 percent, the amount of proposed, on-site open space would decrease by 25 percent, and the amount of developed land would decrease by 25 percent. Under the Reduced Project Alternative, the total

Project area would decrease from 422.22 acres under the proposed Project to 316.67 acres. The remaining 105.55 acres outside of the Reduced Project Alternative area would remain in their current condition (agricultural and open space uses). The 105.55 acres, which would not be included in the development area for this alternative, would be located in the western and southern portions of the site in order to ensure continued preservation of French Camp Slough.

The amount of commercial uses would decrease from 467,834 square feet (sf) to 350,875 sf, the amount of industrial uses would decrease from 12,960,747 sf to 9,720,560 sf, and the open space area would decrease from 54 acres to 40.5 acres. Because the amount of urban development would decrease, the size of the storm basins would also decrease. This would result in a decrease from 41 acres of public facility uses to 30.75 acres. The areas developed with urban uses would be located in the eastern portion of the Project site. In order to maintain the proposed rail service under this alternative, the industrial uses would be located adjacent east of the Union Pacific Railroad (UPRR) line.

AGRICULTURE PROTECTION ALTERNATIVE

Under the Agriculture Protection Alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative. The reasoning behind this alternative is to present an alternative to protect some of the agricultural land on the Project site. Development of the proposed Project would result in the permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland.

Under this alternative, the proposed Project would be developed with the same components as described in the Project Description, but the size of the industrial and commercial areas would be reduced resulting in an increase of undeveloped land beyond the Reduced Project Alternative. The commercial and industrial uses would be two-story in order to reduce the developed area footprint by approximately 50 percent while providing the same square footage as the Project. The 11.0-acre commercial area would be reduced to 5.5 acres, the 298.0-acre industrial area would be reduced to 149.0 acres, and the 54.0-acre open space area would be reduced to 27.0 acres. The total acreage dedicated to the proposed Project would be reduced by approximately 50 percent. The total acreage developed would be 211.11 acres, with 211.11 acres remaining in its current state. The 211.11 acres which would not be included in the development area for this alternative would be located in the western portion of the site in order to ensure continued preservation of French Camp Slough. Because the development areas would be contained within the eastern half of the Project site, the UPRR would not be utilized under this alternative.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-1 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be significantly altered as a result of Project implementation. Consistency with the General Plan, Stockton Zoning Ordinance, and development standards would ensure that impacts are reduced to the greatest extent possible. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Implementation of the lighting plan required by Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the mitigation measure would ensure that excessively reflective building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare. As such, impacts related to nighttime lighting and daytime glare would be less than significant with mitigation.

The No Project (No Build) Alternative would leave the Project site in its existing state and would not result in increases in daytime glare or nighttime lighting. The visual character of the Project site would not change under this alternative compared to existing conditions.

The proposed Project would result in potentially significant new sources of light and glare. The proposed Project would also result in impacts to the existing visual character or quality of the Project site and its surroundings. However, the No Project (No Build) Alternative would avoid these impacts altogether. As such, this impact would be reduced when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is used for agricultural purposes. Development of the proposed Project would result in the permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland. The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on agricultural land, no potential for conflicts with existing agricultural resources, and no potential for conflict with regulations and plans intended to protect those resources. As such, this impact would be reduced when compared to the proposed Project.

Air Quality

Under buildout conditions in the San Joaquin County, the San Joaquin Valley Air Basin (SJVAB) would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, operational emissions would exceed the San Joaquin Valley Air Pollution Control District (SJVACPD) thresholds of significance for NOx, ROG, and PM_{10}. Therefore, the proposed Project is required to implement all feasible mitigation to reduce criteria

pollutant emissions to below the applicable SJVAPCD thresholds of significance. The proposed Project would implement Mitigation Measure 3.3-1 included in Section 3.3, which would ensure that individual projects that are approved as part of the proposed Project would reduce emissions to less than the applicable SJVAPCD thresholds of significance.

As discussed in Impact 3.3-2 in Section 3.3, Project annual NOx construction emissions would exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. Implementation of Mitigation Measures 3.3-2 through 3.3-6 included in Section 3.3 would further reduce proposed Project construction related emissions to the extent possible.

Additionally, as discussed in Impact 3.3-4 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of toxic air contaminants (TACs) for this type of project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-9 in Section 3.3, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Biological Resources

As described in Section 3.4 Biological Resources, construction on the Project site has the potential to result in impacts to special-status species in the region. The California Natural Diversity Database (CNDDB) currently contains records for Swainson's hawk, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species. Mitigation Measure 3.4-1 requires participation with the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the San Joaquin Council of Governments (SJCOG) through the authorization of SJMSCP coverage. Through the implementation of various mitigation measures found in Section 3.4, implementation of the proposed Project will have a less than significant impact on biological resources.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, no habitat would be removed, and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Cultural and Tribal Resources

As discussed in Section 3.5, Cultural and Tribal Resources, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the NRHP. As such, the Project site does not contain a "historical resource" as defined in CEQA Guidelines Section 15064.5.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

The No Project (No Build) Alternative would result in no ground disturbing activities related to the proposed Project and would not have the potential to disturb or destroy cultural, historic, and archaeological resources, as well as paleontological resources. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural resources as the entire Project site would continue to be used for agriculture production. As such, this impact would be reduced when compared to the proposed Project.

Geology and Soils

As described in Section 3.6, implementation of the proposed Project would result in the construction of new structures on the Project site. The new structures would be subject to seismic, geologic, and soils hazards for the life of the Project. Mostly notably, the proposed Project would be subject to ground shaking, soil erosion, and expansive soils. Mitigation measures identified in Section 3.6 would reduce the potential impacts to a less than significant level.

The No Project (No Build) Alternative would result in the Project site remaining in its existing condition. There are no structures on the Project site that are subject to seismic or geologic risks. The No Project (No Build) Alternative would not involve new construction that could be subject to seismic, geologic or soils hazards; thus, this alternative would have no potential for impact. As such, this impact would be reduced when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Short-term construction greenhouse gas (GHG) emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed Project. As presented in Table 3.7-2 in Section 3.7, short-term construction emissions of GHGs are estimated at a maximum of approximately 13,236 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year. As shown in Table 3.7-3, the annual mitigated operational emissions of GHGs associated with the proposed Project would be approximately 125,072 MT CO_2e. The Project would generate GHG emissions, directly and indirectly, that would exceed the 4.84 MT CO2e/SP/year in

2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Although implementation of the mitigation measures presented in Section 3.3: Air Quality of this EIR would reduce the overall annual GHG emissions associated with the proposed Project, the proposed Project would be required to implement additional mitigation to ensure emissions are reduced to below the applicable threshold.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to GHG reductions. As such, this impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

The Project site is not associated with any existing hazardous materials spills; however, after agricultural operations cease, and development is anticipated to occur, the applicant or future project proponent would be required to hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate environmental screening levels (ESLs) for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site, and the potential for hazardous material release on the Project site would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Hydrology and Water Quality

As described in Section 3.9, implementation of the proposed Project has the potential to result in the violation of water quality standards and the discharge of pollutants into surface waters during both construction and long-term operations. Construction operations could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff and could enter groundwater or surface water systems. Mitigation measures provided in Section 3.9 would reduce potential water quality impacts to a less

than significant level. The proposed Project would not significantly impact groundwater recharge or place persons or structures in a flood hazard zone.

Under the No Project (No Build) Alternative, potential water quality impacts from construction and operation of the proposed Project would be eliminated. While groundwater recharge is not considered a significant impact under the proposed Project, under this alternative, the land will be kept in its present state with the majority of the Project site being used for agricultural purposes. The No Project (No Build) Alternative will have a greater chance of groundwater recharge because it does not introduce large areas of impervious surfaces as would the proposed Project. As such, potential impacts related to hydrology and water quality would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

Land Use and Population

The Project would not directly introduce new residents to the City as no housing is proposed as part of the Project. It is noted, however, that some portion of the proposed Project employees could become Stockton residents. The Project would require a zoning and general plan amendment for land use changes. However, impacts to land use are considered less than significant.

The No Project (No Build) Alternative would result in no changes to land use and would have no development. Because the No Project (No Build) Alternative would not add any additional employment population, impacts related to population would be reduced when compared to the proposed Project. It is noted, however, that the employment growth resulting from the proposed Project would be within the growth projections assumed for the Project site by the General Plan and associated EIR. The Envision Stockton 2040 General Plan Land Use Map designates the Project site as Industrial, Commercial, and Open Space/Agriculture. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). The No Project (No Build) Alternative would be inconsistent with the General Plan and zoning designations for the site because the agricultural uses which would continue on the site under this alternative are not allowed within the Industrial or Commercial land use, or within the IL or CG zoning districts. Overall, the impacts related to land use and population under this alternative would be greater compared to the proposed Project.

Noise

The primary noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks, as well as from vehicular traffic. Mitigation measures provided in Section 3.12 would reduce all potential impacts to a less than significant level. Under the No Project (No Build) Alternative, the Project site would not be developed and there would be no potential for new noise sources. As such, this impact would be reduced when compared to the proposed Project.

Public Services

Development of the proposed Project will require payment of all applicable fees and assessments required to fund its fair share of public services. This funding would assist in the development of facilities in order to meet the City's standards. The proposed Project would have a less than significant impact to fire, police, schools, and recreational facilities.

Under the No Project (No Build) Alternative, the Project site would remain undeveloped and there would be no increased demand for public services or recreation. The No Project (No Build) Alternative would have a reduced impact when compared to the proposed Project because demand on public services would be reduced when compared to the proposed Project.

Transportation and Circulation

The No Project (No Build) Alternative would not introduce additional vehicle trips onto the area roadways. It was determined that the proposed Project would cause an increase in vehicle miles traveled (VMT) for home-based work trips per employee for Baseline and Cumulative With Project Conditions. Mitigation was identified to alleviate long term impacts; however, impacts related to VMT were deemed to be significant and unavoidable. All other transportation related impacts were determined to be less than significant. Under the No Project (No Build) Alternative, these potential impacts would be avoided, and the No Project (No Build) Alternative would have a reduced traffic impact when compared to the proposed Project.

Utilities

Implementation of the proposed Project would result in increased flows to the public wastewater system. The wastewater system is capable of handling the increased flows with their existing permit and infrastructure.

Implementation of the proposed Project would result in increased demand for potable water. The City has adequate water supply to handle the increased demand with their existing supply and infrastructure.

Implementation of the proposed Project would result in increased storm drainage from new impervious surfaces. The proposed Project includes a storm drainage collection system to handle the increased storm drainage.

Implementation of the proposed Project would result in increased generation of solid waste. However, the landfill has adequate capacity to dispose the solid waste.

Under the No Project (No Build) Alternative the Project site would not increase the demand for any utilities, including wastewater services, potable water supplies, or solid waste disposal. There would be no need to construct stormwater drainage infrastructure. Overall, the demand for utilities would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

REDUCED PROJECT ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be significantly altered as a result of Project implementation. Consistency with the General Plan, Stockton Zoning Ordinance, and development standards would ensure that impacts are reduced to the greatest extent possible. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Implementation of the lighting plan required by Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the mitigation measure would ensure that excessively reflective building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare. As such, impacts related to nighttime lighting and daytime glare would be less than significant with mitigation.

These impacts would be similar with the Reduced Project Alternative as this alternative is located on the same site and would have similar uses as the proposed Project. However, due to the reduction in developed area and square footage compared to the Project, the changes to the visual character of the site would be less pronounced. The impacts of light and glare would still occur and could be mitigated to a less than significant level. However, due to the decreased developed area and square footage, the Reduced Project Alternative would have a slightly reduced impact on visual resources when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is used for agricultural purposes. Development of the proposed Project would result in the permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland. While this alternative would decrease the amount of developed area by 25 percent compared to the Project, 316.67 acres would still be converted from agricultural use. While this alternative would reduce the impacts to agricultural lands when compared to the proposed Project, the loss of the agricultural land, including prime farmland, would be a significant and unavoidable impact under both the Reduced Project Alternative and the proposed Project. Overall, the Reduced Project Alternative would have slightly reduced impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under buildout conditions in the San Joaquin County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, operational emissions would exceed the SJVACPD thresholds of significance for NOx, ROG, and PM_{10}. Therefore, the proposed Project is required to implement all feasible mitigation to reduce criteria pollutant emissions to below the applicable SJVAPCD thresholds of significance. The proposed Project would implement Mitigation Measure 3.3-1 included in Section 3.3, which would ensure that individual projects that are approved as part of the proposed Project would reduce emissions to less than the applicable SJVAPCD thresholds of significance.

As discussed in Impact 3.3-2 in Section 3.3, Project annual NOx construction emissions would exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations.

Implementation of the Mitigation Measure 3.3-2 through 3.3-6 included in Section 3.3 would further reduce proposed Project construction related emissions to the extent possible.

Additionally, as discussed in Impact 3.3-4 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of TACs for this type of project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-9 in Section 3.3, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

Implementation of the proposed Project would cause an increase in traffic, which is the dominant source of air emissions associated with the proposed Project. Under the Reduced Project Alternative, the Project site would be developed with the same types of commercial, industrial, open space, and public facility uses as described in the Project Description, but the commercial and industrial square footage would decrease by 25 percent, the amount of open space would decrease by 25 percent, and the amount of developed land would decrease by 25 percent. Therefore, the amount of traffic generated from the Reduced Project Alternative would be reduced by 25 percent under this alternative. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the reduced trip volume would result in a reduced amount of the mobile source emissions. Additionally, the area source emissions would be reduced when compared to the Project.

Uses in the Reduced Project Alternative would be required to adhere to the same mitigation measures as the proposed Project. The Reduced Project Alternative would result in reduced impacts related to air quality when compared to the proposed Project; however, it is likely that the significant and unavoidable air quality impact would remain under this alternative.

Biological Resources

As described in Section 3.4 Biological Resources, construction on the Project site has the potential to result in impacts to special-status species in the region. The proposed Project would provide open space areas in the western portion of the site in order to avoid French Camp Slough. The CNDDB currently contains records for Swainson's hawk, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species. Mitigation Measure 3.4-1 requires participation with the SJMSCP, which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage. Through the implementation of the mitigation measures found in Section 3.4, implementation of the proposed Project will have a less than significant impact on biological resources.

The Reduced Project Alternative would result in development of 316.67 acres of the Project site. Under this alternative, the 105.55 acres which would not be included in the development area would be located in the western and southern portions of the site in order to preserve a larger area around French Camp Slough. The preservation of 105.55 acres of the 422.22-acre Project site would provide greater biological benefits even though the remainder of the Project site would be developed. As such, the Reduced Project Alternative would result in slightly less impacts to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

As discussed in Section 3.5, Cultural and Tribal Resources, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the NRHP. As such, the Project site does not contain a "historical resource" as defined in CEQA Guidelines Section 15064.5.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

The Reduced Project Alternative would result in development of 75 percent of the Project site. The 105.55 acres which would not be included in the development area for this alternative would be located in the western and southern portions of the site in order to preserve a larger area around French Camp Slough. This would result in a reduced potential to disturb or destroy cultural, historic, and archaeological resources, as well as paleontological resources. The same mitigation measures required for the proposed Project would be required for this alternative. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the Reduced Project Alternative would result in a slightly reduced potential for impacts to cultural resources.

Geology and Soils

As described in Section 3.6, implementation of the proposed Project would result in the construction of new structures on the Project site. The new structures would be subject to seismic, geologic, and soils hazards for the life of the Project. Mostly notably, the proposed Project would be subject to ground shaking, soil erosion, and expansive soils. Mitigation measures identified in Section 3.6 would reduce the potential impacts to a less than significant level.

Under the Reduced Project Alternative, the amount of developed area would be reduced by 25 percent compared to the Project, and the number of structures that would be subject to hazardous geological conditions would be reduced by 25 percent. While the proposed Project is not anticipated to result in significant impacts from geology and soils with mitigation, the Reduced Project

Alternative would result in a slightly reduced potential for impacts when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed Project. As presented in Table 3.7-2 in Section 3.7, short-term construction emissions of GHGs are estimated at a maximum of approximately 13,236 $MTCO_2e$ per year. As shown in Table 3.7-3, the annual mitigated operational emissions of GHGs associated with the proposed Project would be approximately 125,072 MT CO_2e. The Project would generate GHG emissions, directly and indirectly, that would exceed the 4.84 $MTCO_2e$/SP/year in 2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Although the implementation of the mitigation measures presented in Section 3.3, Air Quality, of this EIR would reduce the overall annual GHG emissions associated with the proposed Project, the proposed Project would be required to implement additional mitigation to ensure emissions are reduced to below the applicable threshold.

Under the Reduced Project Alternative, the Project site would be developed with the same types of uses and structures as the proposed Project, but the amount of building area and developed area would be decreased by 25 percent. All uses in the Reduced Project Alternative would be required to adhere to the same mitigation measure as the proposed Project. The reduced amount of development would result in a corresponding reduced level of GHG emissions when compared to the proposed Project. As such, the GHG emissions impact would be reduced with this Alternative when compared to the proposed Project; however, it is likely that the significant and unavoidable GHG impact would remain under this alternative.

Hazards and Hazardous Materials

For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

The Project site is not associated with any existing hazardous materials spills; however, after agricultural operations cease, and development is anticipated to occur, the applicant or future project proponent would be required to hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.

Under the Reduced Project Alternative, the type of urban uses would not change when compared to the proposed Project, but the amount of development would be reduced by 25 percent. This alternative would still use the hazardous materials identified under the proposed Project. As such, this alternative would have equal impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

As described in Section 3.9, implementation of the proposed Project has the potential to result in the violation of water quality standards and the discharge of pollutants into surface waters during both construction and long-term operations. Construction operations could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff and could enter groundwater or surface water systems. Mitigation measures provided in Section 3.9 would reduce potential water quality impacts to a less than significant level. The proposed Project would not significantly impact groundwater recharge or place persons or structures in a flood hazard zone.

Under the Reduced Project Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be reduced equivalent to the amount of land area that remains undeveloped under this alternative. The increased amount of undeveloped land under this alternative will remain pervious to precipitation, which will facilitate groundwater recharge and the natural biofiltration of stormwater. This alternative will still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be slightly reduced under the Reduced Project Alternative when compared to the proposed Project.

Land Use and Population

The Project would not directly introduce new residents to the City as no housing is proposed as part of the Project. It is noted, however, that some portion of the proposed Project employees could become Stockton residents. The Project would require a zoning and general plan amendment for land use changes. However, impacts to land use are considered less than significant.

The Reduced Project Alternative is not expected to induce substantial population growth in the area. Similar to the proposed Project, development of the Reduced Project Alternative would add employment-generating uses to the Project site, but at a reduced level. Therefore, impacts relating to population would be equal under this alternative. The Envision Stockton 2040 General Plan Land Use Map designates the Project site as Industrial, Commercial, and Open Space/Agriculture. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). The Reduced Project Alternative would be inconsistent with the General Plan and zoning designations for the site because the agricultural uses which would continue on a portion of the site under this alternative are not allowed within the Industrial or Commercial land use, or within the IL or CG zoning districts. As such, similar to the Project, a General Plan amendment and rezone would be

required. Overall, the impacts related to land use and population under this alternative would be similar to the proposed Project.

Noise

The primary noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks, as well as from vehicular traffic. Mitigation measures provided in Section 3.12 would reduce all potential impacts to a less than significant level. The Reduced Project Alternative would result in a reduced amount of industrial and commercial uses compared to the Project; therefore, the noise impacts associated with vehicular and operational activities of the proposed Project would be reduced under this alternative. All noise issues would be mitigated, as appropriate, through noise attenuation and best management practices under both the proposed Project and the Reduced Project Alternative. Therefore, under this alternative, noise impacts are slightly reduced when compared to the proposed Project.

Public Services

Development of the proposed Project will requirement payment all applicable fees and assessments required to fund its fair share of public services. This funding would assist in the development of facilities in order to meet the City's standards. The proposed Project would have a less than significant impact to fire, police, schools, and recreational facilities.

Under the Reduced Project Alternative, the proposed Project would be developed with the same types of commercial, industrial, open space, and public facility uses as described in the Project Description, but the commercial and industrial square footage would decrease by 25 percent, the amount of open space would decrease by 25 percent, and the amount of developed land would decrease by 25 percent. Both the proposed Project and the Reduced Project Alternative would result in less-than-significant impacts to public services. As such, impacts to public services under this alternative would be comparable to the proposed Project.

Transportation and Circulation

It was determined that the proposed Project would cause an increase in VMT for home-based work trips per employee for Baseline and Cumulative With Project Conditions. Mitigation was identified to alleviate long term impacts; however, impacts related to VMT were deemed to be significant and unavoidable. All other transportation related impacts were determined to be less than significant. Under the Reduced Project Alternative, the Project site would be developed with the same components as described in the Project Description, but the amount of square footage and developed area would decrease by 25 percent. The reduced amount of commercial and industrial uses would result in a reduced amount of traffic generated by the Reduced Project Alternative.

Uses in the Reduced Project Alternative would be required to adhere to the same mitigation measures as the proposed Project. It is likely that the significant and unavoidable VMT impact would remain under this alternative. Overall, the Reduced Project Alternative would result in reduced traffic related impacts when compared to the proposed Project.

Utilities

Implementation of the proposed Project would result in increased flows to the public wastewater system. The wastewater system is capable of handling the increased flows with their existing permit and infrastructure.

Implementation of the proposed Project would result in increased demand for potable water. The City has adequate water supply to handle the increased demand with their existing supply and infrastructure.

Implementation of the proposed Project would result in increased storm drainage from new impervious surfaces. The proposed Project includes a storm drainage collection system to handle the increased storm drainage.

Implementation of the proposed Project would result in increased generation of solid waste. However, the landfill has adequate capacity to dispose the solid waste.

Under the Reduced Project Alterative, the Project site would be developed with the same components as described in the Project Description, but the amount of square footage and developed area would decrease by 25 percent. This would result in a reduced amount of wastewater, water demand, and solid waste generated from the Project site. The total Project area would decrease from 422.22 acres to 316.67 acres. The remaining 105.55 acres outside of the Reduced Project Alternative area would remain in their current condition (agricultural and open space uses). This alternative would increase the amount of pervious soils, thereby increasing opportunities for stormwater retention at the Project site. However, uses in Reduced Project Alterative would be required to adhere to the same mitigation measures as the proposed Project. The Reduced Project Alternative would result in reduced demand on utility systems when compared to the proposed Project.

Overall, this alternative would have reduced wastewater treatment demand, reduced water demand, reduced solid waste generated, and reduced storm water runoff when compared to the proposed Project. As such, this alternative would have reduced utilities impacts when compared to the proposed Project.

AGRICULTURE PROTECTION ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be significantly altered as a result of Project implementation. Consistency with the General Plan, Stockton Zoning Ordinance, and development standards would ensure that impacts are reduced to the greatest extent possible. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Implementation of the lighting plan required by Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the mitigation measure would ensure that excessively reflective

building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare. As such, impacts related to nighttime lighting and daytime glare would be less than significant with mitigation.

Under the Agriculture Protection Alternative, the proposed Project would be developed with the same components as described in the Project Description, but the size of the industrial and commercial areas would be reduced resulting in an increase of undeveloped land beyond the Reduced Project Alternative. The commercial and industrial uses would be two-story in order to reduce the developed area footprint while providing the same square footage as the Project. Although the developed area would be reduced by 50 percent compared to the Project, the impacts to the existing visual quality would be similar to the proposed Project as 211.11 acres of the site would be developed with the same uses as under the proposed Project, just at a higher intensity. As such, there would still be an impact to the visual character under this alternative. The impact associated with increased light and glare in the developed area would be mitigated under both the proposed Project and the Agriculture Protection Alternative. Under this alternative, the changes to the existing visual quality would be similar to the proposed Project in the areas that are developed, but would be significantly less in the areas that are not developed. Overall, this alternative would have a reduced impact to aesthetics when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is used for agricultural purposes. Development of the proposed Project would result in the permanent conversion of 158.6 acres of Prime Farmland, 259.3 acres of Farmland of Statewide Importance, and 4.3 acres of Unique Farmland. While this alternative would decrease the amount of developed area by 50 percent compared to the Project, 211.11 acres would still be converted from agricultural use. While this alternative would reduce the impacts to agricultural lands when compared to the proposed Project, the loss of the agricultural land, including prime farmland, would be a significant and unavoidable impact under both this Alternative and the proposed Project. Overall, the Agriculture Protection Alternative would have reduced impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under buildout conditions in the San Joaquin County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, operational emissions would exceed the SJVACPD thresholds of significance for NOx, ROG, and PM_{10}. Therefore, the proposed Project is required to implement all feasible mitigation to reduce criteria pollutant emissions to below the applicable SJVAPCD thresholds of significance. The proposed Project would implement Mitigation Measure 3.3-1 included in Section 3.3, which would ensure that individual projects that are approved as part of the proposed Project would reduce emissions to less than the applicable SJVAPCD thresholds of significance.

As discussed in Impact 3.3-2 in Section 3.3, Project annual NOx construction emissions would exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. Implementation of the Mitigation Measures 3.3-2 through 3.3-6 included in Section 3.3 would further reduce proposed Project construction related emissions to the extent possible.

Additionally, as discussed in Impact 3.3-4 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of TACs for this type of project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-9 in Section 3.3, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

Implementation of the proposed Project would cause an increase in traffic, which is the dominant source of air emissions associated with the proposed Project. Under the Agriculture Protection Alternative, the same types and amounts of commercial, industrial, open space, and public facility uses as described in the Project Description would be developed, but the amount of developed land would decrease by 50 percent. Because the type and amount of trip-generating uses would be equal to the Project, the amount of traffic generated from the Agriculture Protection Alternative would be equal to the proposed Project. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the comparable trip volume would result in an equal amount of the mobile source emissions. Additionally, the area source emissions would be equal when compared to the Project.

Uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measures as the proposed Project. The Agriculture Protection Alternative would result in similar impacts related to air quality when compared to the proposed Project and the significant and unavoidable air quality impact would remain under this alternative.

Biological Resources

As described in Section 3.4 Biological Resources, construction on the Project site has the potential to result in impacts to special-status species in the region. The proposed Project would provide open space areas in the western portion of the site in order to avoid French Camp Slough. The CNDDB currently contains records for Swainson's hawk, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species. Mitigation Measure 3.4-1 requires participation with the SJMSCP, which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage. Through the implementation of various mitigation

measures found in Section 3.4, implementation of the proposed Project will have a less than significant impact on biological resources.

The Agriculture Protection Alternative would result in development of 211.11 acres of the Project site. Under this alternative, the 211.11 acres which would not be included in the development area for this alternative would be located in the western portion of the site in order to preserve a larger area around French Camp Slough. The preservation of 211.11 acres of the 422.22-acre Project site would provide biological benefits even though the remainder of the site would be developed. As such, the Agriculture Protection Alternative would result in less impact to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

As discussed in Section 3.5, Cultural and Tribal Resources, the Project site had been surveyed by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project site; however, a section of the Tidewater and Southern Railroad was recorded (Resource P-39-000015). This railroad line subdivides the Project site. Because the original components of the rail system have been changed and/or altered, this segment of the rail line is not considered eligible for the NRHP. As such, the Project site does not contain a "historical resource" as defined in CEQA Guidelines Section 15064.5.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

The Agriculture Protection Alternative would result in development of 50 percent of the Project site. The 211.11 acres which would not be included in the development area for this alternative would be located in the western half of the site in order to preserve a larger area around French Camp Slough. This would result in a reduced potential to disturb or destroy cultural, historic, and archaeological resources, as well as paleontological resources. The same mitigation measures required for the proposed Project would be required for this alternative. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the Agriculture Protection Alternative would result in a reduced potential for impacts to cultural resources.

Geology and Soils

As described in Section 3.6, implementation of the proposed Project would result in the construction of new structures on the Project site. The new structures would be subject to seismic, geologic, and soils hazards for the life of the Project. Mostly notably, the proposed Project would be subject to ground shaking, soil erosion, and expansive soils. Mitigation measures identified in Section 3.6 would reduce the potential impacts to a less than significant level.

Under the Agriculture Protection Alternative, the amount of developed area would be reduced by 50 percent compared to the Project, but the structural square footage that would be subject to

hazardous geological conditions would be equal to the Project. Both the proposed Project and the Agriculture Protection Alternative would not result in significant impacts from geology and soils with mitigation. As such, the Agriculture Protection Alternative would result in similar geology and soils impacts when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed Project. As presented in Table 3.7-2 in Section 3.7, short-term construction emissions of GHGs are estimated at a maximum of approximately 13,236 $MTCO_2e$ per year. As shown in Table 3.7-3, the annual mitigated operational emissions of GHGs associated with the proposed Project would be approximately 125,072 MT CO_2e. The Project would generate GHG emissions, directly and indirectly, that would exceed the 4.84 $MTCO_2e$/SP/year in 2040 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Although the implementation of the mitigation measures presented in Section 3.3, Air Quality, of this EIR would reduce the overall annual GHG emissions associated with the proposed Project, the proposed Project would be required to implement additional mitigation to ensure emissions are reduced to below the applicable threshold.

Under the Agriculture Protection Alternative, the Project site would be developed with the same types and amounts of commercial and industrial development as the proposed Project, but the amount of developed area would be decreased by 50 percent. All uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measure as the proposed Project. The equal amount of development would result in a corresponding equal level of GHG emissions when compared to the proposed Project. As such, the GHG emissions impact would be similar to the proposed Project and the significant and unavoidable GHG impact would remain under this alternative.

Hazards and Hazardous Materials

For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

The Project site is not associated with any existing hazardous materials spills; however, after agricultural operations cease, and development is anticipated to occur, the applicant or future project proponent would be required to hire a qualified consultant to perform site-specific soil sampling to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. If results of the soil sampling identify concentrations of hazardous materials exceeding appropriate ESLs for the future site-specific use, on-site remediation would be required in coordination with the San Joaquin County Department of Environmental Health.

Under the Agriculture Protection Alternative, the type of urban uses would not change when compared to the proposed Project, but the amount of developed area would be reduced by 50 percent. This alternative would use the same types and quantities of hazardous materials identified under the proposed Project. As such, this alternative would have equal impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

As described in Section 3.9, implementation of the proposed Project has the potential to result in the violation of water quality standards and the discharge of pollutants into surface waters during both construction and long-term operations. Construction operations could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff and could enter groundwater or surface water systems. Mitigation measures provided in Section 3.9 would reduce potential water quality impacts to a less than significant level. The proposed Project would not significantly impact groundwater recharge or place persons or structures in a flood hazard zone.

Under the Agriculture Protection Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be reduced equivalent to the amount of land area that remains undeveloped under this alternative. The increased amount of undeveloped land under this alternative will remain pervious to precipitation, which will facilitate groundwater recharge and the natural biofiltration of stormwater. This alternative will still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be reduced under the Agriculture Protection Alternative when compared to the proposed Project.

Land Use and Population

The Project would not directly introduce new residents to the City as no housing is proposed as part of the Project. It is noted, however, that some portion of the proposed Project employees could become Stockton residents. The Project would require a zoning and general plan amendment for land use changes. However, impacts to land use are considered less than significant.

The Agriculture Protection Alternative is not expected to induce substantial population growth in the area. Similar to the proposed Project, development of the Agriculture Protection Alternative would add employment-generating uses to the Project site. Therefore, impacts relating to population would be equal under this alternative. The Envision Stockton 2040 General Plan Land Use Map designates the Project site as Industrial, Commercial, and Open Space/Agriculture. The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space). The Agriculture Protection Alternative would be inconsistent with the General Plan and zoning designations for the site because the agricultural uses which would continue on a portion of the site under this alternative are not allowed within the Industrial or Commercial land use, or within the IL or CG zoning districts. As such, similar to the Project, a General Plan amendment and rezone would

be required. Overall, the impacts related to land use and population under this alternative would be similar to the proposed Project.

Noise

The primary noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks, as well as from vehicular traffic. Mitigation measures provided in Section 3.12 would reduce all potential impacts to a less than significant level. The Agriculture Protection Alternative would result in an equal amount of industrial and commercial uses compared to the Project; therefore, the noise impacts associated with vehicular and operational activities of the proposed Project would be equal under this alternative. All noise issues would be mitigated, as appropriate, through noise attenuation and best management practices under both the proposed Project and the Agriculture Protection Alternative. Therefore, under this alternative, noise impacts are similar when compared to the proposed Project.

Public Services

Development of the proposed Project will require payment of all applicable fees and assessments required to fund its fair share of public services. This funding would assist in the development of facilities in order to meet the City's standards. The proposed Project would have a less than significant impact to fire, police, schools, and recreational facilities.

Under the Agriculture Protection Alternative, the proposed Project would be developed with the same types and amounts of commercial, industrial, open space, and public facility uses as described in the Project Description, but the amount of developed land would decrease by 50 percent. Both the proposed Project and the Agriculture Protection Alternative would result in less-than-significant impacts to public services. As such, impacts to public services under this alternative would be comparable to the proposed Project.

Transportation and Circulation

It was determined that the proposed Project would cause an increase in VMT for home-based work trips per employee for Baseline and Cumulative With Project Conditions. Mitigation was identified to alleviate long term impacts; however, impacts related to VMT were deemed to be significant and unavoidable. All other transportation related impacts were determined to be less than significant. Under this alternative, the proposed Project would be developed with the same amount of industrial and commercial areas. The equal amount of commercial and industrial uses would result in an equal amount of traffic generated from the Agriculture Protection Alternative.

Uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measures as the proposed Project; however, the significant and unavoidable VMT impact would remain under this alternative. Overall, the Agriculture Protection Alternative would result in equal traffic related impacts when compared to the proposed Project.

Utilities

Implementation of the proposed Project would result in increased flows to the public wastewater system. The wastewater system is capable of handling the increased flows with their existing permit and infrastructure.

Implementation of the proposed Project would result in increased demand for potable water. The City has adequate water supply to handle the increased demand with their existing supply and infrastructure.

Implementation of the proposed Project would result in increased storm drainage from new impervious surfaces. The proposed Project includes a storm drainage collection system to handle the increased storm drainage.

Implementation of the proposed Project would result in increased generation of solid waste. However, the landfill has adequate capacity to dispose the solid waste.

Under this alternative, the same components as described in the Project Description would be developed, but the amount of developed land would be reduced resulting in an increase of undeveloped land when compared to the Project. The commercial and industrial uses would be two-story in order to reduce the developed area footprint while providing the same square footage as the Project. This would result in a comparable amount of wastewater, water demand, and solid waste generated from the Project site. The total Project area would decrease from 422.22 acres to 211.11 acres. The remaining 211.11 acres outside of the Agriculture Protection Alternative area would remain in their current condition (agricultural and open space uses). This alternative would increase the amount of pervious soils, thereby increasing opportunities for stormwater retention at the Project site. However, uses in Agriculture Protection Alterative would be required to adhere to the same mitigation measures as the proposed Project. The Agriculture Protection Alternative would result in a comparable demand on utility systems when compared to the proposed Project.

Overall, this alternative would have similar wastewater treatment demand, similar water demand, similar solid waste generated, and similar storm water runoff when compared to the proposed Project. As such, this alternative would have similar utilities impacts when compared to the proposed Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Project.

Table 5.0-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the

environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Project Alternative and Agriculture Protection Alternative both rank higher than the proposed Project. The Reduced Project Alternative would have equal impacts in three areas, slightly less impacts in seven areas, and less impacts in four areas. The Agriculture Protection Alternative would have equal impacts in nine areas and less impacts in five areas. Therefore, the Reduced Project Alternative would be the next environmentally superior alternative. It is noted that neither the Agriculture Protection Alternative nor the Reduced Project Alternative fully meet all of the Project objectives. See Section 5.4 below for a comparative evaluation of the objectives for each alternative.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*REDUCED PROJECT ALTERNATIVE*	*AGRICULTURE PROTECTION ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Agricultural Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Air Quality	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Cultural and Tribal Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Geology and Soils	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (3rd Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Land Use and Population	Greater (3rd Best)	Equal (Best)	Equal (2nd Best)
Noise	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Public Services	Less (Best)	Equal (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

5.4 COMPARATIVE EVALUATION OF THE ALTERNATIVES' ABILITY TO SATISFY PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the Project objectives.

1. *Logical Expansion of Industrial Area: Seamless expansion of the existing industrial area around the Stockton Airport and being positioned to easily access multiple forms of transportation (i.e., rail, air, multiple state highways (I-5 and SR-99) and local road network).*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not provide seamless expansion of the existing industrial area around the Stockton Airport and being positioned to easily access multiple forms of transportation. The Reduced Project Alternative would meet this objective because this alternative would result in expansion of an industrial area with access to multiple forms of transportation, including rail, air, and multiple highways. The Agriculture

Protection Alternative would also meet this objective, but to a lesser extent than the proposed Project because the UPRR line would not be utilized.

2. *Develop a Class A Industrial Complex and Amenities: The large-scale development (298 acres of industrial uses) provides for a class A-type industrial complex with a variety of building sizes suited for a variety of end users, landscaped roadways and open space elements.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not provide a large-scale development which provides for a class A-type industrial complex with a variety of building sizes suited for a variety of end users, landscaped roadways and open space elements. Both the Reduced Project Alternative and the Agriculture Protection Alternative would develop a class A-type industrial complex with a variety of building sizes suited for a variety of end users, landscaped roadways and open space elements. However, because both alternatives would reduce the amount of industrial and commercial development. As such, both the Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective, but to a lesser extent than the proposed Project.

3. *Employment Opportunities: Provide for local and regional employment opportunities that take advantage of the Project area's high level of accessibility, allow for the expansion of the City's economic base, help create a jobs/housing balance, and reduce the commute for regional residents.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not provide for local and regional employment opportunities that take advantage of the Project area's high level of accessibility, allow for the expansion of the City's economic base, help create a jobs/housing balance, and reduce the commute for regional residents. Under the Reduced Project Alternative, the amount of commercial uses would decrease from 467,834 square feet (sf) to 350,875 sf, the amount of industrial uses would decrease from 12,960,747 sf to 9,720,560 sf, and the open space area would decrease from 54 acres to 40.5 acres. This alternative would meet this objective, but to a lesser extent than the proposed Project due to the reduction in development potential under this alternative. Under the Agriculture Protection Alternative, the Project site would be developed with the same amount and type of uses as the proposed Project, but the Project site would be reduced by approximately half. Because the amount of employment-generating uses would be equal to the proposed Project, the Agriculture Protection Alternative would meet this objective.

4. *Improve Circulation: Create safe access to the industrial area by constructing an overpass of the Union Pacific Railroad line.*

The No Project (No Build) Alternative would not satisfy this objective because under this alternative, an overpass of the UPRR line would not be provided. The Reduced Project Alternative would provide an overpass and, as such, would meet this objective. Under the Agriculture Protection Alternative, because the development areas would be contained within the eastern half of the Project site, the

UPRR would not be utilized under this alternative. As such, this alternative would not meet this objective.

5. *Enhance Transportation: Create the ability to develop rail service to the three largest parcels within the SSCC Project Area, if needed.*

The No Project (No Build) Alternative would not satisfy this objective because under this alternative, rail service would not be provided. Similar to the above discussion for objective two, the Reduced Project Alternative would develop rail service to serve the industrial and commercial uses and, as such, would meet this objective. Under the Agriculture Protection Alternative, because the development areas would be contained within the eastern half of the Project site, the UPRR would not be utilized under this alternative. As such, this alternative would not meet this objective.

6. *Public Facilities and Services: Provide infrastructure and services that meet City standards and integrate with existing and planned facilities.*

The No Project (No Build) Alternative would not provide infrastructure and services that meet City standards and integrate with existing and planned facilities; as such, the No Project (No Build) Alternative would only partially achieve this objective. The Reduced Project Alternative and the Agriculture Protection Alternative would include infrastructure to serve the site; as such, both would meet this objective.

7. *Phasing: Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards, while maintaining the functionality and feasibility of the Project.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not develop the Project site in a logical phased manner. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would be phased to ensure each phase of development would include necessary public improvements required to meet City standards.

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APPENDIX A

Initial Study, Notice of Preparation, and NOP Comments

NOTICE OF PREPARATION AND INITIAL STUDY

FOR THE

SOUTH STOCKTON COMMERCE CENTER PROJECT

SEPTEMBER 2020

Prepared for:

Community Development Department
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

NOTICE OF PREPARATION AND INITIAL STUDY

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NOTICE OF PREPARATION

TO:	State Clearinghouse State Responsible Agencies State Trustee Agencies Other Public Agencies Interested Organizations	FROM:	Nicole D. Moore, LEED AP – Acting Current Planning Manager City of Stockton 345 N. El Dorado Street Stockton, CA 95202 (209) 937-8561 Nicole.Moore@stocktonca.gov

SUBJECT: Notice of Preparation – South Stockton Commerce Center Project

EIR CONSULTANT

Steve McMurtry, Principal Planner
De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
Phone: (916) 580-9818

An Initial Study has been prepared for the proposed project and is attached to this Notice of Preparation (NOP). The Initial Study lists those issues that will require detailed analysis and technical studies that will need to be evaluated and/or prepared as part of the Environmental Impact Report (EIR). The EIR will consider potential environmental effects of the proposed project to determine the level of significance of the environmental effect, and will analyze these potential effects to the detail necessary to make a determination on the level of significance.

Those environmental issues that have been determined to be less than significant will have a discussion that is limited to a brief explanation of why those effects are not considered potentially significant. In addition, the EIR may also consider those environmental issues which are raised by responsible agencies, trustee agencies, and members of the public or related agencies during the NOP process.

We need to know the views of your agency or organization as to the scope and content of the environmental information germane to your agency's statutory responsibilities or of interest to your organization in connection with the proposed project. Specifically, we are requesting the following:

1. If you are a public agency, state whether your agency will be a responsible or trustee agency for the proposed project and list the permits or approvals from your agency that will be required for the project and its future actions;
2. Identify significant environmental effects and mitigation measures that you believe need to be explored in the EIR with supporting discussion of why you believe these effects may be significant;

3. Describe special studies and other information that you believe are necessary for the City of Stockton to analyze the significant environmental effects, alternatives, and mitigation measures you have identified;
4. For public agencies that provide infrastructure and public services, identify any facilities that must be provided (both on- and off-site) to provide services to the proposed project;
5. Indicate whether a member(s) from your agency would like to attend a scoping workshop/meeting for public agencies to discuss the scope and content of the EIR's environmental information; and
6. Provide the name, title, and telephone number of the contact person from your agency or organization that we can contact regarding your comments.

Due to the time limits mandated by State law, your response must be sent and received by the City of Stockton by the following deadlines:

- For responsible agencies, not later than 30 days after you receive this notice.
- For all other agencies and organizations, not later than 30 days following the publication of this Notice of Preparation. The 30-day review period begins September 30, 2020 and ends on October 30, 2020.

If we do not receive a response from your agency or organization, we will presume that your agency or organization has no response to make.

A responsible agency, trustee agency, or other public agency may request a meeting with the City of Stockton or its representatives in accordance with Section 15082(c) of the CEQA Guidelines. A public scoping meeting and neighborhood meeting will be held during the public review period as follows:

1. Virtual Scoping and Neighborhood Meeting: To obtain the call-in and access information please RFVP with Nicole Moore, Acting Current Planning Manager at Nicole.Moore@stocktonca.gov.

Please send your response to Nicole Moore – Acting Current Planning Manager at the City of Stockton, 345 N. El Dorado Street Stockton, CA 95202. If you have any questions, please contact Nicole Moore – Acting Current Planning Manager at (209) 937-8561 or via email at: Nicole.Moore@stocktonca.gov.

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INITIAL STUDY CHECKLIST

PROJECT TITLE

South Stockton Commerce Center

LEAD AGENCY NAME AND ADDRESS

City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

CONTACT PERSON AND PHONE NUMBER

Nicole D. Moore, LEED-AP – Acting Current Planning Manager
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202
Phone: (209) 937-8561
Email: Nicole.Moore@stocktonca.gov

PROJECT SPONSOR'S NAME AND ADDRESS

Ryan Van Groningen
Five Corners Group, LLC
15100 S. Jack Tone Road
Manteca, CA 95336
Phone: (209) 982-5248

PURPOSE OF THE INITIAL STUDY

An Initial Study (IS) is a preliminary analysis which is prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project will have a significant adverse effect on the environment, thereby triggering the need to prepare an Environmental Impact Report (EIR). This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the proposed project may have a significant effect upon the environment.

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The proposed Project site is comprised of 437.45 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Sough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site. Figures 1 and 2 show the Project's regional location and vicinity.

The Project site is made up of five assessor parcels (APN's), which are listed in Table 1, and are displayed on Figure 3.

TABLE 1: PARCELS WITHIN THE PROJECT AREA

APN	ADDRESS	ACREAGE
177-110-040	6110 S. Airport Way	218.29
177-100-030	7070 S. Airport Way	76.03
177-110-050	6122 S. Airport Way, Stockton	3.27
201-020-010	9091 S. State Route 99	75.07
177-050-090	8606 S. Airport Way	64.79
	Total	**437.45**

EXISTING SITE USES

The Project site is comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. Figure 4 shows aerial imagery of the current existing site uses within the Project site.

EXISTING SURROUNDING USES

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard and Stockton Airport are located to the north. These uses are located within the County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks.
- West – The UPPR, Airport Way, and agricultural lands.

STOCKTON GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

GENERAL PLAN LAND USE DESIGNATIONS

The Envision Stockton 2040 General Plan Land Use Map (Figure 2-8) designates the Project site as Industrial, Commercial, and Open Space/Agriculture. Figure 5 depicts the Envision 2040 Stockton General Plan land use designations for the Project site and the surrounding areas. The General Plan contains the following standards to guide development for these land uses:

Industrial (I): This designation allows for a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, Retail Sales, service businesses, public and quasi-public uses, and other similar and compatible uses. Residential uses are prohibited. The maximum FAR for industrial uses is 0.6.

Commercial (C): This designation allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses. Community or regional commercial centers

as well as freestanding commercial establishments are permitted. In addition, limited industrial uses are allowed, provided that they are indoors and compatible with surrounding uses. The maximum FAR ranges differ based on the geographic area. Outside the Greater Downtown, the maximum FAR is 0.3.

Open Space/Agriculture (OS/A): This designation allows for agriculture, parks, single-family residential units, farm worker housing, wetlands, wildlife reserves, and other similar and compatible uses and structures related to the primary use of the property for preservation of natural resources or agriculture. Lands under this designation are intended to remain unincorporated and under the jurisdiction of San Joaquin County. The minimum parcel size is 40 acres, maximum density is 1 dwelling unit per parcel, and maximum FAR is 0.01. The Open Space/Agriculture land use designation within the Project area is currently located near the French Camp Slough, and this area would not be altered by the proposed Project.

ZONING DESIGNATIONS

The Project site is zoned IL (Industrial, Light), CG (Commercial, General), and OS (Open Space).[1] Figure 6 depicts the City's zoning districts for the Project site and the surrounding areas. Below is a general description of the zoning districts within the Project site.

IL (Industrial, Limited) District: This zone is applied to areas appropriate for light manufacturing uses that may generate more nuisance impacts than acceptable in commercial zoning districts and whose operations are totally conducted indoors. Includes retail stores and ancillary office uses. The IL zoning district is consistent with the industrial land use designation of the General Plan.

CG (Commercial, General) District: This zone is applied to areas appropriate for a wide variety of general commercial uses, including retail, personal and business services; commercial recreational uses; and a mix of office, commercial, and/or residential uses. The CG zoning district is consistent with the commercial land use designation of the General Plan.

OS (Open Space) District: This zone is applied to areas of the City with open space resources, including agricultural lands, wetlands, wildlife reserves, and other sensitive natural resources; passive recreational areas such as golf courses; or natural hazards. Structural uses are limited to those which support the maintenance and/or use of the open space area. The OS zoning district is consistent with the open space and agricultural land use designations of the General Plan.

SURROUNDING GENERAL PLAN DESIGNATIONS

Within San Joaquin County, lands to the north and east of the Project site are designated Public (P/F) and lands to the south are designated Urban Reserve (A/UR) and General (A/G). Within the City, lands to the west are designated Industrial. The City's General Plan also designates land to

[1] The Stockton Zoning Map (last revised June 29, 2020) identifies the zoning for APN 177-050-09 as CG (Commercial), RM (Residential Medium-Density), and RH (Residential High-Density). However, City of Stockton Ordinance No. 2019-07-16-1501-02 (adopted July 16, 2019, effective August 15, 2019) rezoned APN 177-050-09 to IL (Industrial-Limited) and CG (Commercial), consistent with the Industrial and Commercial General Plan Land Use Designations.

the east and south (within unincorporated San Joaquin County) as Industrial and Open Space/Agriculture. The City of Stockton and San Joaquin County General Plan land use designations for the Project site and surrounding areas are shown on Figure 6.

PROJECT DESCRIPTION

PROJECT OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed. The principal objective of the proposed Project is the approval and subsequent implementation of the South Stockton Commerce Center (SSCC) Project (the proposed Project). The quantifiable objectives of the proposed Project include the development of approximately 437-acres of land which will include: industrial, commercial, open space, public facilities, and public roadway right-of-way land uses, as described below.

The Project area aims to develop in multiple phases, a well-planned industrial type project that will attract businesses to the City of Stockton and provide for local employment opportunities. The Project also provides for a seamless expansion of the existing industrial area located in southeast Stockton, in the vicinity of the Stockton Airport, and will create the opportunity to create rail served parcels from the adjacent Union Pacific rail line.

The quantifiable objectives of the proposed SSCC Project include the following:

- Development of approximately 300 acres of industrial uses (building and parking areas);
- Development of approximately 41 acres of public facilities (storm basins and pump stations);
- Creation of approximately 54 acres of open space (park area and avoidance of French Camp Slough); and
- Build up to a maximum of 6,091,551 square feet of employment-generating industrial uses.

The following objectives have been identified for the proposed SSCC Project:

- Employment Opportunities: Provide for local and regional employment opportunities that take advantage of the Project area's high level of accessibility, allow for the expansion of the City's economic base, help create a jobs/housing balance, and reduce the commute for regional residents.
- Improve Circulation: Create safe access to the industrial area by constructing an overpass of the Union Pacific Railroad line.
- Enhance Transportation: Create the ability to develop rail service to the three largest parcels within the SSCC Project Area, if needed.
- Public Facilities and Services: Provide infrastructure and services that meet City standards and integrate with existing and planned facilities.
- Phasing: Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.

PROJECT CHARACTERISTICS

The SSCC Project proposes a Tentative Map for the 437.45-acre site to create 13 development lots, two basin lots, one park lot, one open space lot, and one sewer pump station lot. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses.

More specifically, the SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. Although a Site Plan is not currently proposed, for planning purposes a conceptual site plan was prepared to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and for purposes of environmental review. Based on a FAR of .47, a maximum of 6,091,551 square feet of industrial type land uses could be developed throughout the site. Table 1, SSCC Land Use Summary, identifies the land uses and associated development potential.

The SSCC Tentative Map also proposes approximately 11 acres of general commercial uses located between Airport Way and the UPRR right-of-way. Similar to the industrial uses, a Site Plan is not currently proposed; however, based on a FAR of .30, a maximum of 140,350 square feet of commercial land uses could be developed in this area; refer to Table 2.

TABLE 2: SSCC LAND USE SUMMARY

LAND USE	*ACREAGE (NET)*	*TOTAL SQUARE FEET PER LAND USE*	*FLOOR AREA RATIO*	*MAXIMUM SQUARE FEET*
Commercial	11	467,834	.30	140,350
Industrial[1]	298	12,960,747	.47	6,091,551
Open Space	54	--	--	--
Public Facilities (Storm Basins, Outfall and Pump Stations)	41	--	--	--
Roadway Right of Way	19	--	--	--
TOTAL	**423**	**--**	**--**	**6,231,901**

For purposes of the environmental analysis, a range of industrial uses is assumed. These uses include general light industrial, industrial park, warehousing, mini-warehouse, high-cube transload and short-term storage warehouse, high-cube fulfillment center warehouse, high-cube parcel hub warehouse, and high-cube cold storage warehouse.

The project proposes approximately 54 acres of open space area within the site, which will include approximately seven acres of park space located east of the UPRR and south of the future Commerce Drive (refer to the Circulation Improvements discussion below). The Project anticipates development of a passive park with shade structures and picnic tables for use by employees and visitors within the site.

Approximately 41 acres of the site will be for public facilities uses to serve the development, including storm basins, outfall, and pump stations; refer to the Utilities and Planned Infrastructure Improvements discussion below. The Project proposes to locate a sewer pump lot (0.28 acres) at the northeast corner of Airport Way and future Commerce Drive, within the portion of the site designated Commercial.

Approximately 19 acres of the site will consist of the proposed west-east road right-of-way (referred to as Commerce Drive), which will provide connections to the SR 99 Frontage Road and Airport Way; refer to the Circulation Improvements discussion below.

The remaining approximately 14 acres of the site will be identified as remainder areas, and are not identified for development, therefore these 14 acres are not listed in Table 2.

GENERAL PLAN AMENDMENT AND REZONE

Although the proposed SSCC Project is consistent with the site's existing General Plan and Zoning designations, due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment and Rezone of the two areas between Airport Way and the Union Pacific Railroad right-of-way. As seen on Figures 5 and 6, these areas are currently designated Commercial and Industrial and are zoned CG and IL, respectively. The current boundaries of the designations will be modified to be consistent with the future Commerce Drive right-of-way center line. The area to the north of the Commerce Drive right-of-way centerline will be designated Commercial and zoned CG and the area to the south of the Commerce Drive right-of-way centerline will be designated Industrial and zoned IL. Figure 8 and Figure 9 show the proposed boundary modifications to the General Plan land use designations and Zoning districts for these two areas.

CIRCULATION IMPROVEMENTS

The Project proposes a west-east trending primary road referred to as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the UPRR right-of-way will be constructed to accommodate the primary access road and avoid conflicts with the UPRR rail line.

The majority of Commerce Drive is proposed to have a 78-foot right-of-way with one 16-foot traffic lane in each direction, and a 16-foot center turn lane. Five-foot landscaped areas would separate the traffic lanes from the 8-foot sidewalks on both the north and south sides of the road.

As Commerce Drive approaches the intersection with Airport Way, the right-of-way will be reduced to 77 feet 5 inches and provide one 16-foot westbound traffic lane, a 16-foot left turn lane, a 14-foot eastbound traffic lane, and a 16-foot eastbound traffic lane. Five-foot landscaped areas and 8-foot sidewalks would continue to be provided on both the north and south sides of the road.

The grade separated crossing over the UPRR right-of-way will be 40-feet with one 16-foot travel lane in each direction. An eight-foot pedestrian walkway will be provided on the north side of the overcrossing.

As part of the Project, a 10-foot wide right-of-way dedication will be provided along Airport Way, adjacent to the Project site.

The Project also proposes to potentially include rail service to up to three large parcels (parcels 2, 3, and 4) within the Project site. A potential railroad spur line would extend east from the UPRR along the Project site's northern edge providing rail access to the parcels.

The 99 Frontage Road will provide access to the Arch Road and SR 99 Interchange. Airport Way will provide access to both the French Camp/Arch Road and Interstate 5 Interchange and the French Camp and the SR 99 Interchange.

UTILITIES AND PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of infrastructure improvements will be required to accommodate development of the proposed Project, as described below. It should be noted that the potential environmental impacts associated with off-site infrastructure improvements associated with the larger Tidewater Crossing Project, which included the SSCC Project site, were analyzed as part of the Tidewater Crossing Project Environmental Impact Report (SCH No. 2005122101) certified on October 28, 2008. Thus, the SSCC Project environmental analysis will focus on the proposed on-site improvements.

Potable Water. The Project proposes a 24-inch water line to be located within the proposed Commerce Drive right-of-way. The proposed water line will connect to the existing City of Stockton water main in Airport Way and the future City of Stockton water main in 99 Frontage Road, identified as part of the Tidewater Crossing Project. The City is extending existing water lines from Arch Airport Road along 99 Frontage Road to proposed Commerce Drive.

Wastewater. As stated above, a sewer pump station is proposed to be located at the northeast corner of Airport Way and the future Commerce Drive. A sewer line (ranging from 8 to 21 inches) will be located within the proposed Commerce Drive right-of-way. Within the western portion of Parcel 2, the sewer line within the Commerce Drive right-of-way will shift north outside of the Commerce Drive right-of-way into Parcel 2 and extend west along the southern edge of Parcel 1, continuing under the UPRR right-of-way. West of the UPRR right-of-way, the sewer line will extend into the proposed Commerce Drive right-of-way. The sewer line within the Commerce Drive right-of-way will connect to a proposed 36-inch sewer line within Airport Way. The sewer line within Airport Way will extend to the intersection of Industrial Drive and Airport Way and connect to an existing 66-inch sewer pipe.

It should be noted that as part of a separate development project associated with the Tidewater Area, a Sewer Master Plan is currently being prepared that will provide the engineering detail related to the construction of future force mains within Airport Way and the proposed sewer pump station.

Storm Drain. The Project proposes to construct two storm drain detention basins to provide flood control. The primary basin will be approximately 28 acres located within the northwest corner of the Project site, east of the UPRR right-of-way. The Project proposes to construct a storm drainage flood channel generally along the northern edge of Parcels 3, 4 and 5. The drainage channel will connect to a proposed outfall to the detention basin, generally located within the northeast area of the basin. A storm drain (ranging from 15 to 84 inches) is proposed

within the proposed Commerce Drive right-of-way. The storm drain will extend from Commerce Drive along the southern and western edges of Parcel 1 and connect to the proposed outfall to the detention basin. The proposed outfall and a storm drain pump station are proposed to be located generally within the southwest area of the basin.

The secondary basin will be approximately 13 acres, located west of the UPRR right-of-way, between the future Commerce Drive and French Camp Slough. The proposed storm drain in Commerce Drive will connect to the proposed outfall to the detention basin, generally located within the northeast area of the basin. An outfall from the basin to French Camp Slough will also be constructed (exact size and location to be determined).

DEVELOPMENT AGREEMENT

The proposed project includes a request for approval of a Development Agreement (DA) governing the relationship between the City of Stockton and the SSCC Applicant, or its successors. A primary purpose of the DA may be to regulate development density and intensity over an extended period of time; however, the DA would not increase the maximum density or development intensity. The DA will also be used to establish other agreements between the City/Applicant (or its successors) related to the project. Such other agreements may include, but are not limited to, commitments to project entitlements and development standards as well as any other administrative and/or financial relationships that may be defined during the review of the initial application or subsequent applications related to developing the project.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

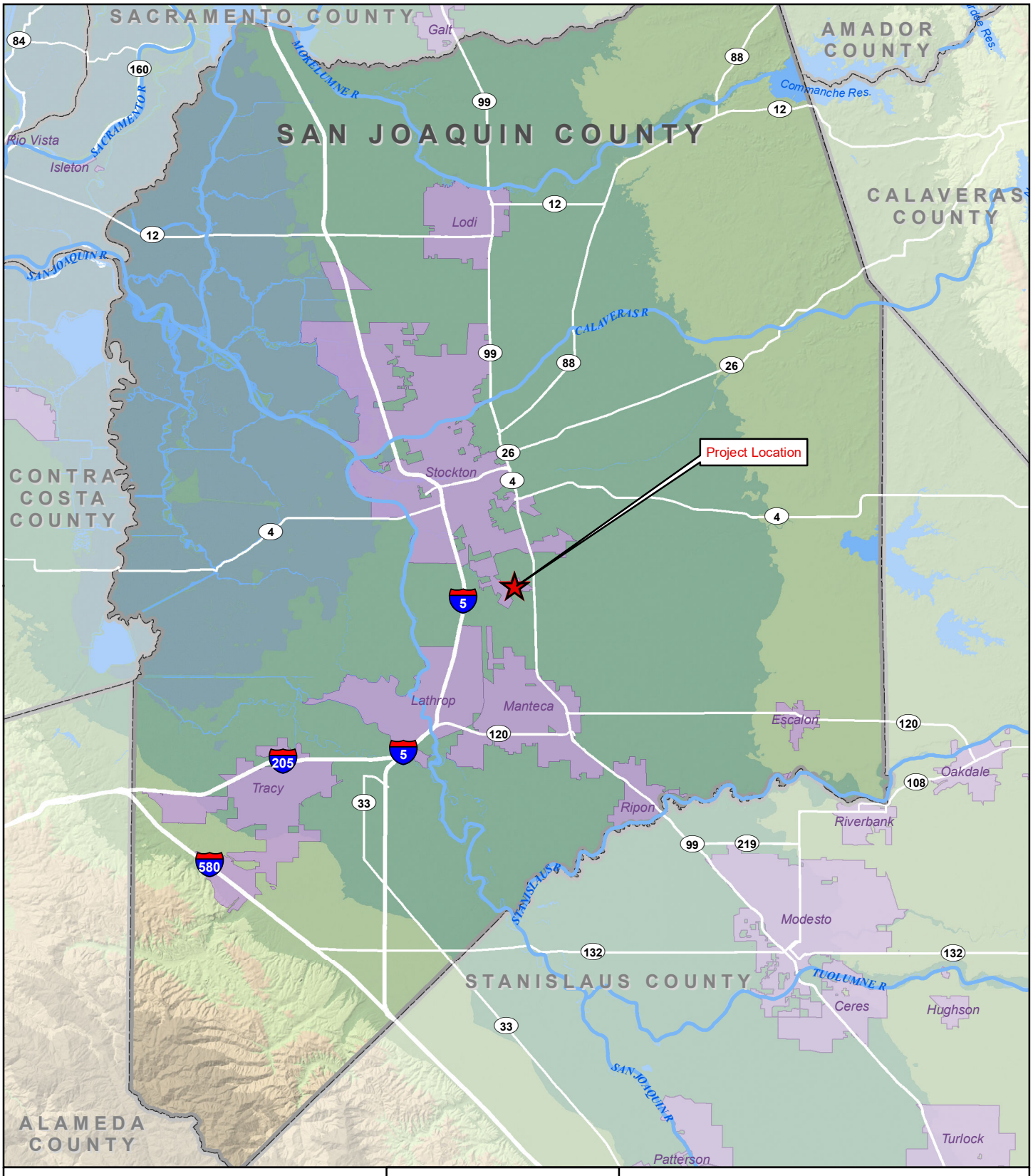
The City of Stockton will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Stockton General Plan Amendment
- Approval of City of Stockton Zoning Map Amendment
- Approval of Tentative and Final maps;
- Approval of Improvement Plans;
- Approval of Grading Plans;
- Approval of Building Permits;
- Approval of Site Plan Review;
- Approval of Design Review;
- Approval of Completeness Review;
- Approval of Development Agreement;
- Issuance of grading, encroachment, and building permits;
- City review and approval of Project utility plans;

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (E.G., PERMITS, ETC.)

The following agencies may be required to issue permits or approve certain aspects of the proposed project. Other governmental agencies that may require approval include, but are not limited to, the following:

- Union Pacific Railroad – Encroachment Permit for the sewer line and Easement for the proposed overpass;
- California Department of Fish and Wildlife – Streambed Alteration Agreement pursuant to Section 1602 of the California Fish and Game Code;
- United States Army Corps. Of Engineers (USACE) – Permitting of federal jurisdictional areas pursuant to Section 404 of the Clean Water Act.
- Central Valley Regional Water Quality Control Board (CVRWQCB) – Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- CVRWQCB – Water quality certification pursuant to Section 401 of the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Approval of construction-related air quality permits;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – As an industrial development, the Project may be subject to Indirect Source Review (ISR) by the SJVAPCD. The storm drain pump station may require an Authority to Construct and, Permit to Operate;
- French Camp McKinley Fire District – Plan check of the site plan and roadway improvements for adequate emergency vehicle access and fire flow capabilities;
- Central Valley Flood Protection Board (CVFPB) – Approval of the storm drainage flood channel;
- CVRWQCB – Permitting of State jurisdictional areas, including French Camp Slough, pursuant to the Porter-Cologne Water Quality Act;
- San Joaquin County Flood Control and Water Conservation District – Approval of the proposed storm basins, outfall and pump stations;
- Sacramento & San Joaquin Drain District (SSJDD) – Approval for construction of an outfall; and
- San Joaquin Council of Governments (SJCOG) – Issuance of incidental take permit under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).



LEGEND

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; California County GIS Departments. Map date: July 20, 2020.

0 2½ 5
Miles

SOUTH STOCKTON COMMERCE CENTER

Figure 1. Regional Location Map

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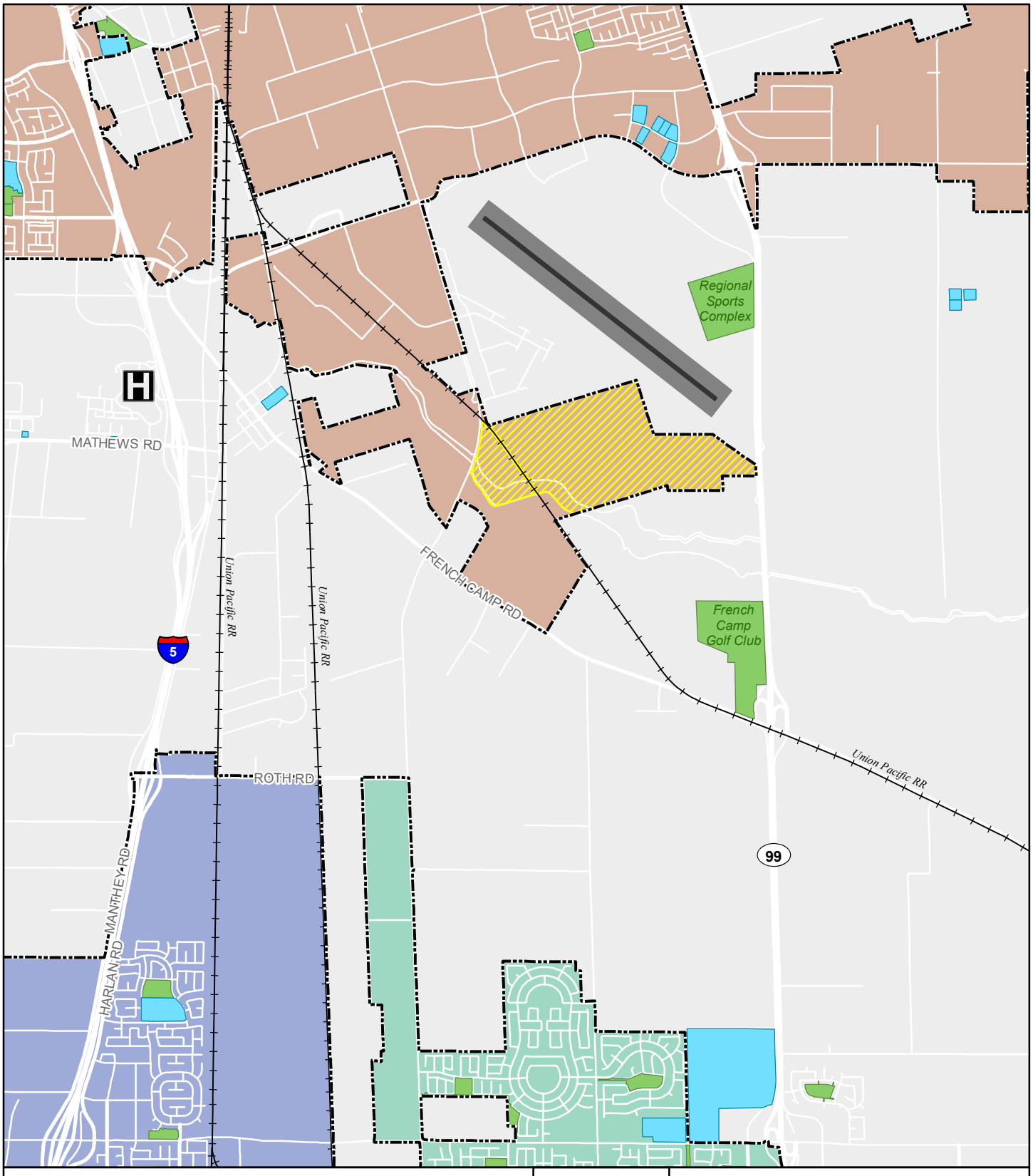

LEGEND

- Project Location

City Limits

- Stockton
- Lathrop
- Manteca

Public Facilities

- Park
- Schools
- San Joaquin General Hospital

Stockton Metropolitan Airport

- Runway
- Primary Surface

N

0 ¼ ½ Miles

Sources: San Joaquin County GIS. Map date: July 20, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 2. Vicinity Map

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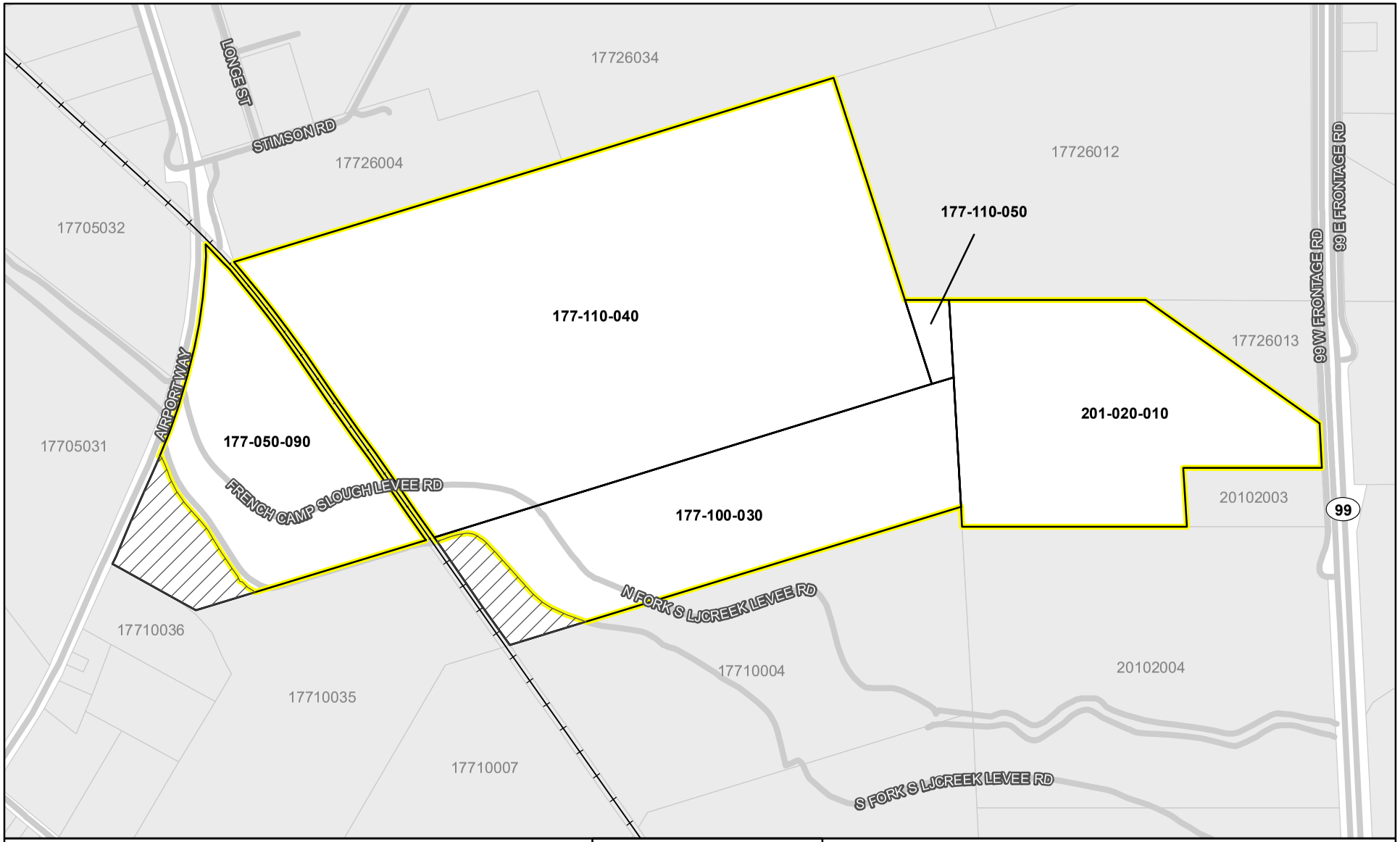

LEGEND

- Project Boundary
- Project Parcels
- Portion of Parcel Excluded from Project
- Surrounding Parcels

Source: San Joaquin County GIS. Map date: July 20, 2020.

N

0 500 1,000

Feet

SOUTH STOCKTON COMMERCE CENTER

Figure 3. Assessor's Parcel Map

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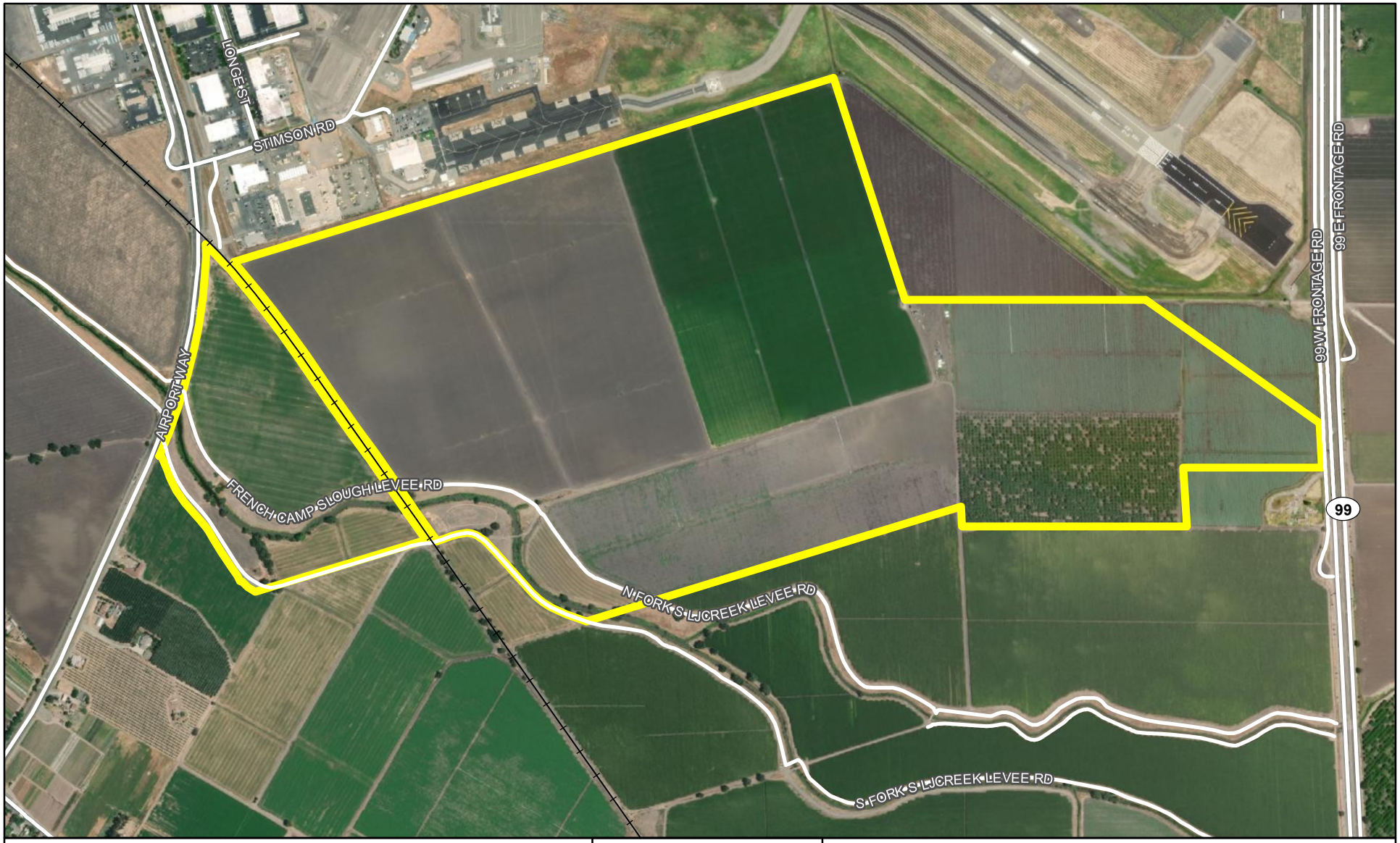

LEGEND

Project Boundary

0 500 1,000
Feet

Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: July 20, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 4. Aerial View of Project Site

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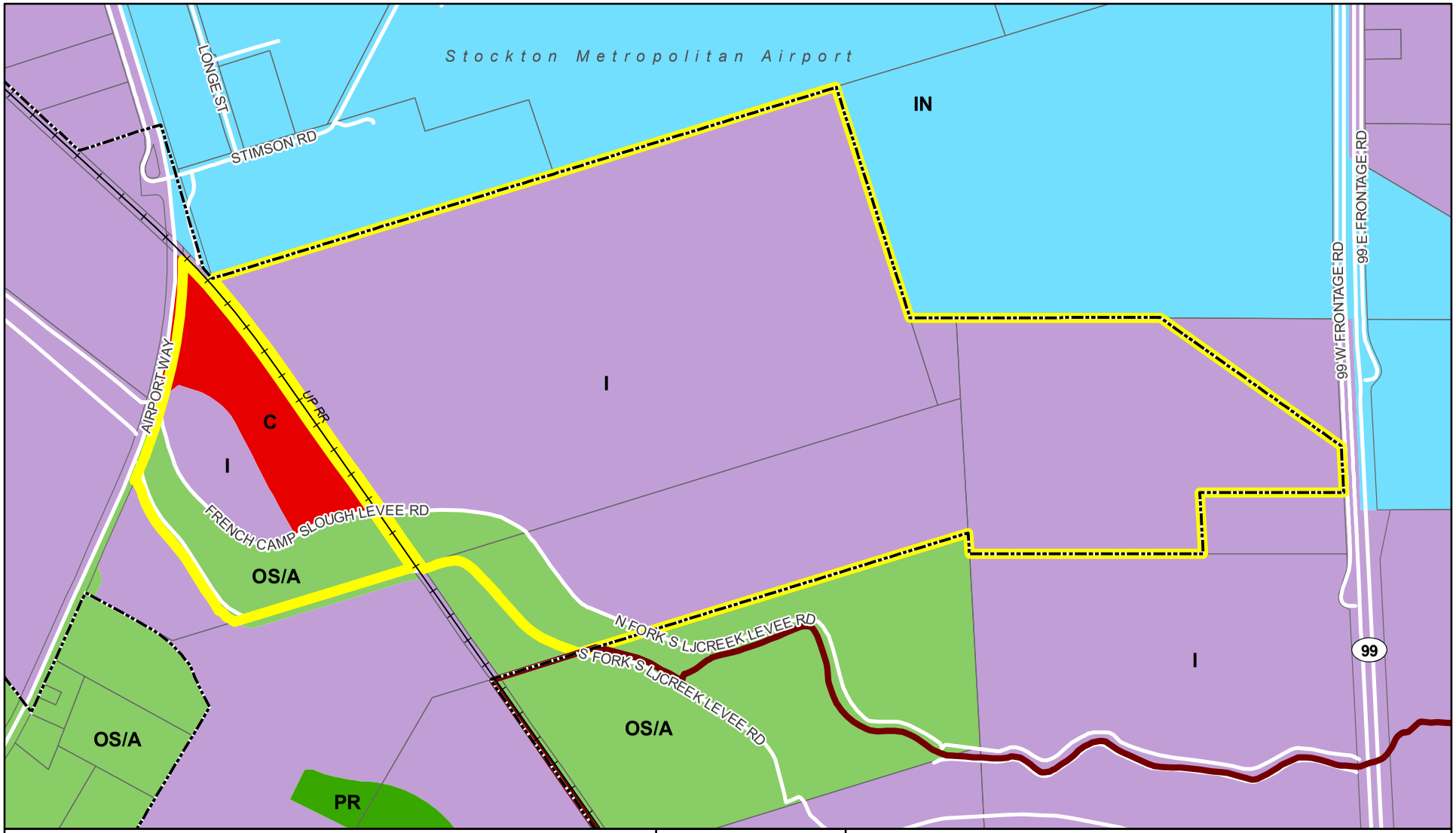

LEGEND

- Project Boundary
- Stockton City Limits
- Stockton Sphere of Influence
- Assessor Parcel

City of Stockton General Plan Land Use

- C - Commercial
- I - Industrial
- IN - Institutional
- OS/A - Open Space/Agriculture
- PR - Parks and Recreation

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020.

N

0 500 1,000

Feet

SOUTH STOCKTON COMMERCE CENTER

Figure 5. Existing General Plan Land Use

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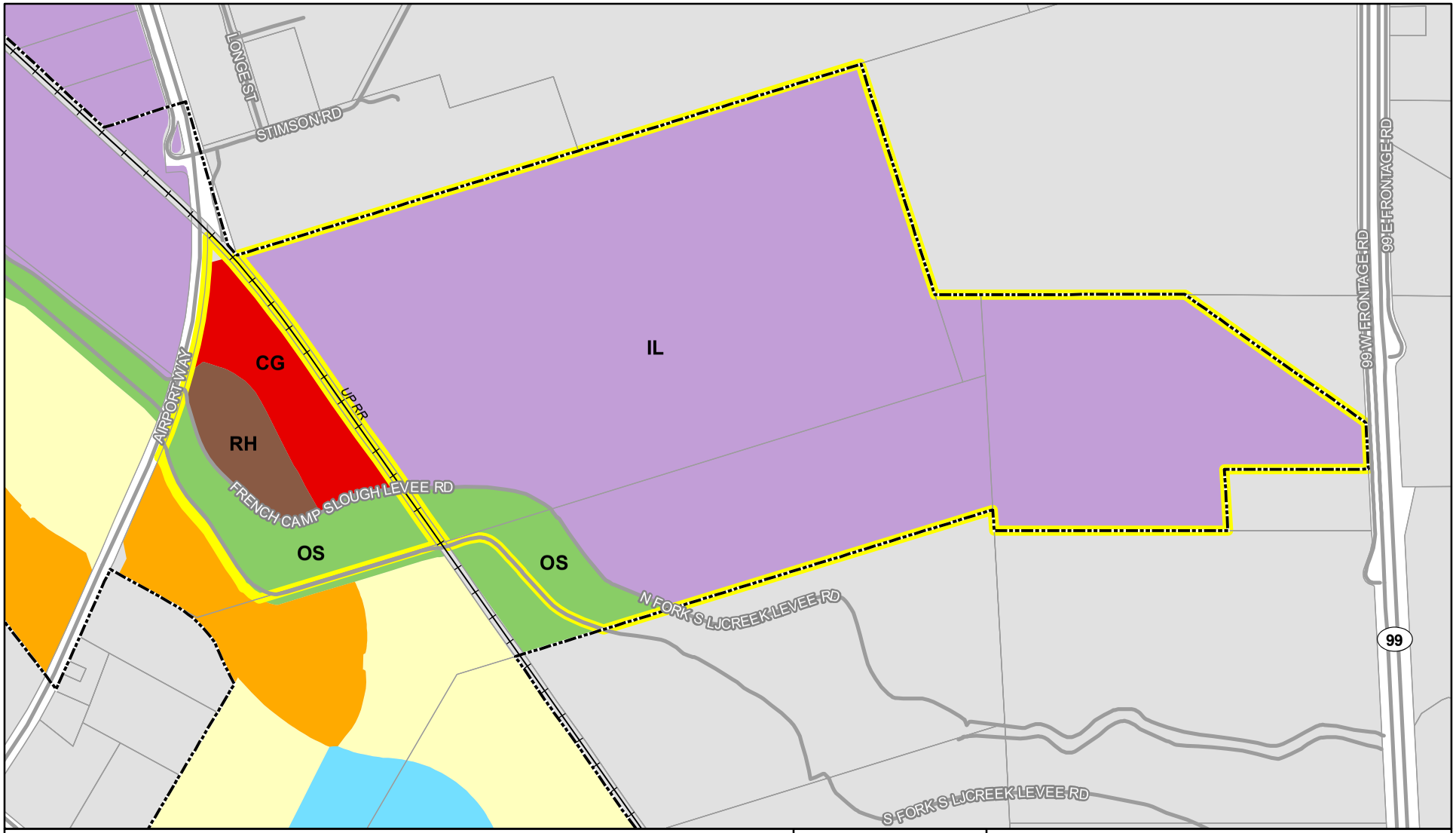

LEGEND

- Project Boundary
- Stockton City Limits
- Assessor Parcel

Zoning Districts

- RL - Residential Low
- RM - Residential Medium
- RH - Residential High
- IL - Industrial Limited
- CG - Commercial General
- PF - Public Facility
- OS - Open Space

0 500 1,000 Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 5. Existing Zoning Districts

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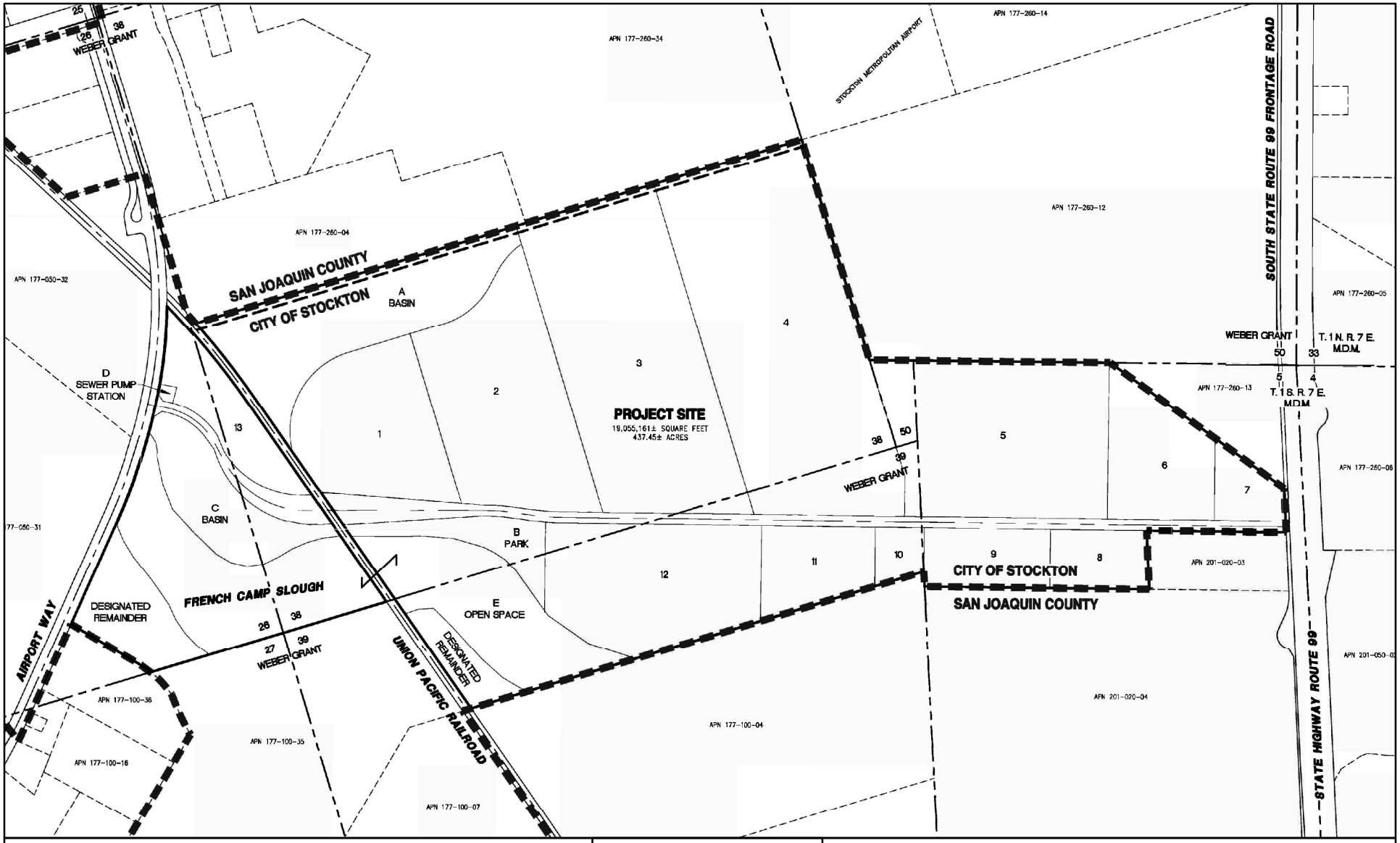

SOUTH STOCKTON COMMERCE CENTER

Figure 7. Proposed Tentative Map

Source: North Star Engineering Group. Map date: July 20, 2020.

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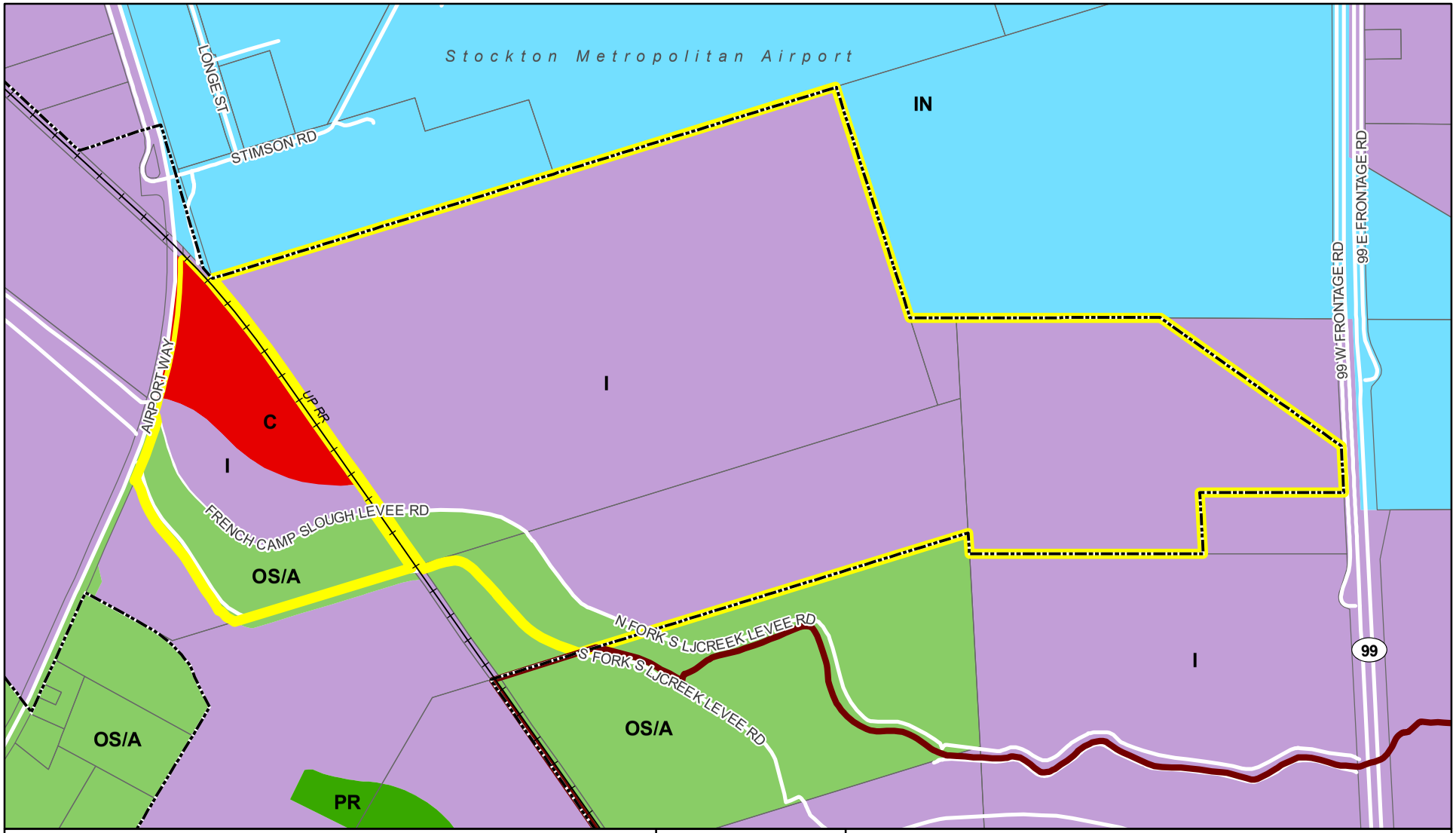

LEGEND

- Project Boundary
- Stockton City Limits
- Stockton Sphere of Influence
- Assessor Parcel

City of Stockton General Plan Land Use

- C - Commercial
- I - Industrial
- IN - Institutional
- OS/A - Open Space/Agriculture
- PR - Parks and Recreation

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020.

N

0 500 1,000
Feet

SOUTH STOCKTON COMMERCE CENTER

Figure 8. Proposed General Plan Land Use

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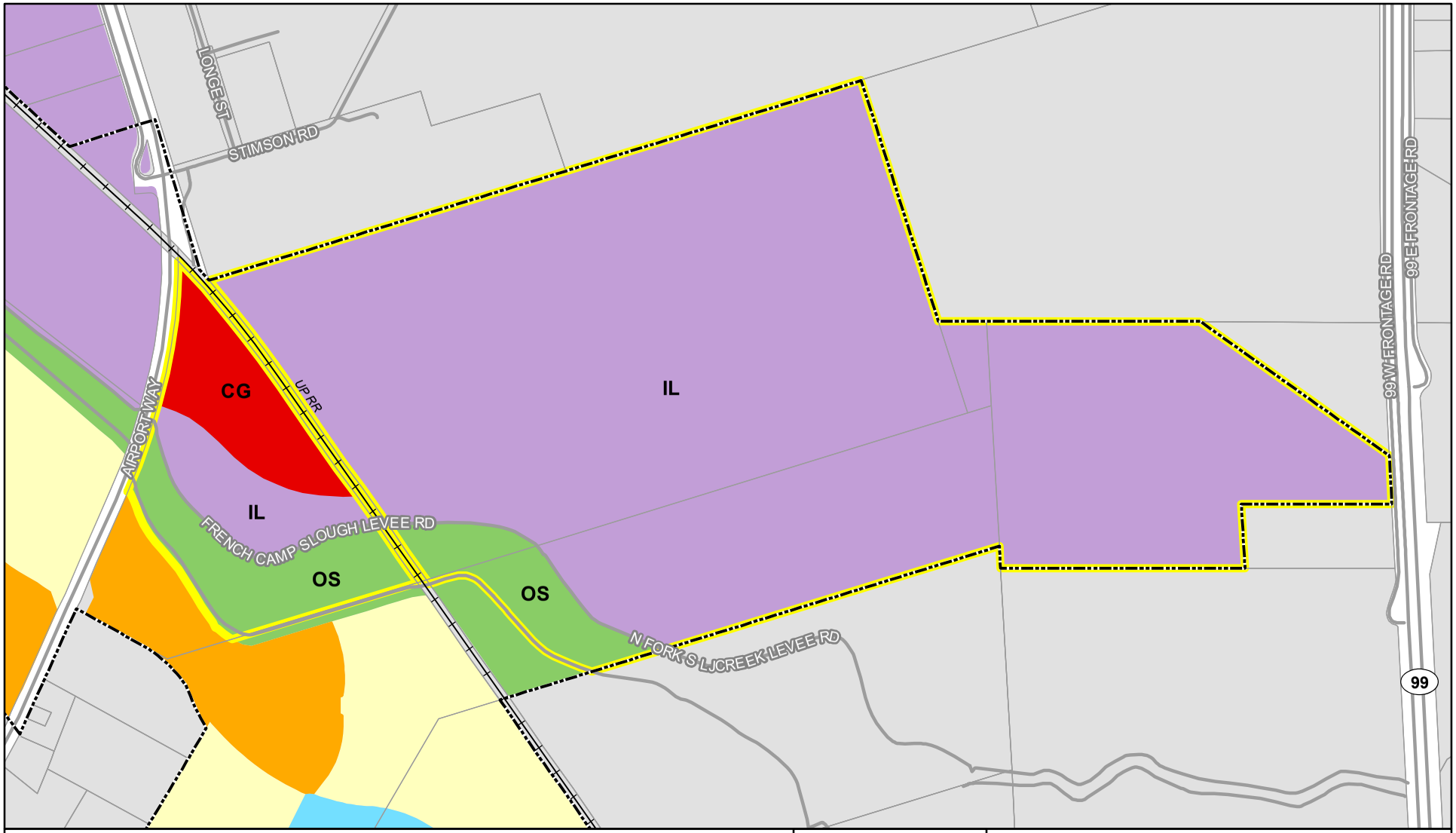

LEGEND

- Project Boundary
- Stockton City Limits
- Assessor Parcel

Zoning Districts

- RL - Residential Low
- RM - Residential Medium
- RH - Residential High
- IL - Industrial Limited
- CG - Commercial General
- PF - Public Facility
- OS - Open Space

N

0 500 1,000
Feet

Sources: San Joaquin County GIS; City of Stockton GIS. Map date: July 20, 2020.

SOUTH STOCKTON COMMERCE CENTER

Figure 9. Proposed Zoning Districts

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

X	Aesthetics	X	Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology and Soils	X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials
X	Hydrology and Water Quality	X	Land Use and Planning		Mineral Resources
X	Noise	X	Population and Housing	X	Public Services
X	Recreation	X	Transportation	X	Tribal Cultural Resources
X	Utilities and Service Systems		Wildfire	X	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
X	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

EVALUATION INSTRUCTIONS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.

    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:

    a) The significance criteria or threshold, if any, used to evaluate each question; and

    b) The mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the environmental topic areas.

I. AESTHETICS – EXCEPT AS PROVIDED IN PUBLIC RESOURCES CODE SECTION 21099, WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?	X			
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	X			
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?	X			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-d): It has been determined that the potential impacts on aesthetics caused by the proposed project will require a more detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project will have a potentially significant impact on aesthetics. At this point, a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will provide a discussion of viewsheds, proximity to scenic roadways and scenic vistas, existing lighting standards, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts on aesthetics. This section of the EIR will identify applicable General Plan policies that protect the visual values located along public roadways and surrounding land uses, and will also address the potential for the project to substantially degrade the visual character or quality of public views of the site and its surroundings. The analysis will address any proposed design and landscaping plans developed by the applicant and provide a narrative description of the anticipated changes to the visual characteristics of the project area as a result of project

implementation and the conversion of the existing on-site land uses. The analysis will also address potential impacts associated with light spillage onto adjacent properties during nighttime activities.

II. AGRICULTURE AND FORESTRY RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?	X			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a), e): It has been determined that the potential impacts on agricultural resources caused by the proposed project will require a more detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project will have a potentially significant impact on agriculture resources. At this point, a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will describe the character of the region's agricultural lands, including maps of prime farmlands, other important farmland classifications, and protected farmland (including Williamson Act contracts). The County Agricultural Commissioner's Office and the State Department of Conservation will be consulted and their respective plans, policies, laws, and regulations affecting agricultural lands will be presented within the analysis.

The EIR will include thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to offset the loss of agricultural lands as a result of project implementation.

Responses b), c), d): The project site is not under a Williamson Act contract. There are no forest resources or zoning for forest lands located on the project site, or within the City of Stockton. This CEQA topic is not relevant to the proposed project and does not require further analysis.

III. AIR QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-d): Based on the current air quality conditions in the air basin it has been determined that the potential impacts on air quality caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on air quality. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an air quality analysis that presents the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts on air quality. The project site is located within the jurisdiction of the SJVAPCD. The air quality analysis will include the following:

- Regional air quality and local air quality in the vicinity of the project site will be described. Meteorological conditions in the vicinity of the project site that could affect air pollutant dispersal or transport will be described. Applicable air quality regulatory framework, standards, and significance thresholds will be discussed.
- Short-term (i.e., construction) increases in regional criteria air pollutants will be quantitatively assessed. The ARB-approved CalEEMod computer model will be used to estimate regional mobile source and particulate matter emissions associated with the construction of the proposed project.
- Long-term (operational) increases in regional criteria air pollutants will be quantitatively assessed for area source, mobile sources, and stationary sources. The ARB-approved CalEEMod computer model will be used to estimate emissions

associated with the proposed project. Exposure to odorous or toxic air contaminants will be assessed through a screening method as recommended by the SJVAPCD.

- Local mobile-source CO concentrations will be assessed through a CO screening method as recommended by the SJVAPCD.
- A Health Risk Assessment (HRA) will be prepared to determine the potential public health risks from existing emissions from nearby rail and other toxic air sources, as well as the potential for the project to cause new public health risks from project-related traffic.

IV. BIOLOGICAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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 interruption, or other means?	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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-f): Based on the documented special status species, sensitive natural communities, wetlands, and other biological resources in the region, it has been determined that the potential impacts on biological resources caused by the proposed project will require a detailed analysis. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on biological resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will provide a summary of local biological resources, including descriptions and mapping of plant communities, the associated plant and wildlife species, and sensitive biological resources known to occur, or with the potential to occur in the project vicinity. The project site will be surveyed for wetlands and other waters that are regulated under federal and state law. The

analysis will conclude with a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented in order to reduce impacts on biological resources and to ensure compliance with the federal and state regulations.

V. CULTURAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	X			
d) Disturb any human remains, including those interred outside of formal cemeteries?	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-c): Based on known historical and archaeological resources in the region, and the potential for undocumented underground cultural resources in the region, it has been determined that the potential impacts on cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the three environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface cultural resources to be found in the area, the types of cultural resources that may be expected to be found, a review of existing regulations and policies that protect cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce potential impacts to cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project. The CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Stockton.

VI. ENERGY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Based on the proposed project and anticipated uses, it has been determined that the potential impacts associated with energy resources will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on energy. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an evaluation of the energy consumption (e.g., electricity, oil, and natural gas) and provide a discussion of the potential energy impacts of the proposed project with particular emphasis on its potential to result in wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation. An analysis of the project's potential to conflict with or obstruct a plan for renewable energy or energy efficiency will also be addressed.

VII. GEOLOGY AND SOILS -- WOULD THE PROJECT:

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

RESPONSES TO CHECKLIST QUESTIONS

Responses a-d), f): It has been determined that the potential impacts from geology and soils will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from geology and soils. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a review of existing geotechnical reports, published documents, aerial photos, geologic maps and other geological and geotechnical literature pertaining to the site and surrounding area to aid in evaluating geologic resources and geologic hazards that may be present. The EIR will include a description of the applicable regulatory setting, a description of the existing geologic and soils conditions on and around the project site, an evaluation of geologic hazards, a description of the nature and general engineering characteristics of the subsurface conditions within the project site, and the provision of findings and potential mitigation strategies to address any geotechnical concerns or potential hazards. The potential for paleontological resources to occur with the area will also be assessed.

This section will provide an analysis including thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with geology and soils.

Response e): The proposed project would connect to the municipal sewer system for wastewater disposal. Septic tanks or septic systems are not proposed as part of the project. As such, this CEQA topic is not relevant to the proposed project and does not require further analysis.

VIII. GREENHOUSE GAS EMISSIONS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 gasses?	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Implementation of the proposed project could generate greenhouse gases (GHGs) from a variety of sources, including but not limited to vehicle trips, vehicle idling, electricity consumption, water use, and solid waste generation. It has been determined that the potential impacts from greenhouse gas emissions by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from greenhouse gas emissions. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a greenhouse gas emissions analysis pursuant to the requirements of federal, state, regional and local laws and regulations. The analysis will follow the California Air Pollution Control Officers Association (CAPCOA) white paper methodology and recommendations presented in Climate Change & CEQA, which was prepared in coordination with the California Air Resources Board and the Governor's Office of Planning and Research as a common platform for public agencies to ensure that GHG emissions are appropriately considered and addressed under CEQA. This analysis will consider a regional approach toward determining whether GHG emissions are significant, and will present mitigation measures to reduce impacts. The discussion and analysis will include quantification of GHGs generated by the project as well as a qualitative discussion of the project's consistency with any applicable state and local plans to reduce the impacts of climate change.

The EIR will provide an analysis including the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with greenhouse gas emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a-f): It has been determined that the potential impacts from hazards and/or hazardous materials by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from hazards and/or hazardous materials. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a review of existing environmental site assessments and any other relevant studies for the project site to obtain a historical record of environmental conditions. The environmental hazards evaluation will include a review of hazardous site databases. A site reconnaissance will be performed to observe the site and potential areas of interest. The potential

for project implementation to introduce hazardous materials to and from the area during construction and operation will be assessed. If environmental conditions are identified, mitigation measures, as applicable, will be identified to address the environmental conditions.

This section will provide an analysis including the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with hazards and hazardous materials.

Response g): The project site and surrounding area are not located within an area identified as a fire hazard severity zone by the Fire Hazard Severity Zones Maps prepared by Cal Fire.[2] Further, the Envision Stockton 2040 General Plan states that risk of wildfire in the Planning Area is considered relatively low. This is a less than significant impact, and no additional analysis of this CEQA topic is warranted.

[2] Cal Fire, *Fire Hazard Severity Zone Maps*, https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/, accessed July 7, 2020.

X. HYDROLOGY AND WATER QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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:				
i) result in substantial erosion or siltation on- or offsite?	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; or	X			
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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-e): It has been determined that the potential impacts on hydrology and water quality caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on hydrology and water quality. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will present the existing FEMA flood zones, levee protection improvements, reclamation districts, and risk of flooding on the project site and general vicinity. The applicable reclamation district will be consulted during the preparation of the EIR. The Project drainage study/calculations and proposed improvement plans will be reviewed and the onsite hydrology

and hydraulic calculations for existing and proposed conditions will be summarized. Some of the specific items to be reviewed include: land use classification; acreage calculations; runoff coefficients; time of concentration; and methodology. Calculations will be reviewed for reasonableness and consistency with the site plan and with the City's master plans.

The EIR will evaluate the potential construction and operational impacts of the proposed project on water quality. This section will describe the surface drainage patterns of the project area and adjoining areas, and identify surface water quality in the project area based on existing and available data. This section will identify 303D listed impaired water bodies in the vicinity of the project site. Conformity of the proposed project to water quality regulations will also be discussed. Mitigation measures will be developed to incorporate Best Management Practices (BMPs), consistent with the requirements of the Central Valley Regional Water Quality Control Board (CVRWQCB) to reduce the potential for site runoff.

This section will provide an analysis including the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with hydrology and water quality.

XI. LAND USE AND PLANNING -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Response a-b): It has been determined that the potential land use and planning impacts caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of these environmental issues in the EIR and will decide whether the proposed project has the potential to have a significant impact. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a detailed discussion of the project entitlements as it relates to the existing General Plan, Zoning Code, and other local regulations. The local, regional, state, and federal jurisdictions potentially affected by the project will be identified, as well as their respective plans, policies, laws, and regulations, and potentially sensitive land uses. The proposed project will be evaluated for consistency the City of Stockton General Plan, the Zoning Ordinance, the Airport Land Use Compatibility Plan (ALUCP) for Environs of Stockton Metropolitan Airport (2018), the San Joaquin County's Aviation System – Airport Land Use Compatibility Plan (2018), and other local planning documents. Planned development and land use trends in the region will be identified based on currently available plans. Reasonably foreseeable future development projects within the region will be noted, and the potential land use impacts associated with the project will be presented.

This section will provide an analysis including the thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to ensure consistency with the existing and planned land uses.

XII. MINERAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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	

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): According to the 2040 General Plan Update and Utility Master Plan Supplements Environmental Impact Report prepared for the Envision Stockton 2040 General Plan, the Plan Area, including the project site, has been classified as a MRZ-1 zone, signifying that it is in an area where the California Geological Survey (CGS) has determined that little likelihood exists for the presence of mineral resources. Given this finding, the likelihood that implementation of the proposed project would result in the loss of availability of a known valuable mineral resource or the loss of availability of a locally important mineral resource recovery site is considered low. Additionally, impacts to mineral resources as a result of General Plan buildout (including development of the Project site with Industrial uses) were analyzed in the General Plan EIR. For these reasons, the impacts related to mineral resources would be less than significant and no additional analysis of this CEQA topic is warranted.

XIII. NOISE -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-c): Based on existing and projected noise levels along roadways and adjacent rail lines, and the potential for noise generated during project construction and operational activities, it has been determined that the potential impacts from noise caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from noise. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a noise study. The noise study will identify the noise level standards contained in the City of Stockton General Plan Noise Element which are applicable to this project, as well as any state and federal standards. The EIR will address the existing noise environment (including the UPRR activities), and an analysis of stationary noise generated by the project, including proposed loading docks, parking lots, and any proposed mechanical equipment. The EIR will also analyze mobile noise generated by the project, including on-site truck circulation, traffic noise, and rail noise (as the proposed project would include extension of the railroad spur line east from the UPRR along the Project site's northern edge providing rail access to the parcels). Noise and vibration impacts associated with construction of the project at existing sensitive receptors in the project vicinity will also be addressed. The study will present appropriate and practical recommendations for noise control aimed at reducing any noise impacts.

The EIR will include thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with noise.

XIV. POPULATION AND HOUSING -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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	

RESPONSES TO CHECKLIST QUESTIONS

Response a): It has been determined that the potential population and housing impacts caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine the potentially significant environmental issue listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact. At this point a definitive impact conclusion for the environmental topic will not be made, rather it is considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a detailed discussion of existing population and housing trends within the city. Relevant policies related to the location and intensity of housing development and population growth will be summarized and addressed. The proposed project characteristics, including the potential to induce substantial unplanned population growth, both directly and indirectly, will be analyzed. The proposed project will be evaluated for consistency the City of Stockton General Plan, the Zoning Ordinance, and other local planning documents as they pertain to planned growth and development.

This section will provide an analysis including the thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to ensure population and housing consistency with the existing and planned land uses.

Response b): The project site is currently undeveloped and does not contain any existing housing that would be displaced. Development of the site, as proposed, would not displace substantial numbers of existing people or housing. No impact would occur and no additional analysis of this CEQA topic is warranted.

XV. PUBLIC SERVICES:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a) i- v: Implementation of the proposed project would result in increased demand for police, fire protection, schools, parks, and other public facilities in the area. It has been determined that the potential impacts from increased demands on public services caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on public services. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

During the preparation of the EIR, the public service providers will be consulted in order to determine existing service levels in the project areas. This would include documentation regarding existing staff levels, equipment and facilities, current service capacity, existing service boundaries, and planned service expansions. Master plans from such public service providers and City policies, programs, and standards associated with the provision of public services will be presented in the EIR.

The EIR will provide an analysis including the thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented reduce impacts associated with public services.

XVI. RECREATION -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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			

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): Implementation of the proposed project could result in increased demand for parks, and other recreational facilities in the area. It has been determined that the potential impacts from increased demands to recreation facilities caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of these environmental issues listed in the checklist above in the EIR, and will decide whether the proposed project has the potential to have a significant impact on recreational facilities. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

During the preparation of the EIR, the recreational facilities and services will be analyzed to determine existing service levels in the project areas. This would include documentation regarding existing and future facility needs, current service capacity, and planned service expansions. City policies, programs, and standards associated with the provision of public services will be presented in the EIR.

The EIR will provide an analysis including the thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented reduce impacts associated with public services.

XVII. TRANSPORTATION -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-d): The proposed project includes the development of uses that will involve new trips on existing and planned roadways within the area, requiring a detailed analysis in the EIR. As such, the EIR will examine each of the environmental issues listed in the checklist above in the EIR and will determine whether the proposed project has the potential to have a significant transportation impact. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is conducted in the EIR.

The potential transportation impacts will be analyzed using methods outlined in the City of Stockton Guidelines for Transportation Impact Studies. The EIR will describe existing and future transportation conditions and will analyze any potential conflicts with programs, plans, ordinances or policies addressing the circulation system. Potential impacts associated with site access, and on-site circulation will also be addressed in the EIR. A detailed vehicle miles traveled (VMT) analysis will be conducted to determine if the project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The VMT analysis would be completed consistent with the Office of Planning and Research's (OPR's) Technical Advisory on Evaluating Transportation Impacts in CEQA.

The project proposes a west-east trending primary road that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the Union Pacific railroad right of way will be constructed to accommodate the primary access road and avoid conflicts with the rail line. Additionally, potential improvements will be reviewed to determine intersection geometrics required to serve all modes of travel. The potential for the project to substantially increase hazards due to a geometric design feature will be analyzed as part of the EIR.

Impacts to the bicycle, pedestrian, rail, and transit facilities and services will be also evaluated, including planned regional bicycle connections and the need for enhanced transit service and

transit stops in coordination with the San Joaquin Regional Transit District. Significant impacts will be identified in accordance with the established criteria. Mitigation measures will be identified to lessen the significance of impacts where feasible.

The EIR will provide an analysis including the thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented reduce impacts associated with transportation.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the project 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:				
a) 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			
b) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	X			

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Based on known tribal cultural resources in the region, and the potential for undocumented underground tribal cultural resources in the region, it has been determined that the potential impacts on tribal cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on tribal cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface tribal cultural resources to be found in the area, the types of tribal cultural resources that may be expected to be found, a review of existing regulations and policies that protect cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce potential impacts to tribal cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project. Pursuant to AB 52 and SB 18, the CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Stockton.

XIX. UTILITIES AND SERVICE SYSTEMS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 telecommunication 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 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 projects projected demand in addition to the providers 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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-e): Implementation of the proposed project would result in increased demands for utilities to serve the project. As such, the EIR will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact to utilities and service systems. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will analyze wastewater, water, and storm drainage infrastructure, as well as other utilities (i.e. solid waste, gas, electric, etc.), that are needed to serve the proposed project. The wastewater assessment will include a discussion of the proposed collection and conveyance system, treatment methods and capacity at the treatment plants, disposal location(s) and methods, and the potential for recycled water use for irrigation. The EIR will analyze the impacts associated with on-site and off-site construction of the conveyance system, including temporary impacts associated with the construction phase. The proposed infrastructure will be presented. This will likely include a system of gravity pipes, pump station(s), and a forcemain(s). The EIR will provide a discussion of the wastewater treatment plants that are within proximity to the project site, including current demand and capacity at these plants. The analysis will discuss the disposal methods and location, including environmental impacts and permit requirements associated with disposal of treated wastewater.

The storm drainage assessment will include a discussion of the proposed drainage collection system including impacts associated with on-site and off-site construction of the storm drainage system. The EIR will identify permit requirements and mitigation needed to minimize and/or avoid impacts. The EIR will include an assessment for consistency with City Master Storm Drain Plan.

The EIR will analyze the impacts associated with on-site and off-site construction of the water system, including temporary impacts associated with the construction phase. The EIR will also identify permit requirements and mitigation needed to minimize and/or avoid impacts, and will present the proposed infrastructure as provided by the project site engineering reports. A Water Supply Assessment will be required for the project to assess the availability of water supplies to serve the project.

The EIR will also address solid waste collection and disposal services for the proposed project. This will include an assessment of the existing capacity and project demands. The assessment will identify whether there is sufficient capacity to meet the project demands.

The EIR will provide thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with utilities and service systems.

XX. WILDFIRE – IF LOCATED IN OR NEAR STATE RESPONSIBILITY AREAS OR LANDS CLASSIFIED AS VERY HIGH FIRE HAZARD SEVERITY ZONES, WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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

RESPONSES TO CHECKLIST QUESTIONS

Responses a-d): The project site and surrounding area are not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.[3] This CEQA topic is not relevant to the proposed project and does not require further analysis.

[3] Cal Fire, *Fire Hazard Severity Zone Maps*, https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/, accessed July 7, 2020.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Does the project 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			

RESPONSES TO CHECKLIST QUESTIONS

Responses a-c): It has been determined that the potential for the proposed project to: 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 a rare or endangered plant or animal; eliminate important examples of the major periods of California history or prehistory; create cumulatively considerable impacts; or adversely affect human beings will require more detailed analysis in an EIR. As such, the EIR will examine each of these environmental issues in the EIR and will decide whether the proposed project has the potential to have a significant impact on these environmental issues. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

REPORT PREPARERS

This document was prepared by De Novo Planning Group, Inc. of El Dorado Hills under the direction of the City of Stockton. De Novo Planning Group staff participating in document preparation included the following:

- Steve McMurtry, Principal Planner
- Starla Barker, AICP, Principal Planner

REFERENCES

Cal Fire. Fire Hazard Severity Zones Maps. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

City of Stockton. Envision Stockton 2040 General Plan Update. Adopted December 4, 2018.

City of Stockton. Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Final EIR. Certified December 4, 2018.

City of Stockton. Legislation Text. Consideration of a Zoning Map Amendment for Approximately 391.23 acres located south of Arch Airport-Sperry Road between Tidewater Southern Railroad Track and French Camp Road (APN 177-050-05, 09, 25 and 177-100-07 and 35) Application No. P18-0046, Tidewater Crossing Project, April 4, 2019.

City of Stockton. Stockton Municipal Code, Charter, and Civil Service Rules. Current through 2020-06-09-1501 C.S. and the July 2020 code supplement.

City of Stockton. Zoning District Map. Last Revision June 29, 2020.

LSA. Environmental Impact Report Tidewater Crossing (SCH# 2005122101), certified October 28, 2008.

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10/20/2020

Nicole D. Moore
City of Stockton
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State Clearinghouse
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CEQA Project #: SCH **2020090561**
Document Type: Initial Study/Positive Declaration
Project Lead Agency: City of Stockton
Project Title: South Stockton Commerce Center Project

The California Geologic Energy Management Division (CalGEM) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells. Our regulatory program emphasizes the wise development of oil, natural gas, and geothermal resources in the state through sound engineering practices that protect the environment, prevent pollution, and ensure public safety. Northern California is known for its rich gas fields. CalGEM staff have reviewed the documents depicting the proposed project.

The proposed project is a Site Approval application to develop approximately 437-acres of land which will include: industrial, commercial, open space, public facilities, and public roadway right-of-way land uses.

The attached maps show the location of two gas wells that are plugged and abandoned. The first well is the Reynolds and Carver "Nielsen" 1 (API 0407720021), drilled and abandoned in 1967. The second well is the Westates Expl. Co. "Nielsen" 1 (API 0407720098), drilled and abandoned in 1969. Based on the project map submitted, the wells are within the construction area. No other wells impact or are impacted by the proposed work. Note that the Division has not verified the actual location of the well.

The Reynolds and Carver "Nielsen" 1 (API 0407720021) well may not be abandoned to standard. The hydrocarbon zone plug appears to be too shallow, and there is no base of fresh water plug at 800' (This is only a preliminary estimate of the base of fresh water and is subject to change). The shoe plug and surface plug are placed correctly.

The Westates Expl. Co. "Nielsen" 1 (API 0407720098) well appears to be abandoned to standard. The hydrocarbon zone plug is placed correctly. The shoe plug coincides with

the base of fresh water zone and is placed correctly (Please note this is based off of a preliminary estimate of base of fresh water at 800'. A better estimate of the base of fresh water may change the abandoned standard of this well). The surface plug is placed correctly.

For future reference, you can review wells located on private and public land at CalGEM's website: https://maps.conservation.ca.gov/doggr/wellfinder/#close

The local permitting agencies and property owner should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil and gas wells. These issues are non-exhaustively identified in the following comments and are provided by CalGEM for consideration by the local permitting agency, in conjunction with the property owner and/or developer, on a parcel-by-parcel or well-by-well basis. As stated above, CalGEM provides the above well review information solely to facilitate decisions made by the local permitting agency regarding potential development near a gas well.

1. It is recommended that access to a well located on the property be maintained in the event abandonment of the well becomes necessary in the future. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access. This includes, but is not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, and decking.

2. Nothing guarantees that a well abandoned to current standards will not start leaking oil, gas, and/or water in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. CalGEM acknowledges that wells abandoned to current standards have a lower probability of leaking oil, gas, and/or water in the future, but makes no guarantees as to the adequacy of this well's abandonment or the potential need for future re-abandonment.

3. Based on comments **1** and **2** above, CalGEM makes the following general recommendations:

a. Maintain physical access to any gas well encountered.

b. Ensure that the abandonment of gas well(s) is to current standards.

If the local permitting agency, property owner, and/or developer chooses not to follow recommendation "**b**" for a well located on the development site property, CalGEM believes that the importance of following recommendation "**a**" for the well located on the subject property increases. If recommendation "**a**" cannot be followed for the well located on the subject property, then CalGEM advises the local permitting agency, property owner, and/or developer to consider any and all alternatives to proposed construction or development on the site (see comment **4** below).

4. Sections 3208 and 3255(a)(3) of the Public Resources Code give CalGEM the authority to order the abandonment or re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources.

Responsibility for abandonment and or re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general recommendations set forth in this letter. (Cal. Public Res. Code, § 3208.1.)

5. Maintaining sufficient access to a gas well may be generally described as maintaining "rig access" to the well. Rig access allows a well servicing rig and associated necessary equipment to reach the well from a public street or access way, solely over the parcel on which the well is located. A well servicing rig, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.

6. If, during development of this proposed project, any unknown well(s) is/are discovered, CalGEM should be notified immediately so that the newly-discovered well(s) can be incorporated into the records and investigated. CalGEM recommends that any well(s) found in the course of this project, and any pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the well(s) located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells.

No well work may be performed on any oil or gas well without written approval from CalGEM in the form of an appropriate permit. This includes, but is not limited to, mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work. (NOTE: CalGEM regulates the depth of any well below final grade (depth below the surface of the ground). Title 14, Section 1723.5 of the California Code of Regulations states that all well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this grade regulation, a permit from CalGEM is required before work can start.)

Sincerely,

DocuSigned by:
Charlene L Wardlow
067E7BD5EA114A7...

Charlene L Wardlow
Northern District Deputy

cc: Jan Perez
Jan.Perez@conservation.ca.gov
Nicole D. Moore
Nicole.Moore@stocktonca.gov

OCTOBER 13, 2020

VIA EMAIL: NICOLE.MOORE@STOCKTONCA.GOV
Nicole Moore, Acting Current Planning Manager
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

Dear Ms. Moore:

INITIAL STUDY AND NOTICE OF PREPARATION FOR THE SOUTH STOCKTON COMMERCE CENTER PROJECT, SCH# 2020090561

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Initial Study and Notice of Preparation for the South Stockton Commerce Center Project (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The Project proposes to develop in multiple phases, a planned industrial type project that will attract businesses to the City of Stockton and provide for local employment opportunities. The project includes a Tentative Map for the 437.45-acre site to create 13 development lots, two basin lots, one park lot, one open space lot, and one sewer pump station lot. Development includes approximately 300 acres for industrial uses (building and parking areas); approximately 41 acres for public facilities (storm basins and pump stations); and approximately 54 acres of open space (park area and avoidance of French Camp Slough). The project site is currently designated as Prime Farmland, and Farmland of Statewide Importance by the Department of Conservation's Farmland Mapping and Monitoring Program.[1]

[1] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, https://maps.conservation.ca.gov/DLRP/CIFF/

Department Comments

Although conversion of agricultural land is often an unavoidable impact under CEQA analysis, feasible alternatives and/or feasible mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts. As stated in CEQA statue, mitigation may also include, "Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."[2]

The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the loss of agricultural land. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State. The Department highlights conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

[2] Public Resources Code Section 15370, Association of Environmental Professionals, 2020 CEQA, California Environmental Quality Act, Statute & Guidelines, page 284, https://www.califaep.org/docs/2020_ceqa_book.pdf

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.

Thank you for giving us the opportunity to comment on the Initial Study and Notice of Preparation for the South Stockton Commerce Center Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

XAVIER BECERRA
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November 24, 2020

Nicole D. Moore
Acting Current Planning Manager
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

RE: Notice of Preparation for the South Stockton Commerce Center Project (SCH # 2020090561)

Dear Ms. Moore:

Thank you for the opportunity to provide comments on the City of Stockton's Notice of Preparation (NOP) for the South Stockton Commerce Center (Project). The NOP and Initial Study detail that the Project will create an expansive industrial zone, with six million square feet of approved industrial land uses. The City seeks comments regarding environmental concerns from the implementation of the proposed Project. Given the Project's setting near a community of color that already suffers some of the worst pollution in the State, we submit these comments for the City's consideration as it prepares the draft environmental impact report (EIR).[1]

I. THE PROJECT SITE IS LOCATED IN ONE OF THE MOST POLLUTED AREAS OF THE STATE.

The Project will create a Tentative Map that allows for construction of up to 6,091,551 square feet of industrial uses—equivalent to more than 105 football fields—on approximately 437 acres of vacant and agricultural land. Thousands of parking spaces will be created for the thousands of diesel trucks and passenger vehicles that will travel to and from these buildings once constructed. A Site Plan is not currently proposed for the Project, so more specific information on the extent of the development and its impacts is unavailable at this time.

The surrounding area already deals with one of the highest pollution burdens in California and the Project will further exacerbate this pollution without adequate mitigation.

[1] The Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. (*See* Cal. Const., art. V, § 13; Gov. Code, §§ 12511, 12600–12; *D'Amico v. Bd. of Medical Examiners* (1974) 11 Cal.3d 1, 14–15.)

Northeast of the Project site is the San Joaquin County Regional Sports Complex, which includes a four-field softball complex, four soccer fields, concession stands, and picnic areas. [2] To the west of the Project site is the unincorporated community of French Camp, which includes rural homes, an elementary school, [3] San Joaquin General Hospital, and several places of worship. According to the 2018 American Community Survey, French Camp has a population of 3,857, of which 60% identify as Latinx.[4]

This community already is exposed to significant pollution in the surrounding area, including highways, railroad tracks, an airport, and agriculture. According to CalEnviroScreen 3.0, CalEPA's screening tool that ranks each census tract in the state for pollution and vulnerability, the Project's census tract ranks worse than 100 percent of the rest of the state for pollution burden.[5] This census tract is in the 82nd percentile for particulate matter pollution and in the top ten percent for exposure to pesticides, solid wastes, impaired water, drinking water, and groundwater threats.

The San Joaquin Valley region fails to meet federal and state attainment standards for ozone and $PM_{2.5}$.[6] The larger Stockton region is home to many disadvantaged census tracts and includes a community recently designated by the California Air Resources Board (CARB) for its Community Air Protection Program under Assembly Bill 617.[7] The AB 617 community is approximately 2.5 miles from the Project and this broader community will experience the negative impacts of air pollution caused by this large industrial development. If adequate mitigation is not implemented, the Project will contribute to the significant air pollution burdens that local communities already bear.

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[2] Regional Sports Complex, San Joaquin Valley Parks, *available at* http://www.sjparks.com/parks/regional-sports-complex.aspx (last visited November 9, 2020).
[3] French Camp School teaches kindergarten through eighth grade and has 612 students, of whom 92% are students of color. National Center for Educational Statistics, *available at* https://nces.ed.gov/ccd/schoolsearch/school_detail.asp (last visited November 9, 2020).
[4] 2018 American Community Survey, *available at* https://data.census.gov/cedsci/table?q=french%20camp,%20california&tid=ACSDP5Y2018.DP05&hidePreview=false (last visited November 9, 2020).
[5] CalEPA, *CalEnviroScreen 3.0*, https://oehha.ca.gov/calenviroscreen (last visited November 9, 2020).
[6] San Joaquin Valley Air Pollution Control District, *Ambient Air Quality Standards & Valley Attainment Status*, https://valleyair.org/aqinfo/attainment.htm (last visited November 9, 2020).
[7] California Air Resources Board, Community Air Protection Program, 2019 Community Recommendations Staff Report, November 2019, *available at* https://ww2.arb.ca.gov/sites/default/files/2019-12/2019_community_recommendations_staff_report_november_8_acc_3.pdf (last visited November 9, 2020). *See also* San Joaquin Valley Air Pollution Control District Website, http://community.valleyair.org/selected-communities/stockton/ (last visited November 9, 2020).

II. THE CITY MUST COMPREHENSIVELY EVALUATE THE PROJECT'S ENVIRONMENTAL IMPACTS, INCLUDING CUMULATIVE IMPACTS.

The purpose of CEQA is to ensure that a lead agency fully evaluates, discloses, and, whenever feasible, mitigates a project's significant environmental effects.[8] An EIR serves as an "informational document" that informs the public and decisionmakers of the significant environmental effects of a project and ways in which those effects can be minimized.[9] CEQA requires an EIR to include "enough detail 'to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.' "[10] In the context of air quality analysis, an EIR must "make[] a reasonable effort to substantively connect a project's air quality impacts to likely health consequences."[11]

Industrial developments of this size typically involve significant air quality impacts from diesel trucks and passenger vehicles. Where the development includes refrigerated uses, these air quality impacts are even greater. Cold storage warehouses require diesel trucks with transport refrigeration units (TRUs), which emit significantly higher levels of toxic diesel particulate matter (PM), nitrogen oxides (NOx), and greenhouse gas emissions than trucks without TRUs. In an area where air pollution burden already high, the increase in air pollutant emissions caused by construction and facility operations will be substantial.

The City's EIR should analyze the full environmental impacts of the Project, which will add a considerable number of diesel truck trips, and their attendant air pollution, to this already overburdened area. That includes the Project's impact on the sensitive receptors, including the nearby sports park and unincorporated community. The area is a non-attainment area for ozone and particulate matter and Project operations will increase emissions of those pollutants.

The City also must sufficiently relate pollutant data to specific adverse human health effects in the Project's EIR. In *Friant Ranch*, the California Supreme Court found a project's air quality impact analysis to be inadequate under CEQA because its "general description of symptoms that are associated with exposure" "fail[ed] to indicate the concentrations at which such pollutants would trigger the identified symptoms" and did not provide the public with an "idea of the health consequences that result when more pollutants are added to a nonattainment basin."[12] The Project's EIR can avoid this problem by detailing the existing conditions and projecting the impact that additional pollution will have on the community.

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[8] Pub. Resources Code, §§ 21000–21002.1.
[9] CEQA Guidelines, § 15121, subd. (a).
[10] *Sierra Club v. County of Fresno* [*Friant Ranch*] (2018) 6 Cal.5th 502, 516.
[11] *Ibid.* at p. 510.
[12] *Ibid.* at p. 519.

For instance, studies have shown that increases in near-roadway air pollution are associated with reduced lung function in non-asthmatic children.[13] Exposure may be particularly harmful during the first year of life, resulting in decreased lung function into adolescence.[14] Increased NO_x emissions are also associated with an increased risk of developing asthma.[15] Human health is not the only potential impact from Project-generated air emissions. Chronic exposure to air pollution may negatively influence children's cognitive processing and memory.[16] Since the Project is expected to increase truck traffic near the county's sports complex, the EIR should be particularly careful to account for the Project's cumulative impacts on children.

III. THE CITY SHOULD CONSIDER ALL FEASIBLE MEASURES TO MITIGATE SIGNIFICANT PROJECT IMPACTS

CEQA requires a lead agency to adopt all feasible mitigation measures that minimize the significant environmental impacts of a project.[17] The lead agency is expected to develop mitigation in an open public process,[18] and mitigation measures must be fully enforceable and nondeferrable.[19] To the extent the EIR determines the Project will have significant environmental impacts—especially any affecting sensitive receptors—the City should consider robust mitigation measures to avoid or limit those impacts.

For example, possible air quality mitigation measures[20] could include:

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[13] Urman, et al., *Associations of Children's Lung Function with Ambient Air Pollution: Joint Effects of Regional and Near-Roadway Pollutants* (2014) 69 Thorax 540, 546; Chen, et al., *Chronic Effects of Air Pollution On Respiratory Health in Southern California Children: Findings from The Southern California Children's Health Study* (2015) 7 Journal of Thoracic Disease 46, 49.

[14] Schultz, et al., *Early-Life Exposure to Traffic-Related Air Pollution and Lung Function in Adolescence* (2016) 193 American Journal of Respiratory and Critical Care Medicine 171, 174–75; Usemann, et al., *Exposure to Moderate Air Pollution and Associations with Lung Function at School-Age: A Birth Cohort Study* (2019) 126 Environment International 682, 688.

[15] Gauderman, et. al., *Childhood Asthma And Exposure To Traffic And Nitrogen Dioxide* (2005) 16 Epidemiology 737, 742; Nishimura, et al., *Early-Life Air Pollution and Asthma Risk in Minority Children. The GALA II and SAGE II Studies* (2013) 188 American Journal of Respiratory and Critical Care Medicine 309, 312.

[16] Grineski, et al., *Hazardous Air Pollutants Are Associated With Worse Performance In Reading, Math, And Science Among US Primary Schoolchildren* (2019) Environmental Research 108925.

[17] Pub. Resources Code, § 21100, subd. (b)(3).

[18] *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 93.

[19] CEQA Guidelines, § 15126.4

[20] For more in-depth information about potential air quality mitigation measures near high volume roadways, see CARB's Technical Advisory on the topic and, more generally, the CARB

- Establishing and enforcing truck routes that avoid sensitive receptors;
- Limiting operation and construction days and times;
- Requiring the use of zero-emission or all-electric, plug-in capable TRUs for warehouses with cold storage capability;
- Establishing fleet requirements for warehouse tenants and carriers serving tenants, such as requiring the exclusive use of zero-emission delivery trucks and vans and requiring any Class 8 trucks entering the site use zero-emissions technology or meet CARB's lowest optional NO_x emissions standard;
- Requiring installation of indoor air filtration and climate control at the warehouse to reduce-impacts on workers;
- Requiring electric vehicle charging infrastructure for both cars and trucks necessary to support zero-emission vehicles and equipment on site;
- Requiring all trucks and trailers entering the site be in compliance with all current air quality regulations;
- Requiring and enforcing no idling policies;
- Requiring the use of electric-powered yard equipment onsite;
- Requiring that all construction equipment meet Tier 4 emission standards;
- Constructing new or improved transit stops, sidewalks, bicycle lanes, crosswalks, and traffic control or traffic safety measures, such as speed bumps or speed limits;
- Improving vegetation and tree canopy in and around the Project site;
- Requiring methods to reduce employee vehicle traffic, such as van shuttles, transit and carpool incentives, and bicycle parking and facilities for employees;
- Requiring installation of solar panels with backup energy storage on each building roof area with a capacity that matches the maximum allowed for distributed solar connections to the grid;
- Adhering to California green building standards; and
- Constructing the warehouse to meet Leadership in Energy and Environmental Design standards.

Mitigation measures like these have been adopted by similar projects throughout California. The Attorney General's Office would be happy to provide any assistance it can as the City considers how best to mitigate the Project's environmental impacts.

IV. CONCLUSION

This Project's EIR affords the City the opportunity to serve its constituents by transparently evaluating, disclosing, and mitigating the environmental impacts of this proposed Project. When implemented well, CEQA builds public trust and promotes sustainable development that will serve the local community for years to come. The Project will result in a large expansion of industrial uses in southern Stockton, along with those uses' environmental impacts. In drafting the EIR, we urge the City to evaluate the Project's impacts

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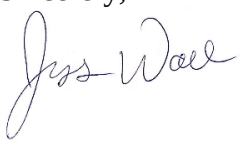
Handbook, which offers more mitigation ideas. Both are available at https://www.arb.ca.gov/ch/landuse.htm. The mitigation measures included here are focused on air quality; however, additional mitigation measures may be necessary for traffic, noise, or other significant impacts.

comprehensively, particularly those affecting the many nearby sensitive receptors. CEQA requires full disclosure and mitigation of significant environmental impacts prior to project approval.

Please do not hesitate to contact me if you have any questions or would like to discuss these issues further.

Sincerely,



JESSICA WALL
Deputy Attorney General

For XAVIER BECERRA
Attorney General

Appendix:

A satellite image of the Project site (in red) with icons depicting the elementary school and park in the surrounding area.

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
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TTY: California Relay Service (800) 735-2929
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Making Conservation a California Way of Life.

October 22, 2020

10-SJ-99-PM 013.15
South Stockton Commerce Center
SCH#2020090561
NOP and Initial Study

Nicole D. Moore
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

Dear Ms. Moore:

The California Department of Transportation appreciates the opportunity to review the Initial Study and Notice of Preparation of an Environmental Impact Report proposed South Stockton Commerce Center. The project includes 298 acres of industrial use, 11 acres of commercial use, 54 acres of open space, 41 acres of public facilities, and 19 acres of roadway right-of-way. The project site is located west of the 99 Frontage Road, east of Airport Way, and south of the Stockton Airport. The Department has the following comments:

1. The project will require a complete Transportation Impact Study to determine the proposed project's near-term and long-term impacts to State highway facilities. This study must be submitted to Caltrans for review and comment prior to project approval. The study must include the following.
    a. A project description that includes a description and build years of each phase (if phasing) of the project improvements and ultimate buildout improvement.
    b. Trip generation for each zoning district shown on page 27 of the EIR.
    c. Highway Capacity Software (HCS) version 7 merge and diverge analysis and intersection operation analysis using Synchro/Simtraffic version 10 for the following interchanges ramps intersections.
        - SR 99/Arch Road interchange
        - SR 99/French Camp interchange
        - I-5/Arch Airport Road interchange
        - I-5/Roth Road interchange
    d. Provide Synchro/Simtraffic version 10 electronic files and hard copy of complete report of the TIS to include the following analysis scenarios. The years of each scenario should be specified
        - Existing Conditions
        - Project Only
        - Existing Conditions plus Project

- Cumulative Conditions (Existing Conditions plus Other Approval and Pending Project without this project)
- Cumulative Conditions with this project

e. Provide figures to show traffic volumes for AM and PM Peak Hours for each of the scenarios listed in Comment 1d.
f. The LOS, control delays and 95th Percentile queue length should be based on Simtraffic 5 runs, four 15-minute intervals with 10-minute seeding period.

2. SB 743 is changing CEQA analysis of transportation impacts. It requires local land use projects to provide safe transportation systems, reduce per capita vehicle miles traveled (VMT), increase accessibility by mode share of bicycle, pedestrian, and transit travel, and reduce GHG emissions. VMT reduction is necessary to meet the statewide greenhouse gas (GHG) goals. Caltrans recommends VMT per capita thresholds that are 15% below existing regional VMT per capita.

3. The City should work with Caltrans Travel Forecasting Branch to provide updated traffic forecasting volumes for each phase (if phasing) of the project and ultimate buildout.

4. STAA Truck off-tracking analysis will be required at all interchanges, intersections, and ramps mentioned above. The analysis must show that off-tracking does not encroach onto opposing lanes, will not kink within the turning paths and allow 2 ft lateral clearance provided between the truck wheel paths and edge of pavement, dikes, or curbs.

5. This project requires the needed improvements to the highway and acquiring the appropriate STAA Terminal Access approvals. Terminal Access application procedures can be found at the following link: http://www.dot.ca.gov/trafficops/trucks/ta-process.html

6. Caltrans encourages employees to use alternate modes of transportation such as buses, bicycles, and carpools to reach the property. Caltrans also encourages the inclusion of bicycle racks on the property and bus stops nearby.

7. A hydrology and hydraulic report is necessary to determine if grading would divert drainage from this proposed project and cause an increase in runoff to existing State facilities. The report will be required to include hydraulic calculations for both existing and proposed conditions, using 25-year storm events at the project site location. The calculations must identify the affected drainage inlets, the amount of flow being intercepted and spread width calculations. Many areas of the state right of way will not allow any additional drainage to be added to the existing flows. Please submit this report to Caltrans for review and comment prior to project approval.

If you have any questions or would like to discuss our comments in more detail, please contact Nicholas Fung at (209) 948-7190 or myself at (209) 941-1921.

Sincerely,

Nicholas Fung
FOR

TOM DUMAS, CHIEF
OFFICE OF METROPOLITAN PLANNING

November 17, 2020

Nicole Moore
Acting Planning Manager
City of Stockton
345 North El Dorado Street
Stockton, California 95202
Submitted via email: nicole.moore@stocktonca.gov

Dear Nicole Moore:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the Notice of Preparation (NOP) for the South Stockton Commerce Center Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2020090561. The Project proposes the development of a maximum of 140,350 square feet of commercial uses and 6,091,551 square feet of industrial uses on a 437.45-acre site. The proposed Project is within the City of Stockton (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes.

Freight facilities, like the one proposed in the Project, can result in high daily volumes of heavy-duty diesel truck traffic and operation of on-site equipment (e.g., forklifts and yard tractors) that emit toxic diesel emissions, and contribute to regional air pollution and global climate change.[1] CARB has reviewed the NOP and is concerned about the air pollution and health risk impacts that would result should the City approve the Project.

I. The Project Would Increase Exposure to Air Pollution in Disadvantaged Communities

The Project, if approved, will expose nearby communities to elevated levels of air pollution. Residences are located south and west of the Project site, with the closest residences situated approximately 930 feet from the Project's western boundary. In addition to residences, the Venture Academy Family of Schools is located within 2 miles of the Project. The communities near the Project are exposed to existing toxic diesel particulate matter (diesel PM) emissions from aircraft operations at the Stockton Metropolitan Airport and vehicular traffic along Interstate 5 (I-5) and State Route 99 (SR-99). Due to the Project's proximity to residences and a school already burdened by multiple sources of air pollution, CARB is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

[1] With regard to greenhouse gas emissions from this project, CARB has been clear that local governments and project proponents have a responsibility to properly mitigate these impacts. CARB's guidance, set out in detail in the Scoping Plan issued in 2017, makes clear that in CARB's expert view, local mitigation is critical to achieving climate goals and reducing greenhouse gases below levels of significance.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel PM emissions generated during the construction and operation of the Project would negatively impact nearby communities, which are already disproportionally impacted by air pollution from aircraft operations at the Stockton Metropolitan Airport and vehicular traffic along I-5 and SR-99.

Through its authority under Health and Safety Code section 39711, the California Environmental Protection Agency (CalEPA) is charged with the duty to identify disadvantaged communities. CalEPA bases its identification of these communities on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code, section 39711, subsection (a)). In this capacity, CalEPA currently defines a disadvantaged community, from an environmental hazard and socioeconomic standpoint, as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). CalEnviroScreen uses a screening methodology to help identify California communities currently disproportionately burdened by multiple sources of pollution. The census tract containing the Project is within the top 5 percent for Pollution Burden[2] and is considered a disadvantaged community; therefore, CARB urges the City to ensure that the Project does not adversely impact neighboring disadvantaged communities.

II. The DEIR Should Quantify and Discuss the Potential Cancer Risks from On-site Transport Refrigeration Units

Since the NOP states the proposed industrial uses could be used for cold storage, it is likely that trucks and trailers visiting the Project site would be equipped with transport refrigeration units (TRU).[3] TRUs on trucks and trailers can emit large quantities of diesel exhaust while operating within the Project site. Residences and other sensitive receptors (e.g., daycare facilities, senior care facilities, and schools) located near where these TRUs could be operating, would be exposed to diesel exhaust emissions that would result in a significant cancer risk.

CARB urges the City to model air pollutant emissions from on-site TRUs in the DEIR, as well as include potential cancer risks from on-site TRUs in the Project's health risk assessment (HRA). The HRA prepared for the Project should account for all potential health risks from Project-related diesel PM emission sources such as backup

[2] Pollution Burden represents the potential exposure to pollutants and the adverse environmental conditions caused by pollution.
[3] TRUs are refrigeration systems powered by integral diesel engines that protect perishable goods during transport in an insulated truck and trailer vans, rail cars, and domestic shipping containers.

generators, TRUs, and heavy-duty truck traffic, and include all the air pollutant reduction measures listed in Attachment A of this comment letter.

In addition to the health risks associated with operational emissions, health risks associated with construction emissions should also be included in the air quality section of the DEIR and the Project's HRA. Construction of the Project would result in short-term diesel emissions from the use of both on-road and off-road diesel equipment. The Office of Environmental Health Hazard Assessment's (OEHHA) guidance (2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments)[4] recommends assessing cancer risks for construction projects lasting longer than two months. Since construction would very likely occur over a period lasting longer than two months, the HRA prepared for the Project should include health risks for existing residences near the Project site during construction.

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

III. Conclusion

To reduce the exposure of toxic diesel PM emissions in disadvantaged communities already disproportionally impacted by air pollution, the final design of the Project should include all existing and emerging zero-emission technologies to minimize diesel PM and oxides of nitrogen (NO_x) emissions, as well as the greenhouse gases that contribute to climate change. CARB encourages the City and applicant to implement the measures listed in Attachment A of this comment letter to reduce the Project's construction and operational air pollution emissions.

Given the breadth and scope of projects subject to CEQA review throughout California that have air quality and greenhouse gas impacts, coupled with CARB's limited staff resources to substantively respond to all issues associated with a project, CARB must prioritize its substantive comments here based on staff time, resources, and its assessment of impacts. CARB's deliberate decision to substantively comment on some issues does not constitute an admission or concession that it substantively agrees with the lead agency's findings and conclusions on any issues on which CARB does not substantively submit comments.

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

CARB appreciates the opportunity to comment on the NOP for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. Please include CARB on your State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, via email at stanley.armstrong@arb.ca.gov.

Sincerely,

Richard Boyd
Assistant Division Chief
Transportation and Toxics Division

Attachment

cc: See next page.

cc: State Clearinghouse
state.clearinghouse@opr.ca.gov

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Little Manila Rising
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Supervising Air Quality Specialist
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stanley.armstrong@arb.ca.gov

ATTACHMENT A

Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers

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

Recommended Construction Measures

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

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

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

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

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

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

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

Recommended Operation Measures

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

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

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

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

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

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

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

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

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

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

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

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

12. Including language in tenant lease agreements, requiring the installing of vegetative walls[6] or other effective barriers that separate loading docks and people living or working nearby.

---

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

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

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

[6] Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies (2017) is available at: https://ww2.arb.ca.gov/sites/default/files/classic//research/apr/past/13-306.pdf.

From:	Nicole Moore
To:	Steve McMurtry (smcmurtry@denovoplanning.com); "Elise Carroll"
Cc:	Trevor Smith
Subject:	FW: Request to be added to notification list for South Stockton Commerce Center Project (SCH2020090561)
Date:	Tuesday, October 13, 2020 8:44:14 AM
Attachments:	image001.png image002.png image003.png image004.png

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Just an FYI:

Nicole D. Moore, LEED-AP
SENIOR PLANNER
Community Development Department
345 N. El Dorado Street, Stockton CA 95202
Office: 209.937.8561 Direct: 209.937.8195

For City of Stockton Updates on COVID-19 please visit:
Twitter @stocktonUpdates
Facebook @CityofStockton
City Website http://www.stocktonca.gov

From: Theresa Rettinghouse <trettinghouse@biologicaldiversity.org>
Sent: Friday, October 9, 2020 10:36 AM
To: Nicole Moore <Nicole.Moore@stocktonca.gov>
Subject: Request to be added to notification list for South Stockton Commerce Center Project (SCH2020090561)

Good morning Ms. Moore,

Please add my email to the notification list for new documents released for the South Stockton Commerce Center Project (SCH2020090561). Do you know the estimated timeline for the release of the DEIR?

Best regards,
Theresa

Theresa Rettinghouse
(she/her/hers)
Urban Wildlands Paralegal
Center for Biological Diversity
trettinghouse@biologicaldiversity.org
Ph: 510-844-7100 ext 320

1212 Broadway St., Suite 800
Oakland, CA 94612

30 October 2020

Nicole D. Moore
City of Stockton
345 North El Dorado Street
Stockton, CA 95202

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, SOUTH STOCKTON COMMERCE CENTER PROJECT, SCH#2020090561, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 30 September 2020 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the South Stockton Commerce Center Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it 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.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-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). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). 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.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit
Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Clean Water Act Section 404 Permit
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage

under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4856 or Nicholas.White@waterboards.ca.gov.

Nicholas White
Water Resource Control Engineer

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

From:	Nicole Moore
To:	Trevor Smith; Steve McMurtry (smcmurtry@denovoplanning.com); "Elise Carroll"
Subject:	FW: South Stockton Commerce Center NOP
Date:	Sunday, November 1, 2020 4:48:11 PM
Attachments:	image001.png image002.png image003.png image004.png

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And this one too:

Nicole D. Moore, LEED-AP
SENIOR PLANNER
Community Development Department
345 N. El Dorado Street, Stockton CA 95202
Office: 209.937.8561 Direct: 209.937.8195

For City of Stockton Updates on COVID-19 please visit:
Twitter @stocktonUpdates
Facebook @CityofStockton
City Website http://www.stocktonca.gov

From: Marven Norman <menorman@gmail.com>
Sent: Friday, October 30, 2020 4:34 PM
To: Nicole Moore <Nicole.Moore@stocktonca.gov>
Subject: South Stockton Commerce Center NOP

Hi Nicole,

I would like to provide the following comments for inclusion in study by the EIR process for the South Stockton Commerce Center ("Project"). It is vital that the traffic impacts for bicyclists be studied based on the contextual guidelines set forth by Caltrans for the appropriate facility for a given road type (linked below). Doing so ensures that construction of the Project will be accessible to workers and visitors in a safe and sane manner right from the very beginning and not become a weak link in the network. This could also be pivotal for keeping Project VMT low by providing a viable alternative to access the area. Also, future intersections should be evaluated for construction as roundabouts as part of the traffic analysis as those are safer than traffic signals or two-way stops. Thank you for your time and consideration.

Cheers,

Marven E. Norman

https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/planning-contextual-guidance-memo-03-11-20-a11y.pdf

STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

September 30, 2020

Nicole Moore
City of Stockton
345 N. El Dorado Street
Stockton, CA 95202

Re: 2020090561, South Stockton Commerce Center Project, San Joaquin County

Dear Ms. Moore:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

October 3, 2020

Community Development Department
City of Stockton
425 N. El Dorado Street
Stockton, CA 98202 - 1997

RE: AB 52 Consultation Request for the Proposed Stockton Commerce Center (Project #P20-0024), Stockton, CA

Dear Nicole D. Moore,

Northern Valley Yokuts Tribe and Nototomne Cultural Preservation received a letter from the City of Stockton dated September 24, 2020, formally notifying us of a proposed project, the Stockton Commerce Center Project (APNs #177-110-040, -050; 177-100-030; 177-050-090; and 201-020-010 Project #P20-0024), in the City of Stockton and an opportunity to consult under AB 52. This letter is a notice that Northern Valley Yokuts Tribe and Nototomne Cultural Preservation would like to initiate consultation under AB 52.

We would like to discuss the topics listed in Cal. Public Resources Code section 21080.3.2(a), including the type of environmental review to be conducted for the project; project alternatives; the project's significant effects; and mitigation measures for any direct, indirect, or cumulative impacts the project may cause to tribal cultural resources. As consultation progresses, we may also wish to discuss design options that would avoid impacts to tribal cultural resources; the scope of any environmental document that is prepared for the project; pre-project surveys; and tribal cultural resource identification, significance evaluations and culturally-appropriate treatment.

This letter is also a formal request to allow Northern Valley Yokuts Tribe and Nototomne Cultural Preservation tribal representatives to observe and participate in all cultural resource surveys, including initial pedestrian surveys for the project. Please send us all existing cultural resource assessments, as well as requests for, and the results of, any records searches that may have been conducted prior to our first consultation meeting. If tribal cultural resources are identified within the project area, it is our policy that tribal monitors must be present for all ground disturbing activities. Finally, please be advised that our strong preference is to preserve tribal cultural resources in place and avoid them whenever possible. Subsurface testing and data recovery must not occur without first consulting with and receiving written consent from Northern Valley Yokuts Tribe and Nototomne Cultural Preservation.

In the letter you are identified as the lead contact person for consultation on the proposed project. I will be our point of contact for this consultation. Please contact me by phone 209.649.8972 or email at canutes@verizon.net begin the consultation process.

Thank you for involving Northern Valley Yokuts Tribe and Nototomne Cultural Preservation in the planning process at an early stage. We ask that you make this letter a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Sincerely,

Katherine Erolinda Perez, Chairwoman

SIERRA CLUB
DELTA-SIERRA GROUP
MOTHER LODE CHAPTER

Delta-Sierra Group
Mother Lode Chapter
P.O. Box 9258
Stockton CA 95208

Nicole Moore
City of Stockton
345 N. El Dorado Street
Stockton CA 95202
via email: Nicole.Moore@stocktonca.gov.

10.27.2020

Re: South Stockton Commerce Center Project Notice of Preparation and Initial Study

The Delta-Sierra Group has reviewed the Initial Study for the planned industrial development located off Airport Way immediately north of the confluence with French Camp Slough and the North Fork of Little John's Creek. French Camp Slough continues through the southwestern part of the five parcels encompassing 437.45 acres of agricultural lands.

Setting

The five parcels are summarized below to help with understanding the discussion regarding General Plan Zoning Maps vs General Plan designations and a zone change designation. The information was obtained from San Joaquin County Assessors and City of Stockton Interactive Zoning Map[1]. There seems to be some discrepancies between the addresses cited in the Initial Study and City of

[1] https://stocktonca.mapgeo.io/datasets/properties?abuttersDistance=100&latlng=37.973764%2C-121.284422&themes=%22%5B%5C%22zoning%5C%22%5D%22&zoom=12

Stockton records (shown within parentheses). Additionally, there seems to be some discrepancies related to acreage sizes as illustrated below (shown within parentheses).

Parcel Table

APN	Address	Acres	Land value ($) SJC	Current SJC assessed use	City Zone	City General Plan
77-110-040	6110 S. Airport Way	218.29	4,357,515 (221.54 ac)	Irrigated row crop	IL (8210 S. Airport)	Industrial
177-100-030	7070 S. Airport Way	76.03	1,660,790 (80.81)	Irrigated row crop	OS (1865 E French Camp Road	Open Space/ Agricultural
177-110-050	6122 S. Airport Way	3.27	65,305	Irrigated row crop	IL (8222 S AIRPORT WY)	Industrial
201-020-010	9091 S. State Route FR 99	75.07	1,550,424 (73.74 ac)	Irrigated row crop	IL	Industrial
177-050-090	8606 S. Airport Way	64.79	1,289,060	Irrigated row crop	RH (Residential, High Density)	Industrial

The conversion of this especially important agricultural land not only will have an effect on local food security, as row crops are food crops, but will significantly affect existing flood buffering, wildlife habitat, and water infiltration. The environmental analysis of the no project alternative must characterize the positive attributes which will be lost, if developed as described in the Initial Study. Removing agricultural land removes the natural climate change attenuator that soils can serve also affecting the City's ability to reduce carbon dioxide levels in the atmosphere through carbon sequestration.

The Draft Environmental Report must include a market analysis to investigate the need for up to 6,091,551 square feet of "employment-generating" industrial uses considering recently approved similar projects under development. This maximum square footage is based on the Floor Area Ratio (FAR) of 0.47 for industrial uses including general light industrial, industrial park, warehousing, mini-warehouse, high cube transitional and short-term storage warehouse, high-cube fulfillment center warehouse, high-cube parcel hub warehouse and light-cube cold storage warehouse. There is active recruiting for existing warehouse jobs in our area which pay $15-$20/hour ($600 to $800/week) for full time work.

Agricultural Land Mitigation

All of the existing land is in active agricultural uses and should require both City of Stockton Agricultural Land Mitigation (1:1) and San Joaquin County Habitat Mitigation based on SJCOG biological study to determine mitigation level. The City of Stockton Agricultural Land Mitigation program was not referenced as part of the environmental analysis.

"Agricultural land or farmland" for the purposes of Agricultural Land Mitigation Guidelines means important farmland, as defined by the California Department of Conservation's Farmland Monitoring and Mapping Program (FMMP) and as shown on the most recent available FMMP map of San Joaquin County. Important farmland includes prime farmland, farmland of statewide significance, and unique farmland.

Agricultural Land Mitigation Impact Fee - Central Valley Farmland Trust (CVFT): Under Municipal Code section 16-355.270, the City has the authority to establish a Public Facilities Fee Program (PFF) on new development. In 2003, City Council approved resolution #2003-04-03-0105, establishing the PFF schedule. In 2007, the City agreed (through Council resolution #2007-02-07-0079) to add Agricultural Land Mitigation Fee to its Public Facilities Fee Program. The Ag. Mitigation Fee is collected for all applicable new development projects that would result from the conversion of important farmland, as defined by California Department of Conservation, into urban uses. All Ag. Mitigation fees collected pursuant to the agreement should be remitted to Central California Farmland Trust (CVFT).

City of Stockton
Public Facilities Fee Report (PFF)
FY 2018-19

CITY OF STOCKTON

Pass Through Fees Schedule - All Mitigation Fees

NOTES TO THE ANNUAL REPORT: Per California Government Code Section 66001(e), no refund of PFF fees.

Notes: All Mitigation Impact Fees apply to all fee areas and subject to additonal Administrative fee of 3.5%.

Agricultural Land Mitigation Fee Schedule:

		Effective Date 7/1/2017 Amount	Effective Date 7/1/2018 Amount
Non-Residential:	**Unit of Measure**		
Office / High Density	Per Acre of Net Parcel Area	$ 11,902.00	$ 11,902.00
Retail / Medium Density	Per Acre of Net Parcel Area	$ 11,758.00	$ 11,758.00
Warehouse / Low Density	Per Acre of Net Parcel Area	$ 10,494.00	$ 10,494.00
Residential:			
Single Family Units	Per Acre of Net Parcel Area	$ 14,352.00	$ 14,352.00
Multiple Family Units	Per Acre of Net Parcel Area	$ 12,841.00	$ 12,841.00
Guest Room	Per Acre of Net Parcel Area	$ 12,841.00	$ 12,841.00

For additional information or questions regarding to Ag. Land Mitigation Impact Fees, please contact CDD at (209) 937-8561.

Important Farmland Categories according to the State of California Department of Conservation

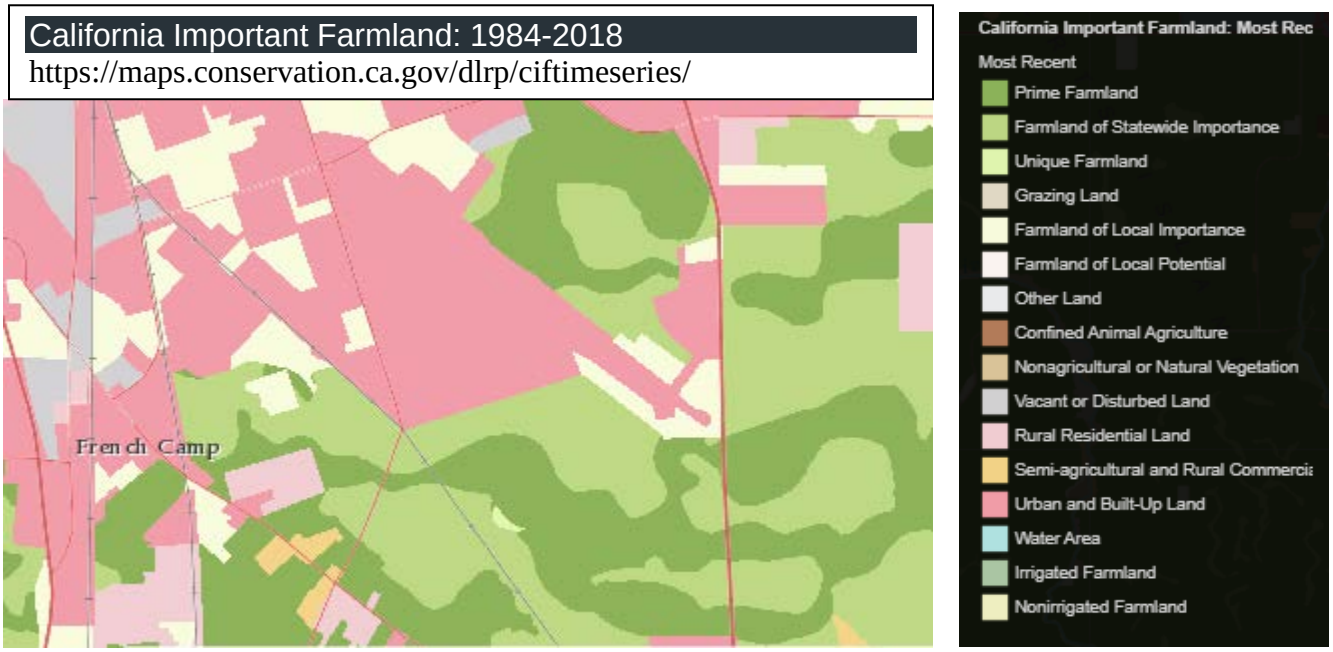
For environmental review purposes under CEQA, the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land constitute 'agricultural land' (Public Resources Code Section 21060.1). The remaining categories are used for reporting changes in land use as required for FMMP's biennial farmland conversion report. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Prime Farmland (P)
Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields.

Farmland of Statewide Importance (S)
Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.

Unique Farmland (U)
Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California.

Farmland of Local Importance (L)
Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance (PDF), but they are shown separately.



Climate changes relating to global warming must be carefully considered especially relating to changes to precipitation patterns. Paved land has much higher runoff coefficients, as compared to the existing agricultural land use which has been shown to attenuate runoff and reduce flood risks. The draft EIR must include a full flood hazard analysis to the residential area downstream of the proposed outfall to French Camp Slough.

Governor Newson recently issued Executive Order N 82-20 announced on October 7, 2020[2]:

> "The science is clear that, in our existential fight against climate change, we must build on our historic efforts in energy and emissions and focus on our lands as well. California's beautiful natural and working lands are an important tool to help slow and avert catastrophic climate change, and today's executive order provides important new tools to take on this existential threat."

Agricultural land mitigation only ensures that some other agricultural land cannot be easily developed through a conservation easement. Agricultural land mitigation does not create new

[2] https://www.gov.ca.gov/2020/10/07/governor-newsom-launches-innovative-strategies-to-use-california-land-to-fight-climate-change-conserve-biodiversity-and-boost-climate-resilience/

agricultural land. Once the land is developed it is unlikely ever to return to food production. The costs associated with the loss of food production land must be analyzed in the draft EIR

The conversion of this land to non-agricultural uses will create additional development pressures on the surrounding farmland and this must be evaluated in the draft EIR.

Air Quality

The conversion of irrigated lands to paved industrial uses accessing SR-99, I-5, the Stockton Metropolitan Airport and rail lines is expected to potentially impact air quality in South Stockton. When considering mitigation measures please refer to the CARB Technical Advisory Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways[3].

(Adjust Font size) When assessing the Project's air pollution emissions from mobile sources use the emission factors found in CARB's latest EMFAC2017. These emission factors were updated from 2014 to provide the best available estimates of emission along with other site-specific variables which will be difficult to determine since the project is conceptual. Please include purple monitor data when evaluating local air quality conditions in the vicinity. Please provide descriptions of all zoned uses for the projects including general light industrial, industrial park, warehousing, mini-warehouse, high cube transitional and short-term storage warehouse, high-cube fulfillment center warehouse, high-cube parcel hub warehouse and light-cube cold storage warehouse. Any development agreements that would limit the amount of various zoned uses must be fully disclosed with complete descriptions of associated air emissions scenarios.

Ultimately, "the lead agency will examine each of the environmental issues listed in the checklist… and decide whether the proposed project has the potential to have a significant impact". This statement was found for each of the CEQA checklist type. The City of Stockton recently approved the conversion of agricultural land for a logistic center and made the finding that air quality will be improved.

If approved, a development agreement that is transferrable will be established without any defined project. Without a defined project it is very difficult to determine impacts which may result from development approved based on zoning. On previous similar projects there have been requests that a reasonable trip length for off-site heavy-heavy duty truck travel be used when analyzing emissions. The San Joaquin Valley AD will not be able to attain health based federal air quality standards without reductions in emissions from HHD which is the single largest source of NOX emissions in the San Joaquin Valley. Operational emissions for on-site sources must also be quantified.

EPA Air Quality Status[4]

pollutant	effec_rede	nonattain	class	part	population
1-Hour Ozone (1979)	- -	Yes	Extreme	W	685306
8-Hour Ozone (1997)	- -	Yes	Extreme	W	685306
8-Hour Ozone (2008)	- -	Yes	Extreme	W	685306
8-Hour Ozone (2015)	- -	Yes	Extreme	W	685306
Carbon Monoxide (1971)	6/1/1998		Moderate <= 12.7ppm	P	373545
PM-10 (1987)	12/12/2008		Serious	W	685306
PM-2.5 (1997)	- -	Yes	Serious	W	685306
PM-2.5 (2006)	- -	Yes	Serious	W	685306
PM-2.5 (2012)	- -	Yes	Moderate	W	685306

[3] https://ww3.arb.ca.gov/ch/rd_technical_advisory_final.pdf
[4] https://www3.epa.gov/airquality/greenbook/anayo_ca.html

Community air quality can be linked to vehicular emissions

The SJVAPCD 2018 PM 2.5 Plan identifies how reductions can be achieved, through implementation of the CARB Statewide Truck and Bus Regulation. The regulation will apply to all truck fleets operating within California, including any fleets that may be associated with the proposed project. As stated, the regulation will require conformance with the identified CARB near-zero truck NOx emission standard.

Again, evaluating impacts is challenging for a project that is not well defined. Recently, the City of Stockton used CalEEMod fleet mix defaults to estimate a project's mobile source air pollutant emissions and was notified that the mileage used required revisions. When performing air emission analyses and traffic impact studies a reasonable estimate of heavy-duty truck trips commensurate with the proposed project's size and location is necessary. Please be very clear and concise when disclosing the parameters used during emissions and traffic analyses.

Land use is within the City's regulatory purview and while the City is not expected to enforce CARB or SJVAPCD standards the City's choice to approve projects with intense trucking and rail components means that it is adding new sources – like an attractive nuisance – which will increase the exposure of our residents to pollution. Mitigation is needed to reduce the impact of the project and should be paid for by the developer not the residents of Stockton.

Transportation

The same issues with regard to evaluating impacts for a project that is not well defined will confound the environmental analysis particularly if it is difficult to ascertain the estimates used when performing the transportation analyses.

> The EIR will describe existing and future transportation conditions and will analyze any potential conflicts with programs, plans, ordinances or policies addressing the circulation system. Potential impacts associated with site access, and on-site circulation will also be addressed in the EIR. A detailed vehicle mile traveled (VMT) analysis will be conducted to determine if the project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The VMT analysis would be completed consistent with the Office of Planning and Research's (OPR's) Technical Advisory on Evaluating Transportation Impacts in CEQA.

If the City of Stockton uses a full build out for the general plan designations then it is likely that regardless of the VMT analysis which is to be undertaken, the City with find: Impact TRANS-1: Consistency with CEQA Guidelines Section 15064.3(b). Compared with existing land use designations, the project would generate less VMT and would therefore be consistent with CEQA Guidelines which is the language used in a similar logistic industrial center. The existing use of the property is the no project alternative and should be used to determine whether or not the project will have a significant impact. Additionally, please provide at your earliest convenience the VMT analysis which the City must be developing consistent with CEQA guidance:

> By July 1, 2020, public agencies evaluating the impact of development projects are required to use vehicle miles traveled (VMT) to evaluate transportation impacts. This change removes the focus on traffic at intersections and roadways immediately around project sites. Instead,

> the focus will be on how new development projects may influence the overall amount of automobile use.[5]

The NOP did not specify what City of Stockton guidance would be used but it is likely not to be the Standards of the City's Transportation Impact Guidelines used in the analysis of a similar project earlier this year.

Tribal Cultural Resources

Please incorporate a paid tribal representative to be present during land disturbance activities recognizing tribal sovereignty. Two local Tribes include the United Auburn Indian Community and the Northern Valley Yokuts which we are in communication with.

Greenhouse Gas Reduction Requirements

The City of Stockton Climate Action Plan adopted in 2014 included the following statement which is even more true now that our community suffers from the economic and emotional impacts relating to the Covid-19 pandemic:

> The CAP would require substantial effort on the part of the entire Stockton community, including residents and business, schools, the San Joaquin Regional Transit District, other public entities, and the Stockton municipal government at a time when residents, businesses, and public agencies are struggling to pay current bills, keep businesses open, and provide basic services. This plan, if fully implemented, would result in a 20% reduction in per capita GHG emission from 2005 to 2020.
>
> Many of the measures included in the CAP would result in long-term economic, environmental, health and other benefits for the City and its residents and businesses in addition to the expected GHG emission reductions.

Vegetation has been shown to be effective at reducing energy and air pollutant transport. Any vegetation associated with the project or subsequent development must be paid for and maintained by the applicant not the residents of Stockton.

Removing agricultural land removes the natural climate change attenuator that soils can serve and must be accounted when evaluating greenhouse gas emissions.

CEQA is clear that "uniformly applicable development policies or standards" need to be considered in the analysis of environmental effects and their significance and the need for additional mitigation measures. These additional measures are those required by the lead agency to protect public health and the environment that may be harmed as a result of the approval of the project. Relying on state guidance which was developed prior to the project and did not consider the project's impact is not sufficient when parts of our community is unequally burdened by negative environmental impacts. All zip codes are not created equal.

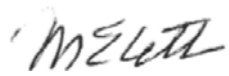
This Project is not vital for our recovery and we hope that the draft environmental impact analysis will be sufficiently detailed so that the residents of Stockton can determine the document's adequacy to describe the environmental costs associated with the project. Cost to Benefits ratio must be clearly described.

Please add the Delta-Sierra Group to your CEQA notification list. We became aware of the project through a CEQAnet link from a colleague. Please let us know if there is to be any public meeting

[5] https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-02-26-transmittal-and-draft-vmt-focused-tisg.pdf

regarding this project and when the draft environmental impact report becomes available to review. If you have any questions you may contact me by email mebeth@outlook.com.

Sincerely,



Mary Elizabeth M.S., R.E.H.S.

Cc: Mother Lode Chapter

Catholic Charities, Environmental Justice Stockton Diocese

Restore the Delta

Central California Asthma Collaborative

Central Valley Air Quality Coalition

Little Manilla Rising

Environmental Justice Coalition for Water

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

October 30, 2020

Nicole Moore
City of Stockton
345 N. El Dorado Street
Stockton, CA, 95202

Project: Notice of Preparation for the South Stockton Commerce Center (SSCC)

District CEQA Reference No: 20200842

Dear Ms. Moore:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Stockton (City) consisting of development of approximately 298 net acres for the development of mix use industrial and commercial uses, 95 acres for public facilities and open space areas, and 19 acres for road right-of-way (Project). The Project is located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport, in Stockton, CA (APN 177-110-040, 177-100-030, 177-110-050, 201-020-010, and 177-050-090).

Project Scope

The Project consists of the expansions of an existing industrial area located in southeast Stockton. The expansion will include the development of approximately 300 acres of industrial uses to a maximum of 6,091,551 square feet, approximately 41 acres of public facilities (storm basins and pump stations), approximately 54 acres of open space for parks, approximately 19 acres for road right-of-way, and approximately 11 acres for commercial uses totaling a maximum of 140,350 square feet.

The District's initial review of the Project concludes that emissions resulting from construction and/or operation of the Project may exceed the following thresholds of significance: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5).

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 FAX: (661) 392-5585

www.valleyair.org www.healthyairliving.com

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions.

Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at: https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf

The District offers the following comments:

1) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM10 emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into development projects. In case the proposed development project clean air design elements are insufficient to meet the targeted emission reductions, the rule requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

Accordingly, future development project(s) within the Project would be subject to District Rule 9510 if:

(1) Upon full build-out, the project would receive a project-level discretionary approval from a public agency and would equal or exceed any one of the following applicability thresholds:

- 50 dwelling units
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;
- 20,000 square feet of medical office space;
- 39,000 square feet of general office space; or
- 9,000 square feet of educational space; or
- 10,000 square feet of government space; or
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above

(2) Or would equal or exceed any of the applicability thresholds in section 2.2 of the rule.

District Rule 9510 also applies to any transportation or transit development projects where construction exhaust emissions equal or exceed two (2.0) tons of NOx or two (2.0) tons of PM10.

In the case the future development project(s) are subject to District Rule 9510, an Air Impact Assessment (AIA) application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The AIA application form can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

District staff is available to provide assistance with determining if future development projects will be subject to Rule 9510, and can be reached by phone at (559) 230-6000 or by email at ISR@valleyair.org.

2) Regulation VIII (Fugitive PM10 Prohibitions)

As the Project is expected to generate fugitive dust during related construction activities, it will be subject to Regulation VIII requirements. Information on how to comply with Regulation VIII can be found online at: http://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm.

3) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

3a) Project Related Construction Emissions

Construction emissions are short-term emissions and should be evaluated separately from operational emissions. Equipment exhaust, as well as fugitive dust emissions should be quantified. For reference, the District's annual criteria thresholds of significance for construction are listed above.

The District recommends that the City consider the use of the cleanest reasonably available off-road construction practices (i.e. eliminating unnecessary idling) and fleets, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations as a mitigation measure to reduce Project related impacts from construction related exhaust emissions.

3b) Project Related Operational Emissions

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed in the Project Scope.

3c) Recommended Model

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using CalEEMod (**Cal**ifornia **E**mission **E**stimator **Mod**el), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

3d) Project Related Operational Emissions– Truck Routing

Truck routing involves the path/roads heavy-duty trucks take to and from their destination. The air emissions from heavy-duty trucks can impact residential communities and sensitive receptors.

The District recommends the City consider evaluating heavy-duty truck routing patterns to help limit emission exposure to residential communities and sensitive receptors. More specifically, this measure would assess current truck routes, in consideration of the number and type of each vehicle, destination/origin of each vehicular trip, time of day/week analysis, vehicle miles traveled and emissions. The truck routing evaluation would also identify alternative truck routes and their impacts on VMT, GHG emissions, and air quality.

3e) Project Related Operational Emissions– Cleanest Available Truck

The San Joaquin Valley will not be able to attain stringent health-based federal air quality standards without significant reductions in emissions from heavy-heavy duty (HHD) Trucks, the single largest source of NOx emissions in the San Joaquin Valley. The District recently adopted the 2018 PM2.5 Plan, which includes significant new reductions from HHD Trucks, including emissions reductions by

2023 through the implementation of the California Air Resources Board (CARB) Statewide Truck and Bus Regulation, which requires truck fleets operating in California to meet the 2010 0.2 g/bhp-hr NOx standard by 2023. Additionally, to meet the federal air quality standards by the 2020 to 2024 attainment deadlines, the District's Plan relies on a significant and immediate transition of heavy duty truck fleets to zero or near-zero emissions technologies, including the near-zero truck standard of 0.02 g/bhp-hr NOx established by the California Air Resources Board.

Development projects have the potential to create a large volume of heavy-duty truck traffic as heavy-duty trucks travel to-and-from the project location at longer trip distances for building material distribution. Since the project may exceed the District significance thresholds, the District recommends that the following mitigation measures be considered by the City for inclusion in the Environmental Impact Report (EIR) for project related operational emissions.

- Advise fleets associated with Project operational activities to utilize the cleanest available HHD truck technologies, including zero and near-zero (0.02 g/bhp-hr NOx) technologies as feasible.

- Advise all on-site service equipment (cargo handling, yard hostlers, forklifts, pallet jacks, etc.) to utilize zero-emissions technologies as feasible.

- Advise fleets associated with future development projects to be subject to the best practices (i.e. eliminating unnecessary idling).

In addition, the District recommends that the City include mitigation measures to reduce project related operational impacts through incorporation of design elements, for example, increased energy efficiency, reducing vehicle miles traveled, etc. More information on mitigation measures can be found on the District's website at: http://www.valleyair.org/transportation/ceqa_idx.htm.

3f) Project Related Operational Emissions– Reduce Idling of Heavy Duty Trucks

The goal of this strategy is to limit the potential for localized PM2.5 and toxic air quality impacts associated with failure to comply with the state's Heavy Duty anti-idling regulation (e.g limiting vehicle idling to specific time limits). The diesel exhaust from excessive idling has the potential to impose significant adverse health and environmental impacts. Therefore, efforts to ensure compliance of the anti-idling regulation, especially near sensitive receptors, is important to limit the

amount of idling within the community, which will result in community air quality benefits.

3g) Project Related Operational Emissions– Electric On-Site Off-Road and On-Road Equipment

Since the Project consists of industrial uses, it may have the potential to result in increased use of off-road equipment (i.e. forklifts) and/or on-road equipment (i.e. mobile yard trucks with the ability to move materials). The District recommends the City advise the project proponent to utilize electric or zero emission off-road and on-road equipment used on-site for this Project.

4) Health Risk Screening/Assessment

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TAC's are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TAC's identified by OEHHA/CARB can be found at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants

The District recommends the Project be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

For your convenience, the District's prioritization calculator can be found at: http:www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

ii) The District recommends a refined HRA for projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is recommended that the Project proponent contact the District to review the proposed modeling protocol.

The Project would be considered to have a significant health risk if the HRA demonstrates that the Project related health impacts would exceed the Districts significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that Projects that result in a significant health risk not be approved.

For HRA submittals, please provide the following information electronically to the District for review:

- HRA AERMOD model files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- The District can be contacted at (559) 230-6000 for assistance; or
- Visiting the Districts website (Modeling Guidance) at: http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

5) Voluntary Emission Reduction Agreement

If the Project is expected to have a significant impact, the District recommends the EIR also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural

irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the Draft EIR includes an assessment of the feasibility of implementing a VERA.

6) Health Impact Discussion

As required by the decision in Sierra Club v. County of Fresno (2018) 6 Cal.4th 502, a reasonable effort to discuss relevant specifics regarding the connection between potential adverse air quality impacts from the Project with the likely nature and magnitude of potential health impacts may be required. If the potential health impacts from the Project cannot be specifically correlated, explain what is known and why, given scientific constraints, potential health impacts cannot be translated.

7) Ambient Air Quality Analysis

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. The District recommends that an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

8) Cumulative Air Impacts

In addition to the discussions on the topics identified above, the District recommends the EIR also include a discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's attainment status can be found online by visiting the District's website at: http://valleyair.org/aginfo/attainment.htm.

9) District Rule 9410 (Employer Based Trip Reduction)

The Project may be subject to District Rule 9410 (Employer Based Trip Reduction) if the Project would result in employment of 100 or more "eligible" employees. District Rule 9410 requires employers with 100 or more "eligible" employees at a worksite to establish an Employer Trip Reduction Implementation Plan (eTRIP) that encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. Under an eTRIP plan, employers have the flexibility to select the options that work best for their worksites and their employees.

Information about how District Rule 9410 can be found online at: www.valleyair.org/tripreduction.htm.

For additional information, you can contact the District by phone at 559-230-6000 or by e-mail at etrip@valleyair.org

10) Other District Rules and Regulations

The Project may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

11) District Comment Letter

The District recommends that a copy of the District's comments be provided to the Project proponent.

If you have any questions or require further information, please contact Eric McLaughlin by e-mail at Eric.McLaughlin@valleyair.org or by phone at (559) 230-5808.

Sincerely,

For Arnaud Marjollet
Director of Permit Services

AM: em

APPENDIX B

Air Quality, Greenhouse Gas, and Energy Appendices

CONTENTS

APPENDIX B.1

CalEEMod Outputs

South Stockton Commerce Center

San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	6,091.55	1000sqft	298.00	6,091,551.00	0
Other Asphalt Surfaces	18.20	Acre	18.20	792,792.00	0
Regional Shopping Center	140.35	1000sqft	11.00	140,350.00	0
Other Non-Asphalt Surfaces	41.00	Acre	41.00	1,785,960.00	0
City Park	54.00	Acre	54.00	2,352,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

South Stockton Commerce Center - San Joaquin County, Annual

Project Characteristics -

Land Use - Land uses are best fit based on available land use types/subtypes available in CalEEMod. Land uses selected are consistent with the land uses as provided in the EIR Project Description.

Construction Phase - Construction schedule based on project size and details.

Off-road Equipment -

Demolition -

Grading - 328 acres assumed to be graded.

Vehicle Trips - Trips consistent with Traffic Impact Assessment (Fehr & Peers).

Energy Use -

Construction Off-road Equipment Mitigation - Construction mitigation: Water Exposed Area 2x daily; Clean Paved Road (9% fugitive dust PM reduction); Unpaved road mitigation: Limit on-site construction vehicle speeds to 5 mph; Soil Stabilizer for unpaved (10% reduction)

Fleet Mix - Fleet mix modified for relevant land use types/subtypes to reflect Traffic Impact Assessment values (Fehr & Peers) - 75.5% passenger vehicles; 24.5% heavy-duty trucks.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
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tblConstructionPhase	NumDays	775.00	620.00
tblConstructionPhase	NumDays	7,750.00	3,685.00
tblConstructionPhase	NumDays	550.00	440.00
tblConstructionPhase	NumDays	550.00	3,685.00
tblConstructionPhase	PhaseEndDate	9/23/2022	7/1/2022
tblConstructionPhase	PhaseEndDate	9/12/2025	11/14/2025
tblConstructionPhase	PhaseEndDate	5/28/2055	12/30/2039
tblConstructionPhase	PhaseEndDate	7/6/2057	7/23/2027
tblConstructionPhase	PhaseEndDate	8/15/2059	12/30/2039
tblConstructionPhase	PhaseStartDate	9/24/2022	7/2/2023
tblConstructionPhase	PhaseStartDate	9/13/2025	11/15/2025

South Stockton Commerce Center - San Joaquin County, Annual

tblConstructionPhase	PhaseStartDate	5/29/2055	11/15/2025
tblConstructionPhase	PhaseStartDate	7/7/2057	11/15/2025
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tblFleetMix	LDA	0.59	0.55
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tblFleetMix	LDT1	0.03	0.03
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tblFleetMix	MHD	0.01	0.00
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tblFleetMix	OBUS	1.1590e-003	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	UBUS	1.1060e-003	0.00

tblFleetMix	UBUS	1.1060e-003	0.00
tblGrading	AcresOfGrading	1,550.00	328.00
tblLandUse	LandUseSquareFeet	6,091,550.00	6,091,551.00
tblLandUse	LotAcreage	139.84	298.00
tblLandUse	LotAcreage	3.22	11.00
tblVehicleTrips	ST_TR	1.32	2.65
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	49.97	64.01
tblVehicleTrips	SU_TR	0.68	2.65
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	25.24	64.01
tblVehicleTrips	WD_TR	6.97	2.65
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	42.70	64.01

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2175	2.2299	1.1890	2.1700e-003	1.0015	0.1125	1.1140	0.5483	0.1035	0.6518	0.0000	190.6260	190.6260	0.0597	0.0000	192.1172
2022	0.2101	2.1531	1.3078	2.5600e-003	1.1836	0.1049	1.2885	0.6480	0.0965	0.7445	0.0000	225.0264	225.0264	0.0705	0.0000	226.7884

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	ROG	NOx	CO	SO2	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					
2023	0.2200	2.2462	1.8511	4.1300e-003	0.5757	0.0927	0.6684	0.2367	0.0852	0.3219	0.0000	362.6843	362.6843	0.1148	0.0000	365.5550
2024	0.4294	4.2462	3.6834	8.3100e-003	0.9837	0.1751	1.1588	0.4580	0.1611	0.6190	0.0000	730.0322	730.0322	0.2313	0.0000	735.8151
2025	1.0927	6.0444	5.7332	0.0221	1.8173	0.1522	1.9695	0.6551	0.1404	0.7955	0.0000	2,014.1077	2,014.1077	0.2622	0.0000	2,020.6623
2026	5.8489	22.3005	20.2884	0.1155	7.4239	0.1823	7.6061	2.0103	0.1703	2.1806	0.0000	10,715.7818	10,715.7818	0.4714	0.0000	10,727.5668
2027	5.6656	21.5359	18.4500	0.1123	7.4170	0.1563	7.5733	2.0084	0.1464	2.1548	0.0000	10,422.8899	10,422.8899	0.4234	0.0000	10,433.4743
2028	5.4446	20.6129	16.4539	0.1085	7.3799	0.1228	7.5027	1.9984	0.1156	2.1140	0.0000	10,081.8879	10,081.8879	0.3646	0.0000	10,091.0038
2029	5.3385	20.4829	15.7140	0.1074	7.4083	0.1211	7.5294	2.0061	0.1140	2.1201	0.0000	9,987.6123	9,987.6123	0.3567	0.0000	9,996.5305
2030	5.2005	19.6668	15.0034	0.1067	7.4083	0.0654	7.4737	2.0061	0.0626	2.0687	0.0000	9,912.2808	9,912.2808	0.2905	0.0000	9,919.5436
2031	5.0709	19.4969	14.3273	0.1056	7.4083	0.0635	7.4718	2.0061	0.0608	2.0669	0.0000	9,812.0792	9,812.0792	0.2825	0.0000	9,819.1425
2032	4.9779	19.4218	13.8045	0.1050	7.4367	0.0620	7.4986	2.0138	0.0594	2.0732	0.0000	9,765.0486	9,765.0486	0.2768	0.0000	9,771.9683
2033	4.8433	19.1424	13.2053	0.1034	7.3799	0.0599	7.4398	1.9984	0.0574	2.0559	0.0000	9,618.9783	9,618.9783	0.2686	0.0000	9,625.6937
2034	4.7622	19.0285	12.7493	0.1028	7.3799	0.0583	7.4383	1.9984	0.0560	2.0545	0.0000	9,558.5016	9,558.5016	0.2634	0.0000	9,565.0854
2035	4.6958	18.8905	12.4024	0.1026	7.4083	0.0483	7.4566	2.0061	0.0461	2.0522	0.0000	9,544.0568	9,544.0568	0.2586	0.0000	9,550.5223
2036	4.7138	18.9629	12.4500	0.1030	7.4367	0.0485	7.4852	2.0138	0.0463	2.0601	0.0000	9,580.6241	9,580.6241	0.2596	0.0000	9,587.1144
2037	4.6958	18.8905	12.4024	0.1026	7.4083	0.0483	7.4566	2.0061	0.0461	2.0522	0.0000	9,544.0568	9,544.0568	0.2586	0.0000	9,550.5223
2038	4.6958	18.8905	12.4024	0.1026	7.4083	0.0483	7.4566	2.0061	0.0461	2.0522	0.0000	9,544.0568	9,544.0568	0.2586	0.0000	9,550.5223
2039	4.6778	18.8182	12.3549	0.1022	7.3799	0.0481	7.4280	1.9984	0.0459	2.0443	0.0000	9,507.4895	9,507.4895	0.2576	0.0000	9,513.9303
Maximum	**5.8489**	**22.3005**	**20.2884**	**0.1155**	**7.4367**	**0.1823**	**7.6061**	**2.0138**	**0.1703**	**2.1806**	**0.0000**	**10,715.7818**	**10,715.7818**	**0.4714**	**0.0000**	**10,727.5668**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2175	2.2299	1.1890	2.1700e-003	0.4544	0.1125	0.5669	0.2477	0.1035	0.3512	0.0000	190.6258	190.6258	0.0597	0.0000	192.1170
2022	0.2101	2.1531	1.3078	2.5600e-003	0.5370	0.1049	0.6419	0.2928	0.0965	0.3893	0.0000	225.0262	225.0262	0.0705	0.0000	226.7881
2023	0.2200	2.2462	1.8511	4.1300e-003	0.2640	0.0927	0.3566	0.1078	0.0852	0.1931	0.0000	362.6839	362.6839	0.1148	0.0000	365.5546
2024	0.4294	4.2462	3.6833	8.3100e-003	0.4525	0.1751	0.6276	0.2087	0.1611	0.3698	0.0000	730.0314	730.0314	0.2313	0.0000	735.8142
2025	1.0927	6.0444	5.7332	0.0221	1.2724	0.1522	1.4246	0.4197	0.1404	0.5601	0.0000	2,014.1069	2,014.1069	0.2622	0.0000	2,020.6614
2026	5.8489	22.3005	20.2884	0.1155	6.8686	0.1823	7.0509	1.8740	0.1703	2.0443	0.0000	10,715.7811	10,715.7811	0.4714	0.0000	10,727.5660
2027	5.6656	21.5359	18.4500	0.1123	6.8623	0.1563	7.0186	1.8723	0.1464	2.0187	0.0000	10,422.8893	10,422.8893	0.4234	0.0000	10,433.4738
2028	5.4446	20.6129	16.4539	0.1085	6.8280	0.1228	6.9509	1.8630	0.1156	1.9786	0.0000	10,081.8875	10,081.8875	0.3646	0.0000	10,091.0034
2029	5.3385	20.4829	15.7139	0.1074	6.8543	0.1211	6.9754	1.8701	0.1140	1.9841	0.0000	9,987.6119	9,987.6119	0.3567	0.0000	9,996.5301
2030	5.2005	19.6668	15.0034	0.1067	6.8543	0.0654	6.9197	1.8701	0.0626	1.9327	0.0000	9,912.2804	9,912.2804	0.2905	0.0000	9,919.5431
2031	5.0709	19.4969	14.3273	0.1056	6.8543	0.0635	6.9178	1.8701	0.0608	1.9309	0.0000	9,812.0788	9,812.0788	0.2825	0.0000	9,819.1421
2032	4.9779	19.4218	13.8045	0.1050	6.8806	0.0620	6.9425	1.8773	0.0594	1.9367	0.0000	9,765.0482	9,765.0482	0.2768	0.0000	9,771.9679
2033	4.8433	19.1424	13.2053	0.1034	6.8280	0.0599	6.8879	1.8630	0.0574	1.9204	0.0000	9,618.9779	9,618.9779	0.2686	0.0000	9,625.6932
2034	4.7622	19.0285	12.7493	0.1028	6.8280	0.0583	6.8864	1.8630	0.0560	1.9190	0.0000	9,558.5012	9,558.5012	0.2634	0.0000	9,565.0849
2035	4.6958	18.8905	12.4024	0.1026	6.8543	0.0483	6.9026	1.8702	0.0461	1.9162	0.0000	9,544.0564	9,544.0564	0.2586	0.0000	9,550.5219

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	ROG	NOx	CO	SO2	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					
2036	4.7138	18.9629	12.4500	0.1030	6.8806	0.0485	6.9291	1.8773	0.0463	1.9236	0.0000	9,580.6236	9,580.6236	0.2596	0.0000	9,587.1139
2037	4.6958	18.8905	12.4024	0.1026	6.8543	0.0483	6.9026	1.8702	0.0461	1.9162	0.0000	9,544.0564	9,544.0564	0.2586	0.0000	9,550.5219
2038	4.6958	18.8905	12.4024	0.1026	6.8543	0.0483	6.9026	1.8702	0.0461	1.9162	0.0000	9,544.0564	9,544.0564	0.2586	0.0000	9,550.5219
2039	4.6778	18.8182	12.3549	0.1022	6.8281	0.0481	6.8762	1.8630	0.0459	1.9089	0.0000	9,507.4891	9,507.4891	0.2576	0.0000	9,513.9298
Maximum	**5.8489**	**22.3005**	**20.2884**	**0.1155**	**6.8806**	**0.1823**	**7.0509**	**1.8773**	**0.1703**	**2.0443**	**0.0000**	**10,715.7811**	**10,715.7811**	**0.4714**	**0.0000**	**10,727.5660**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**9.46**	**0.00**	**9.31**	**10.36**	**0.00**	**9.83**	**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	**8-1-2021**	**10-31-2021**	1.4622	1.4622
2	**11-1-2021**	**1-31-2022**	1.3722	1.3722
3	**2-1-2022**	**4-30-2022**	1.1558	1.1558
4	**5-1-2022**	**7-31-2022**	0.8051	0.8051
8	**5-1-2023**	**7-31-2023**	0.4066	0.4066
9	**8-1-2023**	**10-31-2023**	1.2468	1.2468
10	**11-1-2023**	**1-31-2024**	1.2220	1.2220
11	**2-1-2024**	**4-30-2024**	1.1474	1.1474
12	**5-1-2024**	**7-31-2024**	1.1728	1.1728
13	**8-1-2024**	**10-31-2024**	1.1729	1.1729
14	**11-1-2024**	**1-31-2025**	1.1203	1.1203
15	**2-1-2025**	**4-30-2025**	0.9834	0.9834

16	**5-1-2025**	**7-31-2025**	1.0165	1.0165
17	**8-1-2025**	**10-31-2025**	1.0165	1.0165
18	**11-1-2025**	**1-31-2026**	6.2671	6.2671
19	**2-1-2026**	**4-30-2026**	6.8878	6.8878
20	**5-1-2026**	**7-31-2026**	7.0711	7.0711
21	**8-1-2026**	**10-31-2026**	7.0959	7.0959
22	**11-1-2026**	**1-31-2027**	7.1100	7.1100
23	**2-1-2027**	**4-30-2027**	6.7894	6.7894
24	**5-1-2027**	**7-31-2027**	6.9451	6.9451
25	**8-1-2027**	**10-31-2027**	6.6783	6.6783
26	**11-1-2027**	**1-31-2028**	6.6936	6.6936
27	**2-1-2028**	**4-30-2028**	6.4690	6.4690
28	**5-1-2028**	**7-31-2028**	6.5698	6.5698
29	**8-1-2028**	**10-31-2028**	6.5915	6.5915
30	**11-1-2028**	**1-31-2029**	6.6041	6.6041
31	**2-1-2029**	**4-30-2029**	6.3119	6.3119
32	**5-1-2029**	**7-31-2029**	6.4848	6.4848
33	**8-1-2029**	**10-31-2029**	6.5051	6.5051
34	**11-1-2029**	**1-31-2030**	6.4625	6.4625
35	**2-1-2030**	**4-30-2030**	6.0765	6.0765
36	**5-1-2030**	**7-31-2030**	6.2441	6.2441
37	**8-1-2030**	**10-31-2030**	6.2630	6.2630
38	**11-1-2030**	**1-31-2031**	6.2733	6.2733
39	**2-1-2031**	**4-30-2031**	6.0004	6.0004
40	**5-1-2031**	**7-31-2031**	6.1680	6.1680
41	**8-1-2031**	**10-31-2031**	6.1856	6.1856
42	**11-1-2031**	**1-31-2032**	6.1967	6.1967

43	**2-1-2032**	**4-30-2032**	6.0008	6.0008
44	**5-1-2032**	**7-31-2032**	6.1016	6.1016
45	**8-1-2032**	**10-31-2032**	6.1180	6.1180
46	**11-1-2032**	**1-31-2033**	6.1298	6.1298
47	**2-1-2033**	**4-30-2033**	5.8757	5.8757
48	**5-1-2033**	**7-31-2033**	6.0434	6.0434
49	**8-1-2033**	**10-31-2033**	6.0589	6.0589
50	**11-1-2033**	**1-31-2034**	6.0717	6.0717
51	**2-1-2034**	**4-30-2034**	5.8259	5.8259
52	**5-1-2034**	**7-31-2034**	5.9932	5.9932
53	**8-1-2034**	**10-31-2034**	6.0080	6.0080
54	**11-1-2034**	**1-31-2035**	6.0112	6.0112
55	**2-1-2035**	**4-30-2035**	5.7520	5.7520
56	**5-1-2035**	**7-31-2035**	5.9178	5.9178
57	**8-1-2035**	**10-31-2035**	5.9321	5.9321
58	**11-1-2035**	**1-31-2036**	5.9602	5.9602
59	**2-1-2036**	**4-30-2036**	5.8168	5.8168
60	**5-1-2036**	**7-31-2036**	5.9178	5.9178
61	**8-1-2036**	**10-31-2036**	5.9321	5.9321
62	**11-1-2036**	**1-31-2037**	5.9602	5.9602
63	**2-1-2037**	**4-30-2037**	5.7520	5.7520
64	**5-1-2037**	**7-31-2037**	5.9178	5.9178
65	**8-1-2037**	**10-31-2037**	5.9321	5.9321
66	**11-1-2037**	**1-31-2038**	5.9602	5.9602
67	**2-1-2038**	**4-30-2038**	5.7520	5.7520
68	**5-1-2038**	**7-31-2038**	5.9178	5.9178
69	**8-1-2038**	**10-31-2038**	5.9321	5.9321

70	**11-1-2038**	**1-31-2039**	5.9602	5.9602
71	**2-1-2039**	**4-30-2039**	5.7520	5.7520
72	**5-1-2039**	**7-31-2039**	5.9178	5.9178
73	**8-1-2039**	**9-30-2039**	3.9238	3.9238
		Highest	7.1100	7.1100

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	28.9193	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207
Energy	0.6211	5.6465	4.7431	0.0339		0.4291	0.4291		0.4291	0.4291	0.0000	21,602.5438	21,602.5438	0.8167	0.2573	21,699.6315
Mobile	3.4889	109.0639	34.5707	0.4536	24.0427	0.1360	24.1787	6.4484	0.1286	6.5769	0.0000	42,748.6056	42,748.6056	1.8402	0.0000	42,794.6104
Waste						0.0000	0.0000		0.0000	0.0000	1,564.1530	0.0000	1,564.1530	92.4388	0.0000	3,875.1227
Water						0.0000	0.0000		0.0000	0.0000	450.2045	2,305.7826	2,755.9871	46.3446	1.1134	4,246.3964
Total	**33.0293**	**114.7110**	**39.3717**	**0.4875**	**24.0427**	**0.5653**	**24.6081**	**6.4484**	**0.5579**	**7.0063**	**2,014.3575**	**66,657.0453**	**68,671.4028**	**141.4405**	**1.3707**	**72,615.8817**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	28.9193	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207
Energy	0.6211	5.6465	4.7431	0.0339		0.4291	0.4291		0.4291	0.4291	0.0000	21,602.5438	21,602.5438	0.8167	0.2573	21,699.6315
Mobile	3.4889	109.0639	34.5707	0.4536	24.0427	0.1360	24.1787	6.4484	0.1286	6.5769	0.0000	42,748.6056	42,748.6056	1.8402	0.0000	42,794.6104
Waste						0.0000	0.0000		0.0000	0.0000	1,564.1530	0.0000	1,564.1530	92.4388	0.0000	3,875.1227
Water						0.0000	0.0000		0.0000	0.0000	450.2045	2,305.7826	2,755.9871	46.3446	1.1134	4,246.3964
Total	**33.0293**	**114.7110**	**39.3717**	**0.4875**	**24.0427**	**0.5653**	**24.6081**	**6.4484**	**0.5579**	**7.0063**	**2,014.3575**	**66,657.0453**	**68,671.4028**	**141.4405**	**1.3707**	**72,615.8817**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	7/1/2022	5	240	
2	Grading	Grading	7/2/2023	11/14/2025	5	620	
3	Building Construction	Building Construction	11/15/2025	12/30/2039	5	3685	
4	Paving	Paving	11/15/2025	7/23/2027	5	440	
5	Architectural Coating	Architectural Coating	11/15/2025	12/30/2039	5	3685	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 328

Acres of Paving: 59.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,347,852; Non-Residential Outdoor: 3,115,951; Striped Parking Area: 154,725 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	4,674.00	1,830.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	935.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9936	0.0000	0.9936	0.5462	0.0000	0.5462	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2139	2.2273	1.1635	2.0900e-003		0.1125	0.1125		0.1035	0.1035	0.0000	183.8964	183.8964	0.0595	0.0000	185.3833
Total	**0.2139**	**2.2273**	**1.1635**	**2.0900e-003**	**0.9936**	**0.1125**	**1.1061**	**0.5462**	**0.1035**	**0.6496**	**0.0000**	**183.8964**	**183.8964**	**0.0595**	**0.0000**	**185.3833**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.6500e-003	2.5300e-003	0.0255	7.0000e-005	7.8900e-003	5.0000e-005	7.9400e-003	2.1000e-003	5.0000e-005	2.1400e-003	0.0000	6.7296	6.7296	1.7000e-004	0.0000	6.7339
Total	**3.6500e-003**	**2.5300e-003**	**0.0255**	**7.0000e-005**	**7.8900e-003**	**5.0000e-005**	**7.9400e-003**	**2.1000e-003**	**5.0000e-005**	**2.1400e-003**	**0.0000**	**6.7296**	**6.7296**	**1.7000e-004**	**0.0000**	**6.7339**

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					0.4471	0.0000	0.4471	0.2458	0.0000	0.2458	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2139	2.2273	1.1635	2.0900e-003		0.1125	0.1125		0.1035	0.1035	0.0000	183.8962	183.8962	0.0595	0.0000	185.3831
Total	**0.2139**	**2.2273**	**1.1635**	**2.0900e-003**	**0.4471**	**0.1125**	**0.5596**	**0.2458**	**0.1035**	**0.3492**	**0.0000**	**183.8962**	**183.8962**	**0.0595**	**0.0000**	**185.3831**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.6500e-003	2.5300e-003	0.0255	7.0000e-005	7.2700e-003	5.0000e-005	7.3200e-003	1.9500e-003	5.0000e-005	1.9900e-003	0.0000	6.7296	6.7296	1.7000e-004	0.0000	6.7339
Total	**3.6500e-003**	**2.5300e-003**	**0.0255**	**7.0000e-005**	**7.2700e-003**	**5.0000e-005**	**7.3200e-003**	**1.9500e-003**	**5.0000e-005**	**1.9900e-003**	**0.0000**	**6.7296**	**6.7296**	**1.7000e-004**	**0.0000**	**6.7339**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1743	0.0000	1.1743	0.6455	0.0000	0.6455	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2061	2.1504	1.2804	2.4700e-003		0.1048	0.1048		0.0964	0.0964	0.0000	217.3560	217.3560	0.0703	0.0000	219.1135
Total	**0.2061**	**2.1504**	**1.2804**	**2.4700e-003**	**1.1743**	**0.1048**	**1.2791**	**0.6455**	**0.0964**	**0.7419**	**0.0000**	**217.3560**	**217.3560**	**0.0703**	**0.0000**	**219.1135**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	2.6700e-003	0.0275	8.0000e-005	9.3200e-003	6.0000e-005	9.3800e-003	2.4800e-003	5.0000e-005	2.5300e-003	0.0000	7.6704	7.6704	1.8000e-004	0.0000	7.6749
Total	**4.0000e-003**	**2.6700e-003**	**0.0275**	**8.0000e-005**	**9.3200e-003**	**6.0000e-005**	**9.3800e-003**	**2.4800e-003**	**5.0000e-005**	**2.5300e-003**	**0.0000**	**7.6704**	**7.6704**	**1.8000e-004**	**0.0000**	**7.6749**

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					0.5284	0.0000	0.5284	0.2905	0.0000	0.2905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2061	2.1504	1.2804	2.4700e-003		0.1048	0.1048		0.0964	0.0964	0.0000	217.3558	217.3558	0.0703	0.0000	219.1132
Total	**0.2061**	**2.1504**	**1.2804**	**2.4700e-003**	**0.5284**	**0.1048**	**0.6333**	**0.2905**	**0.0964**	**0.3869**	**0.0000**	**217.3558**	**217.3558**	**0.0703**	**0.0000**	**219.1132**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	2.6700e-003	0.0275	8.0000e-005	8.5900e-003	6.0000e-005	8.6500e-003	2.3000e-003	5.0000e-005	2.3500e-003	0.0000	7.6704	7.6704	1.8000e-004	0.0000	7.6749
Total	**4.0000e-003**	**2.6700e-003**	**0.0275**	**8.0000e-005**	**8.5900e-003**	**6.0000e-005**	**8.6500e-003**	**2.3000e-003**	**5.0000e-005**	**2.3500e-003**	**0.0000**	**7.6704**	**7.6704**	**1.8000e-004**	**0.0000**	**7.6749**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5654	0.0000	0.5654	0.2339	0.0000	0.2339	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2159	2.2435	1.8233	4.0400e-003		0.0926	0.0926		0.0852	0.0852	0.0000	354.4789	354.4789	0.1147	0.0000	357.3450
Total	**0.2159**	**2.2435**	**1.8233**	**4.0400e-003**	**0.5654**	**0.0926**	**0.6580**	**0.2339**	**0.0852**	**0.3191**	**0.0000**	**354.4789**	**354.4789**	**0.1147**	**0.0000**	**357.3450**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1300e-003	2.6600e-003	0.0278	9.0000e-005	0.0104	6.0000e-005	0.0104	2.7500e-003	6.0000e-005	2.8100e-003	0.0000	8.2055	8.2055	1.8000e-004	0.0000	8.2100
Total	**4.1300e-003**	**2.6600e-003**	**0.0278**	**9.0000e-005**	**0.0104**	**6.0000e-005**	**0.0104**	**2.7500e-003**	**6.0000e-005**	**2.8100e-003**	**0.0000**	**8.2055**	**8.2055**	**1.8000e-004**	**0.0000**	**8.2100**

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					0.2544	0.0000	0.2544	0.1053	0.0000	0.1053	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2159	2.2435	1.8233	4.0400e-003		0.0926	0.0926		0.0852	0.0852	0.0000	354.4784	354.4784	0.1147	0.0000	357.3446
Total	**0.2159**	**2.2435**	**1.8233**	**4.0400e-003**	**0.2544**	**0.0926**	**0.3470**	**0.1053**	**0.0852**	**0.1905**	**0.0000**	**354.4784**	**354.4784**	**0.1147**	**0.0000**	**357.3446**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1300e-003	2.6600e-003	0.0278	9.0000e-005	9.5500e-003	6.0000e-005	9.6100e-003	2.5600e-003	6.0000e-005	2.6100e-003	0.0000	8.2055	8.2055	1.8000e-004	0.0000	8.2100
Total	**4.1300e-003**	**2.6600e-003**	**0.0278**	**9.0000e-005**	**9.5500e-003**	**6.0000e-005**	**9.6100e-003**	**2.5600e-003**	**6.0000e-005**	**2.6100e-003**	**0.0000**	**8.2055**	**8.2055**	**1.8000e-004**	**0.0000**	**8.2100**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9628	0.0000	0.9628	0.4524	0.0000	0.4524	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4216	4.2414	3.6317	8.1300e-003		0.1749	0.1749		0.1609	0.1609	0.0000	714.2058	714.2058	0.2310	0.0000	719.9805
Total	**0.4216**	**4.2414**	**3.6317**	**8.1300e-003**	**0.9628**	**0.1749**	**1.1378**	**0.4524**	**0.1609**	**0.6134**	**0.0000**	**714.2058**	**714.2058**	**0.2310**	**0.0000**	**719.9805**

3.3 Grading - 2024

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	7.7800e-003	4.8100e-003	0.0517	1.7000e-004	0.0209	1.3000e-004	0.0210	5.5500e-003	1.2000e-004	5.6600e-003	0.0000	15.8265	15.8265	3.3000e-004	0.0000	15.8346
Total	**7.7800e-003**	**4.8100e-003**	**0.0517**	**1.7000e-004**	**0.0209**	**1.3000e-004**	**0.0210**	**5.5500e-003**	**1.2000e-004**	**5.6600e-003**	**0.0000**	**15.8265**	**15.8265**	**3.3000e-004**	**0.0000**	**15.8346**

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					0.4333	0.0000	0.4333	0.2036	0.0000	0.2036	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4216	4.2414	3.6317	8.1300e-003		0.1749	0.1749		0.1609	0.1609	0.0000	714.2049	714.2049	0.2310	0.0000	719.9796
Total	**0.4216**	**4.2414**	**3.6317**	**8.1300e-003**	**0.4333**	**0.1749**	**0.6082**	**0.2036**	**0.1609**	**0.3645**	**0.0000**	**714.2049**	**714.2049**	**0.2310**	**0.0000**	**719.9796**

3.3 Grading - 2024

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	7.7800e-003	4.8100e-003	0.0517	1.7000e-004	0.0192	1.3000e-004	0.0194	5.1500e-003	1.2000e-004	5.2600e-003	0.0000	15.8265	15.8265	3.3000e-004	0.0000	15.8346
Total	**7.7800e-003**	**4.8100e-003**	**0.0517**	**1.7000e-004**	**0.0192**	**1.3000e-004**	**0.0194**	**5.1500e-003**	**1.2000e-004**	**5.2600e-003**	**0.0000**	**15.8265**	**15.8265**	**3.3000e-004**	**0.0000**	**15.8346**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8604	0.0000	0.8604	0.3962	0.0000	0.3962	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3307	3.1855	3.0017	7.0800e-003		0.1289	0.1289		0.1186	0.1186	0.0000	621.3708	621.3708	0.2010	0.0000	626.3949
Total	**0.3307**	**3.1855**	**3.0017**	**7.0800e-003**	**0.8604**	**0.1289**	**0.9894**	**0.3962**	**0.1186**	**0.5148**	**0.0000**	**621.3708**	**621.3708**	**0.2010**	**0.0000**	**626.3949**

3.3 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3500e-003	3.7900e-003	0.0414	1.5000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.0000e-004	4.9300e-003	0.0000	13.2277	13.2277	2.6000e-004	0.0000	13.2341
Total	**6.3500e-003**	**3.7900e-003**	**0.0414**	**1.5000e-004**	**0.0182**	**1.1000e-004**	**0.0183**	**4.8300e-003**	**1.0000e-004**	**4.9300e-003**	**0.0000**	**13.2277**	**13.2277**	**2.6000e-004**	**0.0000**	**13.2341**

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					0.3872	0.0000	0.3872	0.1783	0.0000	0.1783	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3307	3.1855	3.0017	7.0800e-003		0.1289	0.1289		0.1186	0.1186	0.0000	621.3701	621.3701	0.2010	0.0000	626.3942
Total	**0.3307**	**3.1855**	**3.0017**	**7.0800e-003**	**0.3872**	**0.1289**	**0.5161**	**0.1783**	**0.1186**	**0.2969**	**0.0000**	**621.3701**	**621.3701**	**0.2010**	**0.0000**	**626.3942**

3.3 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3500e-003	3.7900e-003	0.0414	1.5000e-004	0.0168	1.1000e-004	0.0169	4.4800e-003	1.0000e-004	4.5800e-003	0.0000	13.2277	13.2277	2.6000e-004	0.0000	13.2341
Total	**6.3500e-003**	**3.7900e-003**	**0.0414**	**1.5000e-004**	**0.0168**	**1.1000e-004**	**0.0169**	**4.4800e-003**	**1.0000e-004**	**4.5800e-003**	**0.0000**	**13.2277**	**13.2277**	**2.6000e-004**	**0.0000**	**13.2341**

3.4 Building Construction - 2025

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	0.0226	0.2058	0.2654	4.4000e-004		8.7000e-003	8.7000e-003		8.1900e-003	8.1900e-003	0.0000	38.2667	38.2667	9.0000e-003	0.0000	38.4916
Total	**0.0226**	**0.2058**	**0.2654**	**4.4000e-004**		**8.7000e-003**	**8.7000e-003**		**8.1900e-003**	**8.1900e-003**	**0.0000**	**38.2667**	**38.2667**	**9.0000e-003**	**0.0000**	**38.4916**

3.4 Building Construction - 2025

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	0.0619	2.3347	0.4675	8.0600e-003	0.1995	2.3800e-003	0.2019	0.0577	2.2700e-003	0.0599	0.0000	765.6302	765.6302	0.0307	0.0000	766.3965
Worker	0.2149	0.1282	1.4019	4.9500e-003	0.6143	3.6100e-003	0.6179	0.1633	3.3200e-003	0.1666	0.0000	447.4272	447.4272	8.6400e-003	0.0000	447.6433
Total	**0.2768**	**2.4629**	**1.8693**	**0.0130**	**0.8138**	**5.9900e-003**	**0.8198**	**0.2210**	**5.5900e-003**	**0.2266**	**0.0000**	**1,213.0574**	**1,213.0574**	**0.0393**	**0.0000**	**1,214.0398**

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	0.0226	0.2058	0.2654	4.4000e-004		8.7000e-003	8.7000e-003		8.1900e-003	8.1900e-003	0.0000	38.2667	38.2667	9.0000e-003	0.0000	38.4916
Total	**0.0226**	**0.2058**	**0.2654**	**4.4000e-004**		**8.7000e-003**	**8.7000e-003**		**8.1900e-003**	**8.1900e-003**	**0.0000**	**38.2667**	**38.2667**	**9.0000e-003**	**0.0000**	**38.4916**

3.4 Building Construction - 2025

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	0.0619	2.3347	0.4675	8.0600e-003	0.1868	2.3800e-003	0.1892	0.0546	2.2700e-003	0.0568	0.0000	765.6302	765.6302	0.0307	0.0000	766.3965
Worker	0.2149	0.1282	1.4019	4.9500e-003	0.5665	3.6100e-003	0.5701	0.1516	3.3200e-003	0.1549	0.0000	447.4272	447.4272	8.6400e-003	0.0000	447.6433
Total	**0.2768**	**2.4629**	**1.8693**	**0.0130**	**0.7533**	**5.9900e-003**	**0.7593**	**0.2061**	**5.5900e-003**	**0.2117**	**0.0000**	**1,213.0574**	**1,213.0574**	**0.0393**	**0.0000**	**1,214.0398**

3.4 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2026

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	0.4776	18.2918	3.5587	0.0633	1.5778	0.0186	1.5964	0.4560	0.0177	0.4737	0.0000	6,016.9830	6,016.9830	0.2387	0.0000	6,022.9506
Worker	1.6040	0.9242	10.3820	0.0377	4.8585	0.0279	4.8864	1.2917	0.0257	1.3174	0.0000	3,408.7395	3,408.7395	0.0625	0.0000	3,410.3027
Total	**2.0817**	**19.2160**	**13.9407**	**0.1010**	**6.4364**	**0.0464**	**6.4828**	**1.7477**	**0.0434**	**1.7911**	**0.0000**	**9,425.7225**	**9,425.7225**	**0.3012**	**0.0000**	**9,433.2533**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2026

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	0.4776	18.2918	3.5587	0.0633	1.4777	0.0186	1.4963	0.4314	0.0177	0.4492	0.0000	6,016.9830	6,016.9830	0.2387	0.0000	6,022.9506
Worker	1.6040	0.9242	10.3820	0.0377	4.4803	0.0279	4.5082	1.1989	0.0257	1.2245	0.0000	3,408.7395	3,408.7395	0.0625	0.0000	3,410.3027
Total	**2.0817**	**19.2160**	**13.9407**	**0.1010**	**5.9580**	**0.0464**	**6.0045**	**1.6303**	**0.0434**	**1.6737**	**0.0000**	**9,425.7225**	**9,425.7225**	**0.3012**	**0.0000**	**9,433.2533**

3.4 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2027

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	0.4671	18.1182	3.4419	0.0630	1.5778	0.0183	1.5961	0.4560	0.0175	0.4735	0.0000	5,983.2209	5,983.2209	0.2348	0.0000	5,989.0902
Worker	1.5112	0.8441	9.6592	0.0364	4.8585	0.0265	4.8850	1.2917	0.0244	1.3161	0.0000	3,292.9176	3,292.9176	0.0569	0.0000	3,294.3400
Total	**1.9782**	**18.9623**	**13.1011**	**0.0994**	**6.4364**	**0.0448**	**6.4811**	**1.7477**	**0.0419**	**1.7896**	**0.0000**	**9,276.1385**	**9,276.1385**	**0.2917**	**0.0000**	**9,283.4302**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2027

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	0.4671	18.1182	3.4419	0.0630	1.4777	0.0183	1.4960	0.4314	0.0175	0.4489	0.0000	5,983.2209	5,983.2209	0.2348	0.0000	5,989.0902
Worker	1.5112	0.8441	9.6592	0.0364	4.4803	0.0265	4.5068	1.1989	0.0244	1.2233	0.0000	3,292.9176	3,292.9176	0.0569	0.0000	3,294.3400
Total	**1.9782**	**18.9623**	**13.1011**	**0.0994**	**5.9580**	**0.0448**	**6.0028**	**1.6303**	**0.0419**	**1.6722**	**0.0000**	**9,276.1385**	**9,276.1385**	**0.2917**	**0.0000**	**9,283.4302**

3.4 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

3.4 Building Construction - 2028

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	0.4567	17.9194	3.3376	0.0625	1.5718	0.0180	1.5898	0.4543	0.0172	0.4715	0.0000	5,933.5200	5,933.5200	0.2298	0.0000	5,939.2640
Worker	1.4108	0.7696	8.9914	0.0351	4.8399	0.0246	4.8645	1.2868	0.0227	1.3094	0.0000	3,177.9536	3,177.9536	0.0518	0.0000	3,179.2492
Total	**1.8675**	**18.6890**	**12.3291**	**0.0976**	**6.4117**	**0.0426**	**6.4543**	**1.7410**	**0.0399**	**1.7809**	**0.0000**	**9,111.4736**	**9,111.4736**	**0.2816**	**0.0000**	**9,118.5132**

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

3.4 Building Construction - 2028

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	0.4567	17.9194	3.3376	0.0625	1.4721	0.0180	1.4901	0.4298	0.0172	0.4470	0.0000	5,933.5200	5,933.5200	0.2298	0.0000	5,939.2640
Worker	1.4108	0.7696	8.9914	0.0351	4.4631	0.0246	4.4878	1.1943	0.0227	1.2169	0.0000	3,177.9536	3,177.9536	0.0518	0.0000	3,179.2492
Total	**1.8675**	**18.6890**	**12.3291**	**0.0976**	**5.9352**	**0.0426**	**5.9778**	**1.6241**	**0.0399**	**1.6639**	**0.0000**	**9,111.4736**	**9,111.4736**	**0.2816**	**0.0000**	**9,118.5132**

3.4 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2029

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	0.4506	17.8585	3.2679	0.0624	1.5778	0.0179	1.5957	0.4560	0.0171	0.4731	0.0000	5,932.6730	5,932.6730	0.2269	0.0000	5,938.3441
Worker	1.3169	0.7064	8.4254	0.0342	4.8585	0.0230	4.8816	1.2917	0.0212	1.3129	0.0000	3,099.0265	3,099.0265	0.0474	0.0000	3,100.2123
Total	**1.7675**	**18.5648**	**11.6934**	**0.0967**	**6.4364**	**0.0409**	**6.4773**	**1.7477**	**0.0383**	**1.7860**	**0.0000**	**9,031.6995**	**9,031.6995**	**0.2743**	**0.0000**	**9,038.5564**

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2029

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	0.4506	17.8585	3.2679	0.0624	1.4777	0.0179	1.4956	0.4314	0.0171	0.4485	0.0000	5,932.6730	5,932.6730	0.2269	0.0000	5,938.3441
Worker	1.3169	0.7064	8.4254	0.0342	4.4803	0.0230	4.5033	1.1989	0.0212	1.2201	0.0000	3,099.0265	3,099.0265	0.0474	0.0000	3,100.2123
Total	**1.7675**	**18.5648**	**11.6934**	**0.0967**	**5.9580**	**0.0409**	**5.9989**	**1.6303**	**0.0383**	**1.6686**	**0.0000**	**9,031.6995**	**9,031.6995**	**0.2743**	**0.0000**	**9,038.5564**

3.4 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.4 Building Construction - 2030

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	0.4442	17.7451	3.2045	0.0623	1.5778	0.0177	1.5955	0.4560	0.0169	0.4729	0.0000	5,913.9071	5,913.9071	0.2235	0.0000	5,919.4936
Worker	1.2179	0.6454	7.8796	0.0333	4.8585	0.0215	4.8800	1.2917	0.0198	1.3115	0.0000	3,018.2425	3,018.2425	0.0433	0.0000	3,019.3245
Total	**1.6621**	**18.3905**	**11.0841**	**0.0956**	**6.4364**	**0.0392**	**6.4755**	**1.7477**	**0.0367**	**1.7844**	**0.0000**	**8,932.1496**	**8,932.1496**	**0.2667**	**0.0000**	**8,938.8181**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.4 Building Construction - 2030

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	0.4442	17.7451	3.2045	0.0623	1.4777	0.0177	1.4954	0.4314	0.0169	0.4483	0.0000	5,913.9071	5,913.9071	0.2235	0.0000	5,919.4936
Worker	1.2179	0.6454	7.8796	0.0333	4.4803	0.0215	4.5018	1.1989	0.0198	1.2186	0.0000	3,018.2425	3,018.2425	0.0433	0.0000	3,019.3245
Total	**1.6621**	**18.3905**	**11.0841**	**0.0956**	**5.9580**	**0.0392**	**5.9972**	**1.6303**	**0.0367**	**1.6670**	**0.0000**	**8,932.1496**	**8,932.1496**	**0.2667**	**0.0000**	**8,938.8181**

3.4 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

3.4 Building Construction - 2031

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	0.4392	17.6450	3.1565	0.0621	1.5778	0.0175	1.5953	0.4560	0.0167	0.4727	0.0000	5,899.3622	5,899.3622	0.2202	0.0000	5,904.8667
Worker	1.1141	0.5872	7.3562	0.0325	4.8585	0.0200	4.8786	1.2917	0.0184	1.3101	0.0000	2,946.8645	2,946.8645	0.0394	0.0000	2,947.8486
Total	**1.5533**	**18.2323**	**10.5126**	**0.0946**	**6.4364**	**0.0375**	**6.4739**	**1.7477**	**0.0351**	**1.7829**	**0.0000**	**8,846.2267**	**8,846.2267**	**0.2596**	**0.0000**	**8,852.7153**

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

3.4 Building Construction - 2031

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	0.4392	17.6450	3.1565	0.0621	1.4777	0.0175	1.4952	0.4314	0.0167	0.4482	0.0000	5,899.3622	5,899.3622	0.2202	0.0000	5,904.8667
Worker	1.1141	0.5872	7.3562	0.0325	4.4803	0.0200	4.5003	1.1989	0.0184	1.2173	0.0000	2,946.8645	2,946.8645	0.0394	0.0000	2,947.8486
Total	**1.5533**	**18.2323**	**10.5126**	**0.0946**	**5.9580**	**0.0375**	**5.9956**	**1.6303**	**0.0351**	**1.6655**	**0.0000**	**8,846.2267**	**8,846.2267**	**0.2596**	**0.0000**	**8,852.7153**

3.4 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

3.4 Building Construction - 2032

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	0.4371	17.6220	3.1362	0.0622	1.5839	0.0174	1.6013	0.4578	0.0166	0.4744	0.0000	5,912.6702	5,912.6702	0.2182	0.0000	5,918.1262
Worker	1.0278	0.5401	6.9299	0.0320	4.8772	0.0188	4.8959	1.2967	0.0173	1.3139	0.0000	2,895.3825	2,895.3825	0.0362	0.0000	2,896.2862
Total	**1.4649**	**18.1622**	**10.0661**	**0.0942**	**6.4610**	**0.0361**	**6.4972**	**1.7544**	**0.0339**	**1.7883**	**0.0000**	**8,808.0527**	**8,808.0527**	**0.2544**	**0.0000**	**8,814.4124**

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

3.4 Building Construction - 2032

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	0.4371	17.6220	3.1362	0.0622	1.4834	0.0174	1.5008	0.4331	0.0166	0.4497	0.0000	5,912.6702	5,912.6702	0.2182	0.0000	5,918.1262
Worker	1.0278	0.5401	6.9299	0.0320	4.4975	0.0188	4.5162	1.2035	0.0173	1.2207	0.0000	2,895.3825	2,895.3825	0.0362	0.0000	2,896.2862
Total	**1.4649**	**18.1622**	**10.0661**	**0.0942**	**5.9809**	**0.0361**	**6.0170**	**1.6366**	**0.0339**	**1.6704**	**0.0000**	**8,808.0527**	**8,808.0527**	**0.2544**	**0.0000**	**8,814.4124**

3.4 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.4 Building Construction - 2033

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	0.4311	17.4065	3.0882	0.0617	1.5718	0.0171	1.5889	0.4543	0.0163	0.4706	0.0000	5,861.1963	5,861.1963	0.2140	0.0000	5,866.5458
Worker	0.9417	0.4942	6.4856	0.0311	4.8399	0.0174	4.8573	1.2868	0.0160	1.3028	0.0000	2,818.9582	2,818.9582	0.0330	0.0000	2,819.7827
Total	**1.3728**	**17.9007**	**9.5738**	**0.0928**	**6.4117**	**0.0345**	**6.4462**	**1.7410**	**0.0323**	**1.7734**	**0.0000**	**8,680.1545**	**8,680.1545**	**0.2470**	**0.0000**	**8,686.3285**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.4 Building Construction - 2033

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	0.4311	17.4065	3.0882	0.0617	1.4721	0.0171	1.4892	0.4298	0.0163	0.4461	0.0000	5,861.1963	5,861.1963	0.2140	0.0000	5,866.5458
Worker	0.9417	0.4942	6.4856	0.0311	4.4631	0.0174	4.4805	1.1943	0.0160	1.2103	0.0000	2,818.9582	2,818.9582	0.0330	0.0000	2,819.7827
Total	**1.3728**	**17.9007**	**9.5738**	**0.0928**	**5.9352**	**0.0345**	**5.9697**	**1.6241**	**0.0323**	**1.6564**	**0.0000**	**8,680.1545**	**8,680.1545**	**0.2470**	**0.0000**	**8,686.3285**

3.4 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

3.4 Building Construction - 2034

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	0.4288	17.3339	3.0676	0.0617	1.5718	0.0170	1.5888	0.4543	0.0162	0.4705	0.0000	5,857.4154	5,857.4154	0.2119	0.0000	5,862.7123
Worker	0.8760	0.4598	6.1228	0.0306	4.8399	0.0163	4.8562	1.2868	0.0149	1.3017	0.0000	2,771.7134	2,771.7134	0.0304	0.0000	2,772.4721
Total	**1.3048**	**17.7937**	**9.1904**	**0.0922**	**6.4117**	**0.0332**	**6.4449**	**1.7410**	**0.0311**	**1.7722**	**0.0000**	**8,629.1287**	**8,629.1287**	**0.2422**	**0.0000**	**8,635.1844**

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

3.4 Building Construction - 2034

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	0.4288	17.3339	3.0676	0.0617	1.4721	0.0170	1.4890	0.4298	0.0162	0.4460	0.0000	5,857.4154	5,857.4154	0.2119	0.0000	5,862.7123
Worker	0.8760	0.4598	6.1228	0.0306	4.4631	0.0163	4.4794	1.1943	0.0149	1.2092	0.0000	2,771.7134	2,771.7134	0.0304	0.0000	2,772.4721
Total	**1.3048**	**17.7937**	**9.1904**	**0.0922**	**5.9352**	**0.0332**	**5.9684**	**1.6241**	**0.0311**	**1.6552**	**0.0000**	**8,629.1287**	**8,629.1287**	**0.2422**	**0.0000**	**8,635.1844**

3.4 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.4 Building Construction - 2035

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	0.4284	17.3353	3.0626	0.0619	1.5779	0.0169	1.5947	0.4560	0.0161	0.4721	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.8585	0.0153	4.8738	1.2917	0.0140	1.3058	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**6.4364**	**0.0322**	**6.4685**	**1.7477**	**0.0302**	**1.7779**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.4 Building Construction - 2035

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	0.4284	17.3353	3.0626	0.0619	1.4778	0.0169	1.4946	0.4314	0.0161	0.4476	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.4803	0.0153	4.4956	1.1989	0.0140	1.2129	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**5.9581**	**0.0322**	**5.9902**	**1.6303**	**0.0302**	**1.6605**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

3.4 Building Construction - 2036

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	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

3.4 Building Construction - 2036

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	0.4300	17.4018	3.0743	0.0621	1.5839	0.0169	1.6008	0.4578	0.0162	0.4740	0.0000	5,900.0477	5,900.0477	0.2116	0.0000	5,905.3365
Worker	0.8251	0.4365	5.8575	0.0304	4.8772	0.0153	4.8925	1.2967	0.0141	1.3108	0.0000	2,752.2192	2,752.2192	0.0283	0.0000	2,752.9275
Total	**1.2551**	**17.8382**	**8.9317**	**0.0925**	**6.4611**	**0.0323**	**6.4933**	**1.7544**	**0.0303**	**1.7847**	**0.0000**	**8,652.2669**	**8,652.2669**	**0.2399**	**0.0000**	**8,658.2640**

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	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

3.4 Building Construction - 2036

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	0.4300	17.4018	3.0743	0.0621	1.4834	0.0169	1.5004	0.4331	0.0162	0.4493	0.0000	5,900.0477	5,900.0477	0.2116	0.0000	5,905.3365
Worker	0.8251	0.4365	5.8575	0.0304	4.4975	0.0153	4.5128	1.2035	0.0141	1.2176	0.0000	2,752.2192	2,752.2192	0.0283	0.0000	2,752.9275
Total	**1.2551**	**17.8382**	**8.9317**	**0.0925**	**5.9809**	**0.0323**	**6.0132**	**1.6366**	**0.0303**	**1.6669**	**0.0000**	**8,652.2669**	**8,652.2669**	**0.2399**	**0.0000**	**8,658.2640**

3.4 Building Construction - 2037

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.4 Building Construction - 2037

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	0.4284	17.3353	3.0626	0.0619	1.5779	0.0169	1.5947	0.4560	0.0161	0.4721	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.8585	0.0153	4.8738	1.2917	0.0140	1.3058	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**6.4364**	**0.0322**	**6.4685**	**1.7477**	**0.0302**	**1.7779**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.4 Building Construction - 2037

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	0.4284	17.3353	3.0626	0.0619	1.4778	0.0169	1.4946	0.4314	0.0161	0.4476	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.4803	0.0153	4.4956	1.1989	0.0140	1.2129	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**5.9581**	**0.0322**	**5.9902**	**1.6303**	**0.0302**	**1.6605**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

3.4 Building Construction - 2038

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

3.4 Building Construction - 2038

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	0.4284	17.3353	3.0626	0.0619	1.5779	0.0169	1.5947	0.4560	0.0161	0.4721	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.8585	0.0153	4.8738	1.2917	0.0140	1.3058	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**6.4364**	**0.0322**	**6.4685**	**1.7477**	**0.0302**	**1.7779**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

3.4 Building Construction - 2038

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	0.4284	17.3353	3.0626	0.0619	1.4778	0.0169	1.4946	0.4314	0.0161	0.4476	0.0000	5,877.5284	5,877.5284	0.2108	0.0000	5,882.7970
Worker	0.8220	0.4348	5.8351	0.0303	4.4803	0.0153	4.4956	1.1989	0.0140	1.2129	0.0000	2,741.7146	2,741.7146	0.0282	0.0000	2,742.4201
Total	**1.2503**	**17.7701**	**8.8977**	**0.0921**	**5.9581**	**0.0322**	**5.9902**	**1.6303**	**0.0302**	**1.6605**	**0.0000**	**8,619.2430**	**8,619.2430**	**0.2390**	**0.0000**	**8,625.2172**

3.4 Building Construction - 2039

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	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7193	341.7193	0.0127	0.0000	342.0375
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7193**	**341.7193**	**0.0127**	**0.0000**	**342.0375**

3.4 Building Construction - 2039

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	0.4267	17.2689	3.0508	0.0616	1.5718	0.0168	1.5886	0.4543	0.0161	0.4703	0.0000	5,855.0091	5,855.0091	0.2099	0.0000	5,860.2576
Worker	0.8188	0.4331	5.8127	0.0301	4.8399	0.0152	4.8551	1.2868	0.0140	1.3008	0.0000	2,731.2099	2,731.2099	0.0281	0.0000	2,731.9128
Total	**1.2456**	**17.7021**	**8.8636**	**0.0918**	**6.4117**	**0.0320**	**6.4438**	**1.7410**	**0.0301**	**1.7711**	**0.0000**	**8,586.2191**	**8,586.2191**	**0.2381**	**0.0000**	**8,592.1704**

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	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7189	341.7189	0.0127	0.0000	342.0371
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7189**	**341.7189**	**0.0127**	**0.0000**	**342.0371**

3.4 Building Construction - 2039

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	0.4267	17.2689	3.0508	0.0616	1.4721	0.0168	1.4889	0.4298	0.0161	0.4459	0.0000	5,855.0091	5,855.0091	0.2099	0.0000	5,860.2576
Worker	0.8188	0.4331	5.8127	0.0301	4.4631	0.0152	4.4784	1.1943	0.0140	1.2083	0.0000	2,731.2099	2,731.2099	0.0281	0.0000	2,731.9128
Total	**1.2456**	**17.7021**	**8.8636**	**0.0918**	**5.9352**	**0.0320**	**5.9673**	**1.6241**	**0.0301**	**1.6541**	**0.0000**	**8,586.2191**	**8,586.2191**	**0.2381**	**0.0000**	**8,592.1704**

3.5 Paving - 2025

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	0.0151	0.1416	0.2405	3.8000e-004		6.9100e-003	6.9100e-003		6.3500e-003	6.3500e-003	0.0000	33.0318	33.0318	0.0107	0.0000	33.2989
Paving	1.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0169**	**0.1416**	**0.2405**	**3.8000e-004**		**6.9100e-003**	**6.9100e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**33.0318**	**33.0318**	**0.0107**	**0.0000**	**33.2989**

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	4.1000e-004	4.5000e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9800e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.4359	1.4359	3.0000e-005	0.0000	1.4366
Total	**6.9000e-004**	**4.1000e-004**	**4.5000e-003**	**2.0000e-005**	**1.9700e-003**	**1.0000e-005**	**1.9800e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.4359**	**1.4359**	**3.0000e-005**	**0.0000**	**1.4366**

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	0.0151	0.1416	0.2405	3.8000e-004		6.9100e-003	6.9100e-003		6.3500e-003	6.3500e-003	0.0000	33.0317	33.0317	0.0107	0.0000	33.2988
Paving	1.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0169**	**0.1416**	**0.2405**	**3.8000e-004**		**6.9100e-003**	**6.9100e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**33.0317**	**33.0317**	**0.0107**	**0.0000**	**33.2988**

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	4.1000e-004	4.5000e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4359	1.4359	3.0000e-005	0.0000	1.4366
Total	**6.9000e-004**	**4.1000e-004**	**4.5000e-003**	**2.0000e-005**	**1.8200e-003**	**1.0000e-005**	**1.8300e-003**	**4.9000e-004**	**1.0000e-005**	**5.0000e-004**	**0.0000**	**1.4359**	**1.4359**	**3.0000e-005**	**0.0000**	**1.4366**

3.5 Paving - 2026

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	0.1194	1.1199	1.9024	2.9800e-003		0.0546	0.0546		0.0503	0.0503	0.0000	261.2513	261.2513	0.0845	0.0000	263.3636
Paving	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1336**	**1.1199**	**1.9024**	**2.9800e-003**		**0.0546**	**0.0546**		**0.0503**	**0.0503**	**0.0000**	**261.2513**	**261.2513**	**0.0845**	**0.0000**	**263.3636**

3.5 Paving - 2026

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	5.1500e-003	2.9700e-003	0.0333	1.2000e-004	0.0156	9.0000e-005	0.0157	4.1500e-003	8.0000e-005	4.2300e-003	0.0000	10.9395	10.9395	2.0000e-004	0.0000	10.9445
Total	**5.1500e-003**	**2.9700e-003**	**0.0333**	**1.2000e-004**	**0.0156**	**9.0000e-005**	**0.0157**	**4.1500e-003**	**8.0000e-005**	**4.2300e-003**	**0.0000**	**10.9395**	**10.9395**	**2.0000e-004**	**0.0000**	**10.9445**

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	0.1194	1.1199	1.9024	2.9800e-003		0.0546	0.0546		0.0503	0.0503	0.0000	261.2510	261.2510	0.0845	0.0000	263.3633
Paving	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1336**	**1.1199**	**1.9024**	**2.9800e-003**		**0.0546**	**0.0546**		**0.0503**	**0.0503**	**0.0000**	**261.2510**	**261.2510**	**0.0845**	**0.0000**	**263.3633**

3.5 Paving - 2026

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	5.1500e-003	2.9700e-003	0.0333	1.2000e-004	0.0144	9.0000e-005	0.0145	3.8500e-003	8.0000e-005	3.9300e-003	0.0000	10.9395	10.9395	2.0000e-004	0.0000	10.9445
Total	**5.1500e-003**	**2.9700e-003**	**0.0333**	**1.2000e-004**	**0.0144**	**9.0000e-005**	**0.0145**	**3.8500e-003**	**8.0000e-005**	**3.9300e-003**	**0.0000**	**10.9395**	**10.9395**	**2.0000e-004**	**0.0000**	**10.9445**

3.5 Paving - 2027

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	0.0668	0.6265	1.0642	1.6600e-003		0.0306	0.0306		0.0281	0.0281	0.0000	146.1406	146.1406	0.0473	0.0000	147.3222
Paving	7.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0747**	**0.6265**	**1.0642**	**1.6600e-003**		**0.0306**	**0.0306**		**0.0281**	**0.0281**	**0.0000**	**146.1406**	**146.1406**	**0.0473**	**0.0000**	**147.3222**

3.5 Paving - 2027

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	2.7100e-003	1.5200e-003	0.0173	7.0000e-005	8.7200e-003	5.0000e-005	8.7700e-003	2.3200e-003	4.0000e-005	2.3600e-003	0.0000	5.9115	5.9115	1.0000e-004	0.0000	5.9140
Total	**2.7100e-003**	**1.5200e-003**	**0.0173**	**7.0000e-005**	**8.7200e-003**	**5.0000e-005**	**8.7700e-003**	**2.3200e-003**	**4.0000e-005**	**2.3600e-003**	**0.0000**	**5.9115**	**5.9115**	**1.0000e-004**	**0.0000**	**5.9140**

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	0.0668	0.6265	1.0642	1.6600e-003		0.0306	0.0306		0.0281	0.0281	0.0000	146.1404	146.1404	0.0473	0.0000	147.3220
Paving	7.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0747**	**0.6265**	**1.0642**	**1.6600e-003**		**0.0306**	**0.0306**		**0.0281**	**0.0281**	**0.0000**	**146.1404**	**146.1404**	**0.0473**	**0.0000**	**147.3220**

3.5 Paving - 2027

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	2.7100e-003	1.5200e-003	0.0173	7.0000e-005	8.0400e-003	5.0000e-005	8.0900e-003	2.1500e-003	4.0000e-005	2.2000e-003	0.0000	5.9115	5.9115	1.0000e-004	0.0000	5.9140
Total	**2.7100e-003**	**1.5200e-003**	**0.0173**	**7.0000e-005**	**8.0400e-003**	**5.0000e-005**	**8.0900e-003**	**2.1500e-003**	**4.0000e-005**	**2.2000e-003**	**0.0000**	**5.9115**	**5.9115**	**1.0000e-004**	**0.0000**	**5.9140**

3.6 Architectural Coating - 2025

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	0.3928					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8200e-003	0.0189	0.0299	5.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	4.2129	4.2129	2.3000e-004	0.0000	4.2186
Total	**0.3956**	**0.0189**	**0.0299**	**5.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**4.2129**	**4.2129**	**2.3000e-004**	**0.0000**	**4.2186**

3.6 Architectural Coating - 2025

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	0.0430	0.0257	0.2804	9.9000e-004	0.1229	7.2000e-004	0.1236	0.0327	6.6000e-004	0.0333	0.0000	89.5046	89.5046	1.7300e-003	0.0000	89.5478
Total	**0.0430**	**0.0257**	**0.2804**	**9.9000e-004**	**0.1229**	**7.2000e-004**	**0.1236**	**0.0327**	**6.6000e-004**	**0.0333**	**0.0000**	**89.5046**	**89.5046**	**1.7300e-003**	**0.0000**	**89.5478**

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	0.3928					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8200e-003	0.0189	0.0299	5.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	4.2129	4.2129	2.3000e-004	0.0000	4.2186
Total	**0.3956**	**0.0189**	**0.0299**	**5.0000e-005**		**8.5000e-004**	**8.5000e-004**		**8.5000e-004**	**8.5000e-004**	**0.0000**	**4.2129**	**4.2129**	**2.3000e-004**	**0.0000**	**4.2186**

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0430	0.0257	0.2804	9.9000e-004	0.1133	7.2000e-004	0.1140	0.0303	6.6000e-004	0.0310	0.0000	89.5046	89.5046	1.7300e-003	0.0000	89.5478
Total	**0.0430**	**0.0257**	**0.2804**	**9.9000e-004**	**0.1133**	**7.2000e-004**	**0.1140**	**0.0303**	**6.6000e-004**	**0.0310**	**0.0000**	**89.5046**	**89.5046**	**1.7300e-003**	**0.0000**	**89.5478**

3.6 Architectural Coating - 2026

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2026

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	0.3209	0.1849	2.0768	7.5400e-003	0.9719	5.5800e-003	0.9775	0.2584	5.1300e-003	0.2635	0.0000	681.8938	681.8938	0.0125	0.0000	682.2065
Total	**0.3209**	**0.1849**	**2.0768**	**7.5400e-003**	**0.9719**	**5.5800e-003**	**0.9775**	**0.2584**	**5.1300e-003**	**0.2635**	**0.0000**	**681.8938**	**681.8938**	**0.0125**	**0.0000**	**682.2065**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3209	0.1849	2.0768	7.5400e-003	0.8963	5.5800e-003	0.9018	0.2398	5.1300e-003	0.2450	0.0000	681.8938	681.8938	0.0125	0.0000	682.2065
Total	**0.3209**	**0.1849**	**2.0768**	**7.5400e-003**	**0.8963**	**5.5800e-003**	**0.9018**	**0.2398**	**5.1300e-003**	**0.2450**	**0.0000**	**681.8938**	**681.8938**	**0.0125**	**0.0000**	**682.2065**

3.6 Architectural Coating - 2027

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2027

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	0.3023	0.1689	1.9323	7.2800e-003	0.9719	5.3000e-003	0.9772	0.2584	4.8800e-003	0.2633	0.0000	658.7244	658.7244	0.0114	0.0000	659.0090
Total	**0.3023**	**0.1689**	**1.9323**	**7.2800e-003**	**0.9719**	**5.3000e-003**	**0.9772**	**0.2584**	**4.8800e-003**	**0.2633**	**0.0000**	**658.7244**	**658.7244**	**0.0114**	**0.0000**	**659.0090**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3023	0.1689	1.9323	7.2800e-003	0.8963	5.3000e-003	0.9016	0.2398	4.8800e-003	0.2447	0.0000	658.7244	658.7244	0.0114	0.0000	659.0090
Total	**0.3023**	**0.1689**	**1.9323**	**7.2800e-003**	**0.8963**	**5.3000e-003**	**0.9016**	**0.2398**	**4.8800e-003**	**0.2447**	**0.0000**	**658.7244**	**658.7244**	**0.0114**	**0.0000**	**659.0090**

3.6 Architectural Coating - 2028

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.1489	0.2352	3.9000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	33.1923	33.1923	1.8100e-003	0.0000	33.2376
Total	**3.1172**	**0.1489**	**0.2352**	**3.9000e-004**		**6.7000e-003**	**6.7000e-003**		**6.7000e-003**	**6.7000e-003**	**0.0000**	**33.1923**	**33.1923**	**1.8100e-003**	**0.0000**	**33.2376**

3.6 Architectural Coating - 2028

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	0.2822	0.1540	1.7987	7.0200e-003	0.9682	4.9300e-003	0.9731	0.2574	4.5300e-003	0.2619	0.0000	635.7267	635.7267	0.0104	0.0000	635.9859
Total	**0.2822**	**0.1540**	**1.7987**	**7.0200e-003**	**0.9682**	**4.9300e-003**	**0.9731**	**0.2574**	**4.5300e-003**	**0.2619**	**0.0000**	**635.7267**	**635.7267**	**0.0104**	**0.0000**	**635.9859**

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.1489	0.2352	3.9000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	33.1923	33.1923	1.8100e-003	0.0000	33.2375
Total	**3.1172**	**0.1489**	**0.2352**	**3.9000e-004**		**6.7000e-003**	**6.7000e-003**		**6.7000e-003**	**6.7000e-003**	**0.0000**	**33.1923**	**33.1923**	**1.8100e-003**	**0.0000**	**33.2375**

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2822	0.1540	1.7987	7.0200e-003	0.8928	4.9300e-003	0.8977	0.2389	4.5300e-003	0.2434	0.0000	635.7267	635.7267	0.0104	0.0000	635.9859
Total	**0.2822**	**0.1540**	**1.7987**	**7.0200e-003**	**0.8928**	**4.9300e-003**	**0.8977**	**0.2389**	**4.5300e-003**	**0.2434**	**0.0000**	**635.7267**	**635.7267**	**0.0104**	**0.0000**	**635.9859**

3.6 Architectural Coating - 2029

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3200	33.3200	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3200**	**33.3200**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2029

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	0.2634	0.1413	1.6855	6.8500e-003	0.9719	4.6100e-003	0.9765	0.2584	4.2400e-003	0.2626	0.0000	619.9379	619.9379	9.4900e-003	0.0000	620.1751
Total	**0.2634**	**0.1413**	**1.6855**	**6.8500e-003**	**0.9719**	**4.6100e-003**	**0.9765**	**0.2584**	**4.2400e-003**	**0.2626**	**0.0000**	**619.9379**	**619.9379**	**9.4900e-003**	**0.0000**	**620.1751**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.1495	0.2361	3.9000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	33.3199	33.3199	1.8200e-003	0.0000	33.3654
Total	**3.1292**	**0.1495**	**0.2361**	**3.9000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**33.3199**	**33.3199**	**1.8200e-003**	**0.0000**	**33.3654**

3.6 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2634	0.1413	1.6855	6.8500e-003	0.8963	4.6100e-003	0.9009	0.2398	4.2400e-003	0.2441	0.0000	619.9379	619.9379	9.4900e-003	0.0000	620.1751
Total	**0.2634**	**0.1413**	**1.6855**	**6.8500e-003**	**0.8963**	**4.6100e-003**	**0.9009**	**0.2398**	**4.2400e-003**	**0.2441**	**0.0000**	**619.9379**	**619.9379**	**9.4900e-003**	**0.0000**	**620.1751**

3.6 Architectural Coating - 2030

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3200	33.3200	1.3500e-003	0.0000	33.3537
Total	**3.1239**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3200**	**33.3200**	**1.3500e-003**	**0.0000**	**33.3537**

3.6 Architectural Coating - 2030

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	0.2436	0.1291	1.5763	6.6700e-003	0.9719	4.3000e-003	0.9762	0.2584	3.9500e-003	0.2624	0.0000	603.7777	603.7777	8.6600e-003	0.0000	603.9941
Total	**0.2436**	**0.1291**	**1.5763**	**6.6700e-003**	**0.9719**	**4.3000e-003**	**0.9762**	**0.2584**	**3.9500e-003**	**0.2624**	**0.0000**	**603.7777**	**603.7777**	**8.6600e-003**	**0.0000**	**603.9941**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3199	33.3199	1.3500e-003	0.0000	33.3536
Total	**3.1239**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3199**	**33.3199**	**1.3500e-003**	**0.0000**	**33.3536**

3.6 Architectural Coating - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2436	0.1291	1.5763	6.6700e-003	0.8963	4.3000e-003	0.9006	0.2398	3.9500e-003	0.2438	0.0000	603.7777	603.7777	8.6600e-003	0.0000	603.9941
Total	**0.2436**	**0.1291**	**1.5763**	**6.6700e-003**	**0.8963**	**4.3000e-003**	**0.9006**	**0.2398**	**3.9500e-003**	**0.2438**	**0.0000**	**603.7777**	**603.7777**	**8.6600e-003**	**0.0000**	**603.9941**

3.6 Architectural Coating - 2031

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3200	33.3200	1.3500e-003	0.0000	33.3537
Total	**3.1239**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3200**	**33.3200**	**1.3500e-003**	**0.0000**	**33.3537**

3.6 Architectural Coating - 2031

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	0.2229	0.1175	1.4716	6.5100e-003	0.9719	4.0100e-003	0.9759	0.2584	3.6800e-003	0.2621	0.0000	589.4990	589.4990	7.8800e-003	0.0000	589.6959
Total	**0.2229**	**0.1175**	**1.4716**	**6.5100e-003**	**0.9719**	**4.0100e-003**	**0.9759**	**0.2584**	**3.6800e-003**	**0.2621**	**0.0000**	**589.4990**	**589.4990**	**7.8800e-003**	**0.0000**	**589.6959**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3199	33.3199	1.3500e-003	0.0000	33.3536
Total	**3.1239**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3199**	**33.3199**	**1.3500e-003**	**0.0000**	**33.3536**

3.6 Architectural Coating - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2229	0.1175	1.4716	6.5100e-003	0.8963	4.0100e-003	0.9003	0.2398	3.6800e-003	0.2435	0.0000	589.4990	589.4990	7.8800e-003	0.0000	589.6959
Total	**0.2229**	**0.1175**	**1.4716**	**6.5100e-003**	**0.8963**	**4.0100e-003**	**0.9003**	**0.2398**	**3.6800e-003**	**0.2435**	**0.0000**	**589.4990**	**589.4990**	**7.8800e-003**	**0.0000**	**589.6959**

3.6 Architectural Coating - 2032

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	3.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1122	0.2355	3.9000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	33.4476	33.4476	1.3500e-003	0.0000	33.4815
Total	**3.1359**	**0.1122**	**0.2355**	**3.9000e-004**		**2.6600e-003**	**2.6600e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**33.4476**	**33.4476**	**1.3500e-003**	**0.0000**	**33.4815**

3.6 Architectural Coating - 2032

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	0.2056	0.1081	1.3863	6.3900e-003	0.9756	3.7500e-003	0.9794	0.2594	3.4500e-003	0.2628	0.0000	579.2004	579.2004	7.2300e-003	0.0000	579.3812
Total	**0.2056**	**0.1081**	**1.3863**	**6.3900e-003**	**0.9756**	**3.7500e-003**	**0.9794**	**0.2594**	**3.4500e-003**	**0.2628**	**0.0000**	**579.2004**	**579.2004**	**7.2300e-003**	**0.0000**	**579.3812**

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	3.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1122	0.2355	3.9000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	33.4476	33.4476	1.3500e-003	0.0000	33.4814
Total	**3.1359**	**0.1122**	**0.2355**	**3.9000e-004**		**2.6600e-003**	**2.6600e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**33.4476**	**33.4476**	**1.3500e-003**	**0.0000**	**33.4814**

3.6 Architectural Coating - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2056	0.1081	1.3863	6.3900e-003	0.8997	3.7500e-003	0.9034	0.2408	3.4500e-003	0.2442	0.0000	579.2004	579.2004	7.2300e-003	0.0000	579.3812
Total	**0.2056**	**0.1081**	**1.3863**	**6.3900e-003**	**0.8997**	**3.7500e-003**	**0.9034**	**0.2408**	**3.4500e-003**	**0.2442**	**0.0000**	**579.2004**	**579.2004**	**7.2300e-003**	**0.0000**	**579.3812**

3.6 Architectural Coating - 2033

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1113	0.2337	3.9000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	33.1923	33.1923	1.3400e-003	0.0000	33.2259
Total	**3.1120**	**0.1113**	**0.2337**	**3.9000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**33.1923**	**33.1923**	**1.3400e-003**	**0.0000**	**33.2259**

3.6 Architectural Coating - 2033

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	0.1884	0.0989	1.2974	6.2200e-003	0.9682	3.4800e-003	0.9717	0.2574	3.2000e-003	0.2606	0.0000	563.9123	563.9123	6.6000e-003	0.0000	564.0772
Total	**0.1884**	**0.0989**	**1.2974**	**6.2200e-003**	**0.9682**	**3.4800e-003**	**0.9717**	**0.2574**	**3.2000e-003**	**0.2606**	**0.0000**	**563.9123**	**563.9123**	**6.6000e-003**	**0.0000**	**564.0772**

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1113	0.2337	3.9000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	33.1923	33.1923	1.3400e-003	0.0000	33.2258
Total	**3.1120**	**0.1113**	**0.2337**	**3.9000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**33.1923**	**33.1923**	**1.3400e-003**	**0.0000**	**33.2258**

3.6 Architectural Coating - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1884	0.0989	1.2974	6.2200e-003	0.8928	3.4800e-003	0.8963	0.2389	3.2000e-003	0.2421	0.0000	563.9123	563.9123	6.6000e-003	0.0000	564.0772
Total	**0.1884**	**0.0989**	**1.2974**	**6.2200e-003**	**0.8928**	**3.4800e-003**	**0.8963**	**0.2389**	**3.2000e-003**	**0.2421**	**0.0000**	**563.9123**	**563.9123**	**6.6000e-003**	**0.0000**	**564.0772**

3.6 Architectural Coating - 2034

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1113	0.2337	3.9000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	33.1923	33.1923	1.3400e-003	0.0000	33.2259
Total	**3.1120**	**0.1113**	**0.2337**	**3.9000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**33.1923**	**33.1923**	**1.3400e-003**	**0.0000**	**33.2259**

3.6 Architectural Coating - 2034

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	0.1752	0.0920	1.2248	6.1200e-003	0.9682	3.2500e-003	0.9714	0.2574	2.9900e-003	0.2604	0.0000	554.4613	554.4613	6.0700e-003	0.0000	554.6131
Total	**0.1752**	**0.0920**	**1.2248**	**6.1200e-003**	**0.9682**	**3.2500e-003**	**0.9714**	**0.2574**	**2.9900e-003**	**0.2604**	**0.0000**	**554.4613**	**554.4613**	**6.0700e-003**	**0.0000**	**554.6131**

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1113	0.2337	3.9000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	33.1923	33.1923	1.3400e-003	0.0000	33.2258
Total	**3.1120**	**0.1113**	**0.2337**	**3.9000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**33.1923**	**33.1923**	**1.3400e-003**	**0.0000**	**33.2258**

3.6 Architectural Coating - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1752	0.0920	1.2248	6.1200e-003	0.8928	3.2500e-003	0.8961	0.2389	2.9900e-003	0.2419	0.0000	554.4613	554.4613	6.0700e-003	0.0000	554.6131
Total	**0.1752**	**0.0920**	**1.2248**	**6.1200e-003**	**0.8928**	**3.2500e-003**	**0.8961**	**0.2389**	**2.9900e-003**	**0.2419**	**0.0000**	**554.4613**	**554.4613**	**6.0700e-003**	**0.0000**	**554.6131**

3.6 Architectural Coating - 2035

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3200	33.3200	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3200**	**33.3200**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2035

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	0.1644	0.0870	1.1673	6.0500e-003	0.9719	3.0500e-003	0.9750	0.2584	2.8100e-003	0.2612	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.9719**	**3.0500e-003**	**0.9750**	**0.2584**	**2.8100e-003**	**0.2612**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3199	33.3199	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3199**	**33.3199**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1644	0.0870	1.1673	6.0500e-003	0.8963	3.0500e-003	0.8993	0.2398	2.8100e-003	0.2426	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.8963**	**3.0500e-003**	**0.8993**	**0.2398**	**2.8100e-003**	**0.2426**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

3.6 Architectural Coating - 2036

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	3.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0993	0.2351	3.9000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	33.4476	33.4476	1.2400e-003	0.0000	33.4785
Total	**3.1342**	**0.0993**	**0.2351**	**3.9000e-004**		**1.3000e-003**	**1.3000e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**33.4476**	**33.4476**	**1.2400e-003**	**0.0000**	**33.4785**

3.6 Architectural Coating - 2036

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	0.1651	0.0873	1.1717	6.0800e-003	0.9756	3.0700e-003	0.9787	0.2594	2.8200e-003	0.2622	0.0000	550.5616	550.5616	5.6700e-003	0.0000	550.7033
Total	**0.1651**	**0.0873**	**1.1717**	**6.0800e-003**	**0.9756**	**3.0700e-003**	**0.9787**	**0.2594**	**2.8200e-003**	**0.2622**	**0.0000**	**550.5616**	**550.5616**	**5.6700e-003**	**0.0000**	**550.7033**

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	3.1188					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0993	0.2351	3.9000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	33.4476	33.4476	1.2400e-003	0.0000	33.4785
Total	**3.1342**	**0.0993**	**0.2351**	**3.9000e-004**		**1.3000e-003**	**1.3000e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**33.4476**	**33.4476**	**1.2400e-003**	**0.0000**	**33.4785**

3.6 Architectural Coating - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1651	0.0873	1.1717	6.0800e-003	0.8997	3.0700e-003	0.9028	0.2408	2.8200e-003	0.2436	0.0000	550.5616	550.5616	5.6700e-003	0.0000	550.7033
Total	**0.1651**	**0.0873**	**1.1717**	**6.0800e-003**	**0.8997**	**3.0700e-003**	**0.9028**	**0.2408**	**2.8200e-003**	**0.2436**	**0.0000**	**550.5616**	**550.5616**	**5.6700e-003**	**0.0000**	**550.7033**

3.6 Architectural Coating - 2037

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3200	33.3200	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3200**	**33.3200**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2037

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	0.1644	0.0870	1.1673	6.0500e-003	0.9719	3.0500e-003	0.9750	0.2584	2.8100e-003	0.2612	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.9719**	**3.0500e-003**	**0.9750**	**0.2584**	**2.8100e-003**	**0.2612**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3199	33.3199	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3199**	**33.3199**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1644	0.0870	1.1673	6.0500e-003	0.8963	3.0500e-003	0.8993	0.2398	2.8100e-003	0.2426	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.8963**	**3.0500e-003**	**0.8993**	**0.2398**	**2.8100e-003**	**0.2426**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

3.6 Architectural Coating - 2038

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3200	33.3200	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3200**	**33.3200**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2038

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	0.1644	0.0870	1.1673	6.0500e-003	0.9719	3.0500e-003	0.9750	0.2584	2.8100e-003	0.2612	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.9719**	**3.0500e-003**	**0.9750**	**0.2584**	**2.8100e-003**	**0.2612**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

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	3.1069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.0989	0.2342	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.3199	33.3199	1.2300e-003	0.0000	33.3507
Total	**3.1223**	**0.0989**	**0.2342**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.3199**	**33.3199**	**1.2300e-003**	**0.0000**	**33.3507**

3.6 Architectural Coating - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1644	0.0870	1.1673	6.0500e-003	0.8963	3.0500e-003	0.8993	0.2398	2.8100e-003	0.2426	0.0000	548.4602	548.4602	5.6500e-003	0.0000	548.6014
Total	**0.1644**	**0.0870**	**1.1673**	**6.0500e-003**	**0.8963**	**3.0500e-003**	**0.8993**	**0.2398**	**2.8100e-003**	**0.2426**	**0.0000**	**548.4602**	**548.4602**	**5.6500e-003**	**0.0000**	**548.6014**

3.6 Architectural Coating - 2039

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.0985	0.2333	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.1923	33.1923	1.2300e-003	0.0000	33.2230
Total	**3.1103**	**0.0985**	**0.2333**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.1923**	**33.1923**	**1.2300e-003**	**0.0000**	**33.2230**

3.6 Architectural Coating - 2039

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	0.1638	0.0866	1.1628	6.0300e-003	0.9682	3.0400e-003	0.9712	0.2574	2.8000e-003	0.2602	0.0000	546.3589	546.3589	5.6200e-003	0.0000	546.4995
Total	**0.1638**	**0.0866**	**1.1628**	**6.0300e-003**	**0.9682**	**3.0400e-003**	**0.9712**	**0.2574**	**2.8000e-003**	**0.2602**	**0.0000**	**546.3589**	**546.3589**	**5.6200e-003**	**0.0000**	**546.4995**

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	3.0950					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0153	0.0985	0.2333	3.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	33.1923	33.1923	1.2300e-003	0.0000	33.2229
Total	**3.1103**	**0.0985**	**0.2333**	**3.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**33.1923**	**33.1923**	**1.2300e-003**	**0.0000**	**33.2229**

3.6 Architectural Coating - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1638	0.0866	1.1628	6.0300e-003	0.8928	3.0400e-003	0.8959	0.2389	2.8000e-003	0.2417	0.0000	546.3589	546.3589	5.6200e-003	0.0000	546.4995
Total	**0.1638**	**0.0866**	**1.1628**	**6.0300e-003**	**0.8928**	**3.0400e-003**	**0.8959**	**0.2389**	**2.8000e-003**	**0.2417**	**0.0000**	**546.3589**	**546.3589**	**5.6200e-003**	**0.0000**	**546.4995**

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	3.4889	109.0639	34.5707	0.4536	24.0427	0.1360	24.1787	6.4484	0.1286	6.5769	0.0000	42,748.6056	42,748.6056	1.8402	0.0000	42,794.6104
Unmitigated	3.4889	109.0639	34.5707	0.4536	24.0427	0.1360	24.1787	6.4484	0.1286	6.5769	0.0000	42,748.6056	42,748.6056	1.8402	0.0000	42,794.6104

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	16,142.61	16,142.61	16142.61	47,128,530	47,128,530
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	8,983.80	8,983.80	8983.80	15,751,346	15,751,346
Total	25,126.41	25,126.41	25,126.41	62,879,876	62,879,876

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000
City Park	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Non-Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Regional Shopping Center	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,455.6411	15,455.6411	0.6989	0.1446	15,516.2009
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,455.6411	15,455.6411	0.6989	0.1446	15,516.2009
NaturalGas Mitigated	0.6211	5.6465	4.7431	0.0339		0.4291	0.4291		0.4291	0.4291	0.0000	6,146.9027	6,146.9027	0.1178	0.1127	6,183.4306
NaturalGas Unmitigated	0.6211	5.6465	4.7431	0.0339		0.4291	0.4291		0.4291	0.4291	0.0000	6,146.9027	6,146.9027	0.1178	0.1127	6,183.4306

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					
City Park	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
General Light Industry	1.13547e+008	0.6123	5.5660	4.6754	0.0334		0.4230	0.4230		0.4230	0.4230	0.0000	6,059.2742	6,059.2742	0.1161	0.1111	6,095.2815
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	1.6421e+006	8.8500e-003	0.0805	0.0676	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.6284	87.6284	1.6800e-003	1.6100e-003	88.1492
Total		**0.6211**	**5.6465**	**4.7431**	**0.0339**		**0.4291**	**0.4291**		**0.4291**	**0.4291**	**0.0000**	**6,146.9027**	**6,146.9027**	**0.1178**	**0.1127**	**6,183.4306**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	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
General Light Industry	1.13547e+008	0.6123	5.5660	4.6754	0.0334		0.4230	0.4230		0.4230	0.4230	0.0000	6,059.2742	6,059.2742	0.1161	0.1111	6,095.2815
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	1.6421e+006	8.8500e-003	0.0805	0.0676	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.6284	87.6284	1.6800e-003	1.6100e-003	88.1492
Total		**0.6211**	**5.6465**	**4.7431**	**0.0339**		**0.4291**	**0.4291**		**0.4291**	**0.4291**	**0.0000**	**6,146.9027**	**6,146.9027**	**0.1178**	**0.1127**	**6,183.4306**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	5.14736e+007	14,974.2622	0.6771	0.1401	15,032.9358
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.65473e+006	481.3789	0.0218	4.5000e-003	483.2651
Total		**15,455.6411**	**0.6989**	**0.1446**	**15,516.2009**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	5.14736e+007	14,974.2622	0.6771	0.1401	15,032.9358
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.65473e+006	481.3789	0.0218	4.5000e-003	483.2651
Total		**15,455.6411**	**0.6989**	**0.1446**	**15,516.2009**

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	28.9193	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207
Unmitigated	28.9193	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.3865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.5275					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207
Total	**28.9193**	**5.2000e-004**	**0.0579**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.1134**	**0.1134**	**2.9000e-004**	**0.0000**	**0.1207**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.3865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.5275					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-003	5.2000e-004	0.0579	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	0.1134	0.1134	2.9000e-004	0.0000	0.1207
Total	**28.9193**	**5.2000e-004**	**0.0579**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.1134**	**0.1134**	**2.9000e-004**	**0.0000**	**0.1207**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,755.9871	46.3446	1.1134	4,246.3964
Unmitigated	2,755.9871	46.3446	1.1134	4,246.3964

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 64.34	65.5104	2.9600e-003	6.1000e-004	65.7670
General Light Industry	1408.67 / 0	2,664.3261	46.0018	1.1046	4,143.5367
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10.3961 / 6.37179	26.1506	0.3398	8.2100e-003	37.0927
Total		**2,755.9871**	**46.3446**	**1.1134**	**4,246.3964**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 64.34	65.5104	2.9600e-003	6.1000e-004	65.7670
General Light Industry	1408.67 / 0	2,664.3261	46.0018	1.1046	4,143.5367
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10.3961 / 6.37179	26.1506	0.3398	8.2100e-003	37.0927
Total		**2,755.9871**	**46.3446**	**1.1134**	**4,246.3964**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,564.1530	92.4388	0.0000	3,875.1227
Unmitigated	1,564.1530	92.4388	0.0000	3,875.1227

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	4.64	0.9419	0.0557	0.0000	2.3335
General Light Industry	7553.52	1,533.2963	90.6152	0.0000	3,798.6767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	147.37	29.9148	1.7679	0.0000	74.1126
Total		**1,564.1530**	**92.4388**	**0.0000**	**3,875.1227**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	4.64	0.9419	0.0557	0.0000	2.3335
General Light Industry	7553.52	1,533.2963	90.6152	0.0000	3,798.6767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	147.37	29.9148	1.7679	0.0000	74.1126
Total		**1,564.1530**	**92.4388**	**0.0000**	**3,875.1227**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

South Stockton Commerce Center

San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	6,091.55	1000sqft	298.00	6,091,551.00	0
Other Asphalt Surfaces	18.20	Acre	18.20	792,792.00	0
Regional Shopping Center	140.35	1000sqft	11.00	140,350.00	0
Other Non-Asphalt Surfaces	41.00	Acre	41.00	1,785,960.00	0
City Park	54.00	Acre	54.00	2,352,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses are best fit based on available land use types/subtypes available in CalEEMod. Land uses selected are consistent with the land uses as provided in the EIR Project Description.

Construction Phase - Construction schedule based on project size and details.

Off-road Equipment -

Demolition -

Grading - 328 acres assumed to be graded.

Vehicle Trips - Trips consistent with Traffic Impact Assessment (Fehr & Peers).

Energy Use -

Construction Off-road Equipment Mitigation - Construction mitigation: Water Exposed Area 2x daily; Clean Paved Road (9% fugitive dust PM reduction); Unpaved road mitigation: Limit on-site construction vehicle speeds to 5 mph; Soil Stabilizer for unpaved (10% reduction)

Fleet Mix - Fleet mix modified for relevant land use types/subtypes to reflect Traffic Impact Assessment values (Fehr & Peers) - 75.5% passenger vehicles; 24.5% heavy-duty trucks.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	300.00	240.00
tblConstructionPhase	NumDays	775.00	620.00
tblConstructionPhase	NumDays	7,750.00	3,685.00
tblConstructionPhase	NumDays	550.00	440.00
tblConstructionPhase	NumDays	550.00	3,685.00
tblConstructionPhase	PhaseEndDate	9/23/2022	7/1/2022
tblConstructionPhase	PhaseEndDate	9/12/2025	11/14/2025
tblConstructionPhase	PhaseEndDate	5/28/2055	12/30/2039
tblConstructionPhase	PhaseEndDate	7/6/2057	7/23/2027
tblConstructionPhase	PhaseEndDate	8/15/2059	12/30/2039
tblConstructionPhase	PhaseStartDate	9/24/2022	7/2/2023
tblConstructionPhase	PhaseStartDate	9/13/2025	11/15/2025

tblConstructionPhase	PhaseStartDate	5/29/2055	11/15/2025
tblConstructionPhase	PhaseStartDate	7/7/2057	11/15/2025
tblFleetMix	HHD	0.05	0.25
tblFleetMix	HHD	0.05	0.25
tblFleetMix	LDA	0.59	0.55
tblFleetMix	LDA	0.59	0.55
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	8.6960e-003	0.00
tblFleetMix	LHD1	8.6960e-003	0.00
tblFleetMix	LHD2	3.6880e-003	0.00
tblFleetMix	LHD2	3.6880e-003	0.00
tblFleetMix	MCY	4.5230e-003	0.00
tblFleetMix	MCY	4.5230e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	4.7000e-004	0.00
tblFleetMix	MH	4.7000e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.1590e-003	0.00
tblFleetMix	OBUS	1.1590e-003	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	UBUS	1.1060e-003	0.00

tblFleetMix	UBUS	1.1060e-003	0.00
tblGrading	AcresOfGrading	1,550.00	328.00
tblLandUse	LandUseSquareFeet	6,091,550.00	6,091,551.00
tblLandUse	LotAcreage	139.84	298.00
tblLandUse	LotAcreage	3.22	11.00
tblVehicleTrips	ST_TR	1.32	2.65
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	49.97	64.01
tblVehicleTrips	SU_TR	0.68	2.65
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	25.24	64.01
tblVehicleTrips	WD_TR	6.97	2.65
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	42.70	64.01

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9617	40.5386	21.6779	0.0395	18.2141	2.0454	20.2595	9.9699	1.8818	11.8517	0.0000	3,832.3661	3,832.3661	1.1958	0.0000	3,862.2606
2022	3.2383	33.1207	20.1765	0.0395	18.2141	1.6135	19.8276	9.9699	1.4844	11.4543	0.0000	3,827.5497	3,827.5497	1.1955	0.0000	3,857.4376

South Stockton Commerce Center - San Joaquin County, Summer

	ROG	NOx	CO	SO2	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					
2023	3.3921	34.5526	28.5370	0.0636	6.7474	1.4255	8.1729	3.4144	1.3114	4.7258	0.0000	6,162.8295	6,162.8295	1.9476	0.0000	6,211.5190
2024	3.2837	32.4102	28.1714	0.0635	6.7474	1.3364	8.0838	3.4144	1.2295	4.6438	0.0000	6,154.5880	6,154.5880	1.9467	0.0000	6,203.2546
2025	47.3482	170.9775	175.3434	0.9396	58.5987	1.4036	60.0024	15.8243	1.3116	17.1358	0.0000	95,959.8673	95,959.8673	4.0334	0.0000	96,060.7014
2026	46.2651	168.9415	167.1562	0.9219	58.5988	1.3956	59.9945	15.8243	1.3041	17.1284	0.0000	94,186.1952	94,186.1952	3.9387	0.0000	94,284.6626
2027	45.2243	166.9880	158.8643	0.9062	58.5989	1.3810	59.9798	15.8243	1.2905	17.1148	0.0000	92,614.0416	92,614.0416	3.8446	0.0000	92,710.1568
2028	43.1259	156.8249	136.8484	0.8688	58.4757	0.9439	59.4196	15.7916	0.8883	16.6800	0.0000	88,945.6176	88,945.6176	3.0423	0.0000	89,021.6739
2029	42.0552	155.3092	130.0897	0.8568	58.4757	0.9269	59.4026	15.7916	0.8726	16.6642	0.0000	87,737.8022	87,737.8022	2.9611	0.0000	87,811.8287
2030	40.9003	149.1379	124.1002	0.8503	58.4758	0.5006	58.9763	15.7917	0.4788	16.2704	0.0000	87,029.0263	87,029.0263	2.3995	0.0000	87,089.0133
2031	39.8092	147.9138	118.4058	0.8411	58.4758	0.4858	58.9616	15.7917	0.4651	16.2568	0.0000	86,120.2146	86,120.2146	2.3301	0.0000	86,178.4671
2032	38.8629	146.8387	113.5407	0.8335	58.4758	0.4722	58.9480	15.7917	0.4526	16.2443	0.0000	85,355.1213	85,355.1213	2.2710	0.0000	85,411.8954
2033	38.0390	145.8911	109.3432	0.8269	58.4759	0.4598	58.9356	15.7917	0.4411	16.2328	0.0000	84,703.5477	84,703.5477	2.2182	0.0000	84,759.0030
2034	37.3333	145.0687	105.4589	0.8214	58.4759	0.4481	58.9240	15.7917	0.4304	16.2221	0.0000	84,152.4563	84,152.4563	2.1722	0.0000	84,206.7619
2035	36.6130	143.4951	102.0999	0.8167	58.4759	0.3694	58.8454	15.7917	0.3525	16.1442	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2036	36.6130	143.4951	102.0999	0.8167	58.4759	0.3694	58.8454	15.7917	0.3525	16.1442	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2037	36.6130	143.4951	102.0999	0.8167	58.4759	0.3694	58.8454	15.7917	0.3525	16.1442	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2038	36.6130	143.4951	102.0999	0.8167	58.4759	0.3694	58.8454	15.7917	0.3525	16.1442	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2039	36.6130	143.4951	102.0999	0.8167	58.4759	0.3694	58.8454	15.7917	0.3525	16.1442	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
Maximum	**47.3482**	**170.9775**	**175.3434**	**0.9396**	**58.5989**	**2.0454**	**60.0024**	**15.8243**	**1.8818**	**17.1358**	**0.0000**	**95,959.8673**	**95,959.8673**	**4.0334**	**0.0000**	**96,060.7014**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9617	40.5386	21.6779	0.0395	8.2661	2.0454	10.3115	4.5052	1.8818	6.3870	0.0000	3,832.3661	3,832.3661	1.1958	0.0000	3,862.2606
2022	3.2383	33.1207	20.1765	0.0395	8.2661	1.6135	9.8796	4.5052	1.4844	5.9896	0.0000	3,827.5497	3,827.5497	1.1955	0.0000	3,857.4376
2023	3.3921	34.5526	28.5370	0.0636	3.1139	1.4255	4.5393	1.5573	1.3114	2.8687	0.0000	6,162.8295	6,162.8295	1.9476	0.0000	6,211.5190
2024	3.2837	32.4102	28.1714	0.0635	3.1139	1.3364	4.4502	1.5573	1.2295	2.7867	0.0000	6,154.5879	6,154.5879	1.9467	0.0000	6,203.2546
2025	47.3482	170.9775	175.3434	0.9396	54.1903	1.4036	55.5939	14.7422	1.3116	16.0538	0.0000	95,959.8673	95,959.8673	4.0334	0.0000	96,060.7014
2026	46.2651	168.9415	167.1562	0.9219	54.1903	1.3956	55.5860	14.7422	1.3041	16.0463	0.0000	94,186.1952	94,186.1952	3.9387	0.0000	94,284.6626
2027	45.2243	166.9880	158.8643	0.9062	54.1904	1.3810	55.5714	14.7422	1.2905	16.0327	0.0000	92,614.0416	92,614.0416	3.8446	0.0000	92,710.1568
2028	43.1259	156.8249	136.8484	0.8688	54.0769	0.9439	55.0208	14.7119	0.8883	15.6003	0.0000	88,945.6176	88,945.6176	3.0423	0.0000	89,021.6739
2029	42.0552	155.3092	130.0897	0.8568	54.0769	0.9269	55.0038	14.7119	0.8726	15.5845	0.0000	87,737.8022	87,737.8022	2.9611	0.0000	87,811.8287
2030	40.9003	149.1379	124.1002	0.8503	54.0769	0.5006	54.5775	14.7119	0.4788	15.1907	0.0000	87,029.0263	87,029.0263	2.3995	0.0000	87,089.0133
2031	39.8092	147.9138	118.4058	0.8411	54.0770	0.4858	54.5628	14.7119	0.4651	15.1771	0.0000	86,120.2146	86,120.2146	2.3301	0.0000	86,178.4671
2032	38.8629	146.8387	113.5407	0.8335	54.0770	0.4722	54.5492	14.7120	0.4526	15.1646	0.0000	85,355.1213	85,355.1213	2.2710	0.0000	85,411.8954
2033	38.0390	145.8911	109.3432	0.8269	54.0770	0.4598	54.5368	14.7120	0.4411	15.1531	0.0000	84,703.5477	84,703.5477	2.2182	0.0000	84,759.0030
2034	37.3333	145.0687	105.4589	0.8214	54.0771	0.4481	54.5252	14.7120	0.4304	15.1424	0.0000	84,152.4563	84,152.4563	2.1722	0.0000	84,206.7618
2035	36.6130	143.4951	102.0999	0.8167	54.0771	0.3694	54.4465	14.7120	0.3525	15.0645	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871

South Stockton Commerce Center - San Joaquin County, Summer

	ROG	NOx	CO	SO2	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					
2036	36.6130	143.4951	102.0999	0.8167	54.0771	0.3694	54.4465	14.7120	0.3525	15.0645	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2037	36.6130	143.4951	102.0999	0.8167	54.0771	0.3694	54.4465	14.7120	0.3525	15.0645	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2038	36.6130	143.4951	102.0999	0.8167	54.0771	0.3694	54.4465	14.7120	0.3525	15.0645	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
2039	36.6130	143.4951	102.0999	0.8167	54.0771	0.3694	54.4465	14.7120	0.3525	15.0645	0.0000	83,687.3209	83,687.3209	2.1227	0.0000	83,740.3871
Maximum	**47.3482**	**170.9775**	**175.3434**	**0.9396**	**54.1904**	**2.0454**	**55.5939**	**14.7422**	**1.8818**	**16.0538**	**0.0000**	**95,959.8673**	**95,959.8673**	**4.0334**	**0.0000**	**96,060.7014**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.05**	**0.00**	**9.87**	**11.70**	**0.00**	**11.04**	**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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Energy	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
Mobile	20.5104	599.5923	197.0294	2.5820	136.0920	0.7446	136.8365	36.4099	0.7037	37.1136		268,065.9062	268,065.9062	10.6346		268,331.7703
Total	**182.4056**	**630.5378**	**223.6625**	**2.7677**	**136.0920**	**3.0983**	**139.1902**	**36.4099**	**3.0574**	**39.4673**		**305,194.9679**	**305,194.9679**	**11.3498**	**0.6807**	**305,681.5526**

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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Energy	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
Mobile	20.5104	599.5923	197.0294	2.5820	136.0920	0.7446	136.8365	36.4099	0.7037	37.1136		268,065.9062	268,065.9062	10.6346		268,331.7703
Total	**182.4056**	**630.5378**	**223.6625**	**2.7677**	**136.0920**	**3.0983**	**139.1902**	**36.4099**	**3.0574**	**39.4673**		**305,194.9679**	**305,194.9679**	**11.3498**	**0.6807**	**305,681.5526**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	7/1/2022	5	240	
2	Grading	Grading	7/2/2023	11/14/2025	5	620	
3	Building Construction	Building Construction	11/15/2025	12/30/2039	5	3685	
4	Paving	Paving	11/15/2025	7/23/2027	5	440	
5	Architectural Coating	Architectural Coating	11/15/2025	12/30/2039	5	3685	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 328

Acres of Paving: 59.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,347,852; Non-Residential Outdoor: 3,115,951; Striped Parking Area: 154,725 (Architectural Coating – sqft)

OffRoad Equipment

South Stockton Commerce Center - San Joaquin County, Summer

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	4,674.00	1,830.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	935.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0415	0.5237	1.4700e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		146.7092	146.7092	3.7600e-003		146.8033
Total	**0.0735**	**0.0415**	**0.5237**	**1.4700e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**146.7092**	**146.7092**	**3.7600e-003**		**146.8033**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**8.1298**	**2.0445**	**10.1743**	**4.4688**	**1.8809**	**6.3497**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0415	0.5237	1.4700e-003	0.1363	9.4000e-004	0.1372	0.0364	8.7000e-004	0.0373		146.7092	146.7092	3.7600e-003		146.8033
Total	**0.0735**	**0.0415**	**0.5237**	**1.4700e-003**	**0.1363**	**9.4000e-004**	**0.1372**	**0.0364**	**8.7000e-004**	**0.0373**		**146.7092**	**146.7092**	**3.7600e-003**		**146.8033**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0681	0.0372	0.4787	1.4200e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		141.4878	141.4878	3.3700e-003		141.5721
Total	**0.0681**	**0.0372**	**0.4787**	**1.4200e-003**	**0.1479**	**9.1000e-004**	**0.1488**	**0.0392**	**8.4000e-004**	**0.0401**		**141.4878**	**141.4878**	**3.3700e-003**		**141.5721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.1298**	**1.6126**	**9.7424**	**4.4688**	**1.4836**	**5.9524**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0681	0.0372	0.4787	1.4200e-003	0.1363	9.1000e-004	0.1372	0.0364	8.4000e-004	0.0372		141.4878	141.4878	3.3700e-003		141.5721
Total	**0.0681**	**0.0372**	**0.4787**	**1.4200e-003**	**0.1363**	**9.1000e-004**	**0.1372**	**0.0364**	**8.4000e-004**	**0.0372**		**141.4878**	**141.4878**	**3.3700e-003**		**141.5721**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**6.5831**	**1.4245**	**8.0076**	**3.3708**	**1.3105**	**4.6813**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

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	0.0703	0.0370	0.4859	1.5200e-003	0.1643	9.8000e-004	0.1653	0.0436	9.1000e-004	0.0445		151.3518	151.3518	3.3400e-003		151.4354
Total	**0.0703**	**0.0370**	**0.4859**	**1.5200e-003**	**0.1643**	**9.8000e-004**	**0.1653**	**0.0436**	**9.1000e-004**	**0.0445**		**151.3518**	**151.3518**	**3.3400e-003**		**151.4354**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**2.9624**	**1.4245**	**4.3869**	**1.5169**	**1.3105**	**2.8274**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

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	0.0703	0.0370	0.4859	1.5200e-003	0.1514	9.8000e-004	0.1524	0.0404	9.1000e-004	0.0413		151.3518	151.3518	3.3400e-003		151.4354
Total	**0.0703**	**0.0370**	**0.4859**	**1.5200e-003**	**0.1514**	**9.8000e-004**	**0.1524**	**0.0404**	**9.1000e-004**	**0.0413**		**151.3518**	**151.3518**	**3.3400e-003**		**151.4354**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**6.5831**	**1.3354**	**7.9185**	**3.3708**	**1.2286**	**4.5994**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0656	0.0333	0.4486	1.4500e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		144.8393	144.8393	2.9900e-003		144.9141
Total	**0.0656**	**0.0333**	**0.4486**	**1.4500e-003**	**0.1643**	**9.6000e-004**	**0.1653**	**0.0436**	**8.8000e-004**	**0.0445**		**144.8393**	**144.8393**	**2.9900e-003**		**144.9141**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**2.9624**	**1.3354**	**4.2978**	**1.5169**	**1.2286**	**2.7454**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0656	0.0333	0.4486	1.4500e-003	0.1514	9.6000e-004	0.1524	0.0404	8.8000e-004	0.0413		144.8393	144.8393	2.9900e-003		144.9141
Total	**0.0656**	**0.0333**	**0.4486**	**1.4500e-003**	**0.1514**	**9.6000e-004**	**0.1524**	**0.0404**	**8.8000e-004**	**0.0413**		**144.8393**	**144.8393**	**2.9900e-003**		**144.9141**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404		6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**6.5831**	**1.1309**	**7.7140**	**3.3708**	**1.0404**	**4.4112**		**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

3.3 Grading - 2025

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	0.0615	0.0301	0.4141	1.4000e-003	0.1643	9.4000e-004	0.1652	0.0436	8.6000e-004	0.0444		139.1014	139.1014	2.7100e-003		139.1691
Total	**0.0615**	**0.0301**	**0.4141**	**1.4000e-003**	**0.1643**	**9.4000e-004**	**0.1652**	**0.0436**	**8.6000e-004**	**0.0444**		**139.1014**	**139.1014**	**2.7100e-003**		**139.1691**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404	0.0000	6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**2.9624**	**1.1309**	**4.0933**	**1.5169**	**1.0404**	**2.5573**	**0.0000**	**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

3.3 Grading - 2025

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	0.0615	0.0301	0.4141	1.4000e-003	0.1514	9.4000e-004	0.1524	0.0404	8.6000e-004	0.0413		139.1014	139.1014	2.7100e-003		139.1691
Total	**0.0615**	**0.0301**	**0.4141**	**1.4000e-003**	**0.1514**	**9.4000e-004**	**0.1524**	**0.0404**	**8.6000e-004**	**0.0413**		**139.1014**	**139.1014**	**2.7100e-003**		**139.1691**

3.4 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6772	140.3102	26.4248	0.4946	12.3989	0.1428	12.5417	3.5699	0.1365	3.7064		51,799.8865	51,799.8865	1.9425		51,848.4479
Worker	14.3792	7.0397	96.7768	0.3260	38.3958	0.2188	38.6146	10.1844	0.2014	10.3857		32,507.9968	32,507.9968	0.6324		32,523.8061
Total	**18.0564**	**147.3499**	**123.2016**	**0.8206**	**50.7947**	**0.3616**	**51.1563**	**13.7543**	**0.3378**	**14.0921**		**84,307.8833**	**84,307.8833**	**2.5748**		**84,372.2540**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6772	140.3102	26.4248	0.4946	11.6041	0.1428	11.7469	3.3748	0.1365	3.5113		51,799.8865	51,799.8865	1.9425		51,848.4479
Worker	14.3792	7.0397	96.7768	0.3260	35.3925	0.2188	35.6113	9.4472	0.2014	9.6486		32,507.9968	32,507.9968	0.6324		32,523.8061
Total	**18.0564**	**147.3499**	**123.2016**	**0.8206**	**46.9967**	**0.3616**	**47.3582**	**12.8220**	**0.3378**	**13.1599**		**84,307.8833**	**84,307.8833**	**2.5748**		**84,372.2540**

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5858	139.0217	25.4287	0.4914	12.3990	0.1410	12.5400	3.5699	0.1348	3.7047		51,465.3910	51,465.3910	1.9121		51,513.1939
Worker	13.5551	6.4184	90.8004	0.3140	38.3958	0.2137	38.6095	10.1844	0.1966	10.3810		31,311.9243	31,311.9243	0.5789		31,326.3971
Total	**17.1408**	**145.4401**	**116.2291**	**0.8054**	**50.7948**	**0.3546**	**51.1494**	**13.7543**	**0.3314**	**14.0857**		**82,777.3154**	**82,777.3154**	**2.4910**		**82,839.5910**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5858	139.0217	25.4287	0.4914	11.6042	0.1410	11.7452	3.3748	0.1348	3.5096		51,465.3910	51,465.3910	1.9121		51,513.1939
Worker	13.5551	6.4184	90.8004	0.3140	35.3925	0.2137	35.6062	9.4472	0.1966	9.6438		31,311.9243	31,311.9243	0.5789		31,326.3971
Total	**17.1408**	**145.4401**	**116.2291**	**0.8054**	**46.9967**	**0.3546**	**47.3514**	**12.8220**	**0.3314**	**13.1534**		**82,777.3154**	**82,777.3154**	**2.4910**		**82,839.5910**

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5060	137.7353	24.5858	0.4886	12.3991	0.1390	12.5380	3.5700	0.1329	3.7028		51,172.6207	51,172.6207	1.8803		51,219.6282
Worker	12.7564	5.8640	84.6097	0.3033	38.3958	0.2031	38.5989	10.1844	0.1869	10.3712		30,248.6531	30,248.6531	0.5272		30,261.8320
Total	**16.2623**	**143.5993**	**109.1954**	**0.7919**	**50.7949**	**0.3421**	**51.1369**	**13.7543**	**0.3197**	**14.0740**		**81,421.2738**	**81,421.2738**	**2.4075**		**81,481.4602**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5060	137.7353	24.5858	0.4886	11.6043	0.1390	11.7433	3.3749	0.1329	3.5077		51,172.6207	51,172.6207	1.8803		51,219.6282
Worker	12.7564	5.8640	84.6097	0.3033	35.3925	0.2031	35.5956	9.4472	0.1869	9.6341		30,248.6531	30,248.6531	0.5272		30,261.8320
Total	**16.2623**	**143.5993**	**109.1954**	**0.7919**	**46.9968**	**0.3421**	**47.3389**	**12.8221**	**0.3197**	**13.1418**		**81,421.2738**	**81,421.2738**	**2.4075**		**81,481.4602**

3.4 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4407	136.7668	23.9274	0.4864	12.3991	0.1376	12.5366	3.5700	0.1315	3.7015		50,938.9316	50,938.9316	1.8470		50,985.1063
Worker	11.9493	5.3689	79.1865	0.2938	38.3958	0.1894	38.5852	10.1844	0.1742	10.3586		29,306.2580	29,306.2580	0.4825		29,318.3193
Total	**15.3899**	**142.1357**	**103.1139**	**0.7801**	**50.7949**	**0.3270**	**51.1218**	**13.7543**	**0.3057**	**14.0600**		**80,245.1896**	**80,245.1896**	**2.3294**		**80,303.4256**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4407	136.7668	23.9274	0.4864	11.6043	0.1376	11.7419	3.3749	0.1315	3.5064		50,938.9316	50,938.9316	1.8470		50,985.1063
Worker	11.9493	5.3689	79.1865	0.2938	35.3925	0.1894	35.5819	9.4472	0.1742	9.6214		29,306.2580	29,306.2580	0.4825		29,318.3193
Total	**15.3899**	**142.1357**	**103.1139**	**0.7801**	**46.9968**	**0.3270**	**47.3238**	**12.8221**	**0.3057**	**13.1278**		**80,245.1896**	**80,245.1896**	**2.3294**		**80,303.4256**

3.4 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3812	135.8003	23.3317	0.4844	12.3991	0.1360	12.5351	3.5700	0.1300	3.6999		50,733.4312	50,733.4312	1.8164		50,778.8403
Worker	11.1066	4.9112	74.0508	0.2853	38.3958	0.1765	38.5723	10.1844	0.1624	10.3467		28,471.0253	28,471.0253	0.4403		28,482.0331
Total	**14.4877**	**140.7116**	**97.3825**	**0.7697**	**50.7949**	**0.3125**	**51.1074**	**13.7543**	**0.2923**	**14.0467**		**79,204.4564**	**79,204.4564**	**2.2567**		**79,260.8734**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3812	135.8003	23.3317	0.4844	11.6043	0.1360	11.7403	3.3749	0.1300	3.5048		50,733.4312	50,733.4312	1.8164		50,778.8403
Worker	11.1066	4.9112	74.0508	0.2853	35.3925	0.1765	35.5691	9.4472	0.1624	9.6096		28,471.0253	28,471.0253	0.4403		28,482.0331
Total	**14.4877**	**140.7116**	**97.3825**	**0.7697**	**46.9969**	**0.3125**	**47.3093**	**12.8221**	**0.2923**	**13.1144**		**79,204.4564**	**79,204.4564**	**2.2567**		**79,260.8734**

3.4 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3329	134.9588	22.8731	0.4829	12.3992	0.1345	12.5337	3.5700	0.1286	3.6986		50,571.1744	50,571.1744	1.7891		50,615.9018
Worker	10.2664	4.4900	69.3912	0.2779	38.3958	0.1646	38.5604	10.1844	0.1514	10.3358		27,731.3921	27,731.3921	0.4023		27,741.4490
Total	**13.5993**	**139.4488**	**92.2643**	**0.7607**	**50.7950**	**0.2992**	**51.0941**	**13.7544**	**0.2800**	**14.0344**		**78,302.5664**	**78,302.5664**	**2.1914**		**78,357.3508**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3329	134.9588	22.8731	0.4829	11.6044	0.1345	11.7389	3.3749	0.1286	3.5035		50,571.1744	50,571.1744	1.7891		50,615.9018
Worker	10.2664	4.4900	69.3912	0.2779	35.3925	0.1646	35.5572	9.4472	0.1514	9.5986		27,731.3921	27,731.3921	0.4023		27,741.4490
Total	**13.5993**	**139.4488**	**92.2643**	**0.7607**	**46.9969**	**0.2992**	**47.2961**	**12.8221**	**0.2800**	**13.1021**		**78,302.5664**	**78,302.5664**	**2.1914**		**78,357.3508**

3.4 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2951	134.2160	22.5249	0.4817	12.3992	0.1332	12.5324	3.5700	0.1273	3.6973		50,445.8926	50,445.8926	1.7627		50,489.9594
Worker	9.3887	4.0889	64.9361	0.2713	38.3958	0.1534	38.5492	10.1844	0.1411	10.3255		27,078.4738	27,078.4738	0.3665		27,087.6358
Total	**12.6838**	**138.3050**	**87.4611**	**0.7529**	**50.7950**	**0.2866**	**51.0816**	**13.7544**	**0.2685**	**14.0228**		**77,524.3664**	**77,524.3664**	**2.1292**		**77,577.5952**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2951	134.2160	22.5249	0.4817	11.6044	0.1332	11.7376	3.3749	0.1273	3.5022		50,445.8926	50,445.8926	1.7627		50,489.9594
Worker	9.3887	4.0889	64.9361	0.2713	35.3925	0.1534	35.5460	9.4472	0.1411	9.5883		27,078.4738	27,078.4738	0.3665		27,087.6358
Total	**12.6838**	**138.3050**	**87.4611**	**0.7529**	**46.9969**	**0.2866**	**47.2836**	**12.8221**	**0.2685**	**13.0906**		**77,524.3664**	**77,524.3664**	**2.1292**		**77,577.5952**

3.4 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2663	133.5485	22.2895	0.4809	12.3992	0.1320	12.5312	3.5700	0.1261	3.6961		50,367.1472	50,367.1472	1.7404		50,410.6569
Worker	8.6241	3.7493	61.0782	0.2655	38.3958	0.1432	38.5390	10.1844	0.1317	10.3160		26,506.5376	26,506.5376	0.3358		26,514.9319
Total	**11.8904**	**137.2978**	**83.3677**	**0.7464**	**50.7950**	**0.2751**	**51.0702**	**13.7544**	**0.2578**	**14.0122**		**76,873.6847**	**76,873.6847**	**2.0762**		**76,925.5888**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2663	133.5485	22.2895	0.4809	11.6044	0.1320	11.7364	3.3749	0.1261	3.5011		50,367.1472	50,367.1472	1.7404		50,410.6569
Worker	8.6241	3.7493	61.0782	0.2655	35.3925	0.1432	35.5357	9.4472	0.1317	9.5789		26,506.5376	26,506.5376	0.3358		26,514.9319
Total	**11.8904**	**137.2978**	**83.3677**	**0.7464**	**46.9970**	**0.2751**	**47.2721**	**12.8221**	**0.2578**	**13.0799**		**76,873.6847**	**76,873.6847**	**2.0762**		**76,925.5888**

3.4 Building Construction - 2033

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2453	132.9488	22.1104	0.4804	12.3993	0.1308	12.5301	3.5700	0.1250	3.6951		50,314.0760	50,314.0760	1.7195		50,357.0626
Worker	7.9550	3.4593	57.7297	0.2605	38.3958	0.1338	38.5296	10.1844	0.1230	10.3074		26,007.8034	26,007.8034	0.3093		26,015.5346
Total	**11.2004**	**136.4082**	**79.8401**	**0.7409**	**50.7951**	**0.2646**	**51.0596**	**13.7544**	**0.2481**	**14.0024**		**76,321.8794**	**76,321.8794**	**2.0287**		**76,372.5972**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2453	132.9488	22.1104	0.4804	11.6045	0.1308	11.7353	3.3749	0.1250	3.5000		50,314.0760	50,314.0760	1.7195		50,357.0626
Worker	7.9550	3.4593	57.7297	0.2605	35.3925	0.1338	35.5263	9.4472	0.1230	9.5702		26,007.8034	26,007.8034	0.3093		26,015.5346
Total	**11.2004**	**136.4082**	**79.8401**	**0.7409**	**46.9970**	**0.2646**	**47.2616**	**12.8221**	**0.2481**	**13.0702**		**76,321.8794**	**76,321.8794**	**2.0287**		**76,372.5972**

3.4 Building Construction - 2034

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2275	132.4137	21.9564	0.4801	12.3993	0.1297	12.5290	3.5700	0.1240	3.6940		50,283.5355	50,283.5355	1.7025		50,326.0979
Worker	7.3818	3.2200	54.6213	0.2561	38.3958	0.1250	38.5208	10.1844	0.1149	10.2993		25,574.0264	25,574.0264	0.2851		25,581.1531
Total	**10.6093**	**135.6337**	**76.5776**	**0.7362**	**50.7951**	**0.2547**	**51.0498**	**13.7544**	**0.2389**	**13.9933**		**75,857.5619**	**75,857.5619**	**1.9876**		**75,907.2509**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2275	132.4137	21.9564	0.4801	11.6045	0.1297	11.7342	3.3750	0.1240	3.4989		50,283.5355	50,283.5355	1.7025		50,326.0979
Worker	7.3818	3.2200	54.6213	0.2561	35.3925	0.1250	35.5175	9.4472	0.1149	9.5621		25,574.0264	25,574.0264	0.2851		25,581.1531
Total	**10.6093**	**135.6337**	**76.5776**	**0.7362**	**46.9970**	**0.2547**	**47.2517**	**12.8221**	**0.2389**	**13.0611**		**75,857.5619**	**75,857.5619**	**1.9876**		**75,907.2509**

3.4 Building Construction - 2035

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	12.3993	0.1287	12.5280	3.5700	0.1230	3.6931		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**50.7951**	**0.2457**	**51.0408**	**13.7544**	**0.2306**	**13.9850**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	11.6045	0.1287	11.7332	3.3750	0.1230	3.4980		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**46.9971**	**0.2457**	**47.2428**	**12.8222**	**0.2306**	**13.0528**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

3.4 Building Construction - 2036

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	12.3993	0.1287	12.5280	3.5700	0.1230	3.6931		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**50.7951**	**0.2457**	**51.0408**	**13.7544**	**0.2306**	**13.9850**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	11.6045	0.1287	11.7332	3.3750	0.1230	3.4980		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**46.9971**	**0.2457**	**47.2428**	**12.8222**	**0.2306**	**13.0528**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

3.4 Building Construction - 2037

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	12.3993	0.1287	12.5280	3.5700	0.1230	3.6931		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**50.7951**	**0.2457**	**51.0408**	**13.7544**	**0.2306**	**13.9850**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	11.6045	0.1287	11.7332	3.3750	0.1230	3.4980		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**46.9971**	**0.2457**	**47.2428**	**12.8222**	**0.2306**	**13.0528**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

3.4 Building Construction - 2038

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	12.3993	0.1287	12.5280	3.5700	0.1230	3.6931		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**50.7951**	**0.2457**	**51.0408**	**13.7544**	**0.2306**	**13.9850**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	11.6045	0.1287	11.7332	3.3750	0.1230	3.4980		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**46.9971**	**0.2457**	**47.2428**	**12.8222**	**0.2306**	**13.0528**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

3.4 Building Construction - 2039

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	12.3993	0.1287	12.5280	3.5700	0.1230	3.6931		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**50.7951**	**0.2457**	**51.0408**	**13.7544**	**0.2306**	**13.9850**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2114	131.9351	21.8302	0.4799	11.6045	0.1287	11.7332	3.3750	0.1230	3.4980		50,264.7704	50,264.7704	1.6869		50,306.9417
Worker	6.8827	3.0340	51.9629	0.2524	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		25,202.0644	25,202.0644	0.2646		25,208.6783
Total	**10.0941**	**134.9691**	**73.7931**	**0.7323**	**46.9971**	**0.2457**	**47.2428**	**12.8222**	**0.2306**	**13.0528**		**75,466.8348**	**75,466.8348**	**1.9514**		**75,515.6199**

3.5 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2025

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	0.0462	0.0226	0.3106	1.0500e-003	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		104.3261	104.3261	2.0300e-003		104.3768
Total	**0.0462**	**0.0226**	**0.3106**	**1.0500e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.5000e-004**	**0.0333**		**104.3261**	**104.3261**	**2.0300e-003**		**104.3768**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2025

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	0.0462	0.0226	0.3106	1.0500e-003	0.1136	7.0000e-004	0.1143	0.0303	6.5000e-004	0.0310		104.3261	104.3261	2.0300e-003		104.3768
Total	**0.0462**	**0.0226**	**0.3106**	**1.0500e-003**	**0.1136**	**7.0000e-004**	**0.1143**	**0.0303**	**6.5000e-004**	**0.0310**		**104.3261**	**104.3261**	**2.0300e-003**		**104.3768**

3.5 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2026

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	0.0435	0.0206	0.2914	1.0100e-003	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		100.4876	100.4876	1.8600e-003		100.5340
Total	**0.0435**	**0.0206**	**0.2914**	**1.0100e-003**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**100.4876**	**100.4876**	**1.8600e-003**		**100.5340**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2026

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	0.0435	0.0206	0.2914	1.0100e-003	0.1136	6.9000e-004	0.1143	0.0303	6.3000e-004	0.0310		100.4876	100.4876	1.8600e-003		100.5340
Total	**0.0435**	**0.0206**	**0.2914**	**1.0100e-003**	**0.1136**	**6.9000e-004**	**0.1143**	**0.0303**	**6.3000e-004**	**0.0310**		**100.4876**	**100.4876**	**1.8600e-003**		**100.5340**

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2027

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	0.0409	0.0188	0.2715	9.7000e-004	0.1232	6.5000e-004	0.1239	0.0327	6.0000e-004	0.0333		97.0753	97.0753	1.6900e-003		97.1176
Total	**0.0409**	**0.0188**	**0.2715**	**9.7000e-004**	**0.1232**	**6.5000e-004**	**0.1239**	**0.0327**	**6.0000e-004**	**0.0333**		**97.0753**	**97.0753**	**1.6900e-003**		**97.1176**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2027

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	0.0409	0.0188	0.2715	9.7000e-004	0.1136	6.5000e-004	0.1142	0.0303	6.0000e-004	0.0309		97.0753	97.0753	1.6900e-003		97.1176
Total	**0.0409**	**0.0188**	**0.2715**	**9.7000e-004**	**0.1136**	**6.5000e-004**	**0.1142**	**0.0303**	**6.0000e-004**	**0.0309**		**97.0753**	**97.0753**	**1.6900e-003**		**97.1176**

3.6 Architectural Coating - 2025

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2025

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	2.8765	1.4082	19.3595	0.0652	7.6808	0.0438	7.7246	2.0373	0.0403	2.0776		6,502.9904	6,502.9904	0.1265		6,506.1529
Total	**2.8765**	**1.4082**	**19.3595**	**0.0652**	**7.6808**	**0.0438**	**7.7246**	**2.0373**	**0.0403**	**2.0776**		**6,502.9904**	**6,502.9904**	**0.1265**		**6,506.1529**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2025

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	2.8765	1.4082	19.3595	0.0652	7.0800	0.0438	7.1238	1.8898	0.0403	1.9301		6,502.9904	6,502.9904	0.1265		6,506.1529
Total	**2.8765**	**1.4082**	**19.3595**	**0.0652**	**7.0800**	**0.0438**	**7.1238**	**1.8898**	**0.0403**	**1.9301**		**6,502.9904**	**6,502.9904**	**0.1265**		**6,506.1529**

3.6 Architectural Coating - 2026

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2026

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	2.7116	1.2840	18.1640	0.0628	7.6808	0.0427	7.7235	2.0373	0.0393	2.0766		6,263.7247	6,263.7247	0.1158		6,266.6199
Total	**2.7116**	**1.2840**	**18.1640**	**0.0628**	**7.6808**	**0.0427**	**7.7235**	**2.0373**	**0.0393**	**2.0766**		**6,263.7247**	**6,263.7247**	**0.1158**		**6,266.6199**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2026

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	2.7116	1.2840	18.1640	0.0628	7.0800	0.0427	7.1228	1.8898	0.0393	1.9292		6,263.7247	6,263.7247	0.1158		6,266.6199
Total	**2.7116**	**1.2840**	**18.1640**	**0.0628**	**7.0800**	**0.0427**	**7.1228**	**1.8898**	**0.0393**	**1.9292**		**6,263.7247**	**6,263.7247**	**0.1158**		**6,266.6199**

3.6 Architectural Coating - 2027

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2027

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	2.5518	1.1731	16.9256	0.0607	7.6808	0.0406	7.7214	2.0373	0.0374	2.0747		6,051.0250	6,051.0250	0.1055		6,053.6613
Total	**2.5518**	**1.1731**	**16.9256**	**0.0607**	**7.6808**	**0.0406**	**7.7214**	**2.0373**	**0.0374**	**2.0747**		**6,051.0250**	**6,051.0250**	**0.1055**		**6,053.6613**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2027

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	2.5518	1.1731	16.9256	0.0607	7.0800	0.0406	7.1207	1.8898	0.0374	1.9272		6,051.0250	6,051.0250	0.1055		6,053.6613
Total	**2.5518**	**1.1731**	**16.9256**	**0.0607**	**7.0800**	**0.0406**	**7.1207**	**1.8898**	**0.0374**	**1.9272**		**6,051.0250**	**6,051.0250**	**0.1055**		**6,053.6613**

3.6 Architectural Coating - 2028

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

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	2.3904	1.0740	15.8407	0.0588	7.6808	0.0379	7.7187	2.0373	0.0349	2.0722		5,862.5056	5,862.5056	0.0965		5,864.9184
Total	**2.3904**	**1.0740**	**15.8407**	**0.0588**	**7.6808**	**0.0379**	**7.7187**	**2.0373**	**0.0349**	**2.0722**		**5,862.5056**	**5,862.5056**	**0.0965**		**5,864.9184**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

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	2.3904	1.0740	15.8407	0.0588	7.0800	0.0379	7.1179	1.8898	0.0349	1.9247		5,862.5056	5,862.5056	0.0965		5,864.9184
Total	**2.3904**	**1.0740**	**15.8407**	**0.0588**	**7.0800**	**0.0379**	**7.1179**	**1.8898**	**0.0349**	**1.9247**		**5,862.5056**	**5,862.5056**	**0.0965**		**5,864.9184**

3.6 Architectural Coating - 2029

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2029

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	2.2218	0.9825	14.8133	0.0571	7.6808	0.0353	7.7161	2.0373	0.0325	2.0698		5,695.4233	5,695.4233	0.0881		5,697.6254
Total	**2.2218**	**0.9825**	**14.8133**	**0.0571**	**7.6808**	**0.0353**	**7.7161**	**2.0373**	**0.0325**	**2.0698**		**5,695.4233**	**5,695.4233**	**0.0881**		**5,697.6254**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2029

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	2.2218	0.9825	14.8133	0.0571	7.0800	0.0353	7.1153	1.8898	0.0325	1.9223		5,695.4233	5,695.4233	0.0881		5,697.6254
Total	**2.2218**	**0.9825**	**14.8133**	**0.0571**	**7.0800**	**0.0353**	**7.1153**	**1.8898**	**0.0325**	**1.9223**		**5,695.4233**	**5,695.4233**	**0.0881**		**5,697.6254**

3.6 Architectural Coating - 2030

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2030

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	2.0537	0.8982	13.8812	0.0556	7.6808	0.0329	7.7137	2.0373	0.0303	2.0676		5,547.4650	5,547.4650	0.0805		5,549.4769
Total	**2.0537**	**0.8982**	**13.8812**	**0.0556**	**7.6808**	**0.0329**	**7.7137**	**2.0373**	**0.0303**	**2.0676**		**5,547.4650**	**5,547.4650**	**0.0805**		**5,549.4769**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2030

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	2.0537	0.8982	13.8812	0.0556	7.0800	0.0329	7.1130	1.8898	0.0303	1.9201		5,547.4650	5,547.4650	0.0805		5,549.4769
Total	**2.0537**	**0.8982**	**13.8812**	**0.0556**	**7.0800**	**0.0329**	**7.1130**	**1.8898**	**0.0303**	**1.9201**		**5,547.4650**	**5,547.4650**	**0.0805**		**5,549.4769**

3.6 Architectural Coating - 2031

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2031

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	1.8782	0.8180	12.9900	0.0543	7.6808	0.0307	7.7115	2.0373	0.0282	2.0655		5,416.8535	5,416.8535	0.0733		5,418.6862
Total	**1.8782**	**0.8180**	**12.9900**	**0.0543**	**7.6808**	**0.0307**	**7.7115**	**2.0373**	**0.0282**	**2.0655**		**5,416.8535**	**5,416.8535**	**0.0733**		**5,418.6862**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2031

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	1.8782	0.8180	12.9900	0.0543	7.0800	0.0307	7.1107	1.8898	0.0282	1.9181		5,416.8535	5,416.8535	0.0733		5,418.6862
Total	**1.8782**	**0.8180**	**12.9900**	**0.0543**	**7.0800**	**0.0307**	**7.1107**	**1.8898**	**0.0282**	**1.9181**		**5,416.8535**	**5,416.8535**	**0.0733**		**5,418.6862**

3.6 Architectural Coating - 2032

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2032

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	1.7252	0.7500	12.2183	0.0531	7.6808	0.0286	7.7094	2.0373	0.0263	2.0637		5,302.4417	5,302.4417	0.0672		5,304.1209
Total	**1.7252**	**0.7500**	**12.2183**	**0.0531**	**7.6808**	**0.0286**	**7.7094**	**2.0373**	**0.0263**	**2.0637**		**5,302.4417**	**5,302.4417**	**0.0672**		**5,304.1209**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2032

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	1.7252	0.7500	12.2183	0.0531	7.0800	0.0286	7.1087	1.8898	0.0263	1.9162		5,302.4417	5,302.4417	0.0672		5,304.1209
Total	**1.7252**	**0.7500**	**12.2183**	**0.0531**	**7.0800**	**0.0286**	**7.1087**	**1.8898**	**0.0263**	**1.9162**		**5,302.4417**	**5,302.4417**	**0.0672**		**5,304.1209**

3.6 Architectural Coating - 2033

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2033

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	1.5914	0.6920	11.5484	0.0521	7.6808	0.0268	7.7076	2.0373	0.0246	2.0619		5,202.6735	5,202.6735	0.0619		5,204.2201
Total	**1.5914**	**0.6920**	**11.5484**	**0.0521**	**7.6808**	**0.0268**	**7.7076**	**2.0373**	**0.0246**	**2.0619**		**5,202.6735**	**5,202.6735**	**0.0619**		**5,204.2201**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2033

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	1.5914	0.6920	11.5484	0.0521	7.0800	0.0268	7.1068	1.8898	0.0246	1.9145		5,202.6735	5,202.6735	0.0619		5,204.2201
Total	**1.5914**	**0.6920**	**11.5484**	**0.0521**	**7.0800**	**0.0268**	**7.1068**	**1.8898**	**0.0246**	**1.9145**		**5,202.6735**	**5,202.6735**	**0.0619**		**5,204.2201**

3.6 Architectural Coating - 2034

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2034

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	1.4767	0.6441	10.9266	0.0512	7.6808	0.0250	7.7058	2.0373	0.0230	2.0603		5,115.8996	5,115.8996	0.0570		5,117.3252
Total	**1.4767**	**0.6441**	**10.9266**	**0.0512**	**7.6808**	**0.0250**	**7.7058**	**2.0373**	**0.0230**	**2.0603**		**5,115.8996**	**5,115.8996**	**0.0570**		**5,117.3252**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2034

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	1.4767	0.6441	10.9266	0.0512	7.0800	0.0250	7.1050	1.8898	0.0230	1.9128		5,115.8996	5,115.8996	0.0570		5,117.3252
Total	**1.4767**	**0.6441**	**10.9266**	**0.0512**	**7.0800**	**0.0250**	**7.1050**	**1.8898**	**0.0230**	**1.9128**		**5,115.8996**	**5,115.8996**	**0.0570**		**5,117.3252**

3.6 Architectural Coating - 2035

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2035

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	1.3768	0.6069	10.3948	0.0505	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2035

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	1.3768	0.6069	10.3948	0.0505	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

3.6 Architectural Coating - 2036

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2036

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	1.3768	0.6069	10.3948	0.0505	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2036

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	1.3768	0.6069	10.3948	0.0505	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

3.6 Architectural Coating - 2037

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2037

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	1.3768	0.6069	10.3948	0.0505	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2037

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	1.3768	0.6069	10.3948	0.0505	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

3.6 Architectural Coating - 2038

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2038

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	1.3768	0.6069	10.3948	0.0505	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2038

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	1.3768	0.6069	10.3948	0.0505	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

3.6 Architectural Coating - 2039

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2039

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	1.3768	0.6069	10.3948	0.0505	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2039

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	1.3768	0.6069	10.3948	0.0505	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		5,041.4913	5,041.4913	0.0529		5,042.8143
Total	**1.3768**	**0.6069**	**10.3948**	**0.0505**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**5,041.4913**	**5,041.4913**	**0.0529**		**5,042.8143**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.5104	599.5923	197.0294	2.5820	136.0920	0.7446	136.8365	36.4099	0.7037	37.1136		268,065.9062	268,065.9062	10.6346		268,331.7703
Unmitigated	20.5104	599.5923	197.0294	2.5820	136.0920	0.7446	136.8365	36.4099	0.7037	37.1136		268,065.9062	268,065.9062	10.6346		268,331.7703

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	16,142.61	16,142.61	16142.61	47,128,530	47,128,530
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	8,983.80	8,983.80	8983.80	15,751,346	15,751,346
Total	25,126.41	25,126.41	25,126.41	62,879,876	62,879,876

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000
City Park	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Non-Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Regional Shopping Center	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
NaturalGas Unmitigated	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Light Industry	311086	3.3549	30.4987	25.6189	0.1830		2.3179	2.3179		2.3179	2.3179		36,598.3918	36,598.3918	0.7015	0.6710	36,815.8778
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	4498.89	0.0485	0.4411	0.3705	2.6500e-003		0.0335	0.0335		0.0335	0.0335		529.2812	529.2812	0.0101	9.7000e-003	532.4265
Total		**3.4034**	**30.9397**	**25.9894**	**0.1856**		**2.3514**	**2.3514**		**2.3514**	**2.3514**		**37,127.6731**	**37,127.6731**	**0.7116**	**0.6807**	**37,348.3043**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Light Industry	311.086	3.3549	30.4987	25.6189	0.1830		2.3179	2.3179		2.3179	2.3179		36,598.3918	36,598.3918	0.7015	0.6710	36,815.8778
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	4.49889	0.0485	0.4411	0.3705	2.6500e-003		0.0335	0.0335		0.0335	0.0335		529.2812	529.2812	0.0101	9.7000e-003	532.4265
Total		**3.4034**	**30.9397**	**25.9894**	**0.1856**		**2.3514**	**2.3514**		**2.3514**	**2.3514**		**37,127.6731**	**37,127.6731**	**0.7116**	**0.6807**	**37,348.3043**

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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Unmitigated	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781

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	24.0357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	134.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0589	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Total	**158.4919**	**5.7800e-003**	**0.6437**	**5.0000e-005**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**		**1.3886**	**1.3886**	**3.5800e-003**		**1.4781**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	24.0357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	134.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0589	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Total	**158.4919**	**5.7800e-003**	**0.6437**	**5.0000e-005**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**		**1.3886**	**1.3886**	**3.5800e-003**		**1.4781**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

South Stockton Commerce Center

San Joaquin County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	6,091.55	1000sqft	298.00	6,091,551.00	0
Other Asphalt Surfaces	18.20	Acre	18.20	792,792.00	0
Regional Shopping Center	140.35	1000sqft	11.00	140,350.00	0
Other Non-Asphalt Surfaces	41.00	Acre	41.00	1,785,960.00	0
City Park	54.00	Acre	54.00	2,352,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land uses are best fit based on available land use types/subtypes available in CalEEMod. Land uses selected are consistent with the land uses as provided in the EIR Project Description.

Construction Phase - Construction schedule based on project size and details.

Off-road Equipment -

Demolition -

Grading - 328 acres assumed to be graded.

Vehicle Trips - Trips consistent with Traffic Impact Assessment (Fehr & Peers).

Energy Use -

Construction Off-road Equipment Mitigation - Construction mitigation: Water Exposed Area 2x daily; Clean Paved Road (9% fugitive dust PM reduction); Unpaved road mitigation: Limit on-site construction vehicle speeds to 5 mph; Soil Stabilizer for unpaved (10% reduction)

Fleet Mix - Fleet mix modified for relevant land use types/subtypes to reflect Traffic Impact Assessment values (Fehr & Peers) - 75.5% passenger vehicles; 24.5% heavy-duty trucks.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	300.00	240.00
tblConstructionPhase	NumDays	775.00	620.00
tblConstructionPhase	NumDays	7,750.00	3,685.00
tblConstructionPhase	NumDays	550.00	440.00
tblConstructionPhase	NumDays	550.00	3,685.00
tblConstructionPhase	PhaseEndDate	9/23/2022	7/1/2022
tblConstructionPhase	PhaseEndDate	9/12/2025	11/14/2025
tblConstructionPhase	PhaseEndDate	5/28/2055	12/30/2039
tblConstructionPhase	PhaseEndDate	7/6/2057	7/23/2027
tblConstructionPhase	PhaseEndDate	8/15/2059	12/30/2039
tblConstructionPhase	PhaseStartDate	9/24/2022	7/2/2023
tblConstructionPhase	PhaseStartDate	9/13/2025	11/15/2025

South Stockton Commerce Center - San Joaquin County, Winter

tblConstructionPhase	PhaseStartDate	5/29/2055	11/15/2025
tblConstructionPhase	PhaseStartDate	7/7/2057	11/15/2025
tblFleetMix	HHD	0.05	0.25
tblFleetMix	HHD	0.05	0.25
tblFleetMix	LDA	0.59	0.55
tblFleetMix	LDA	0.59	0.55
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	8.6960e-003	0.00
tblFleetMix	LHD1	8.6960e-003	0.00
tblFleetMix	LHD2	3.6880e-003	0.00
tblFleetMix	LHD2	3.6880e-003	0.00
tblFleetMix	MCY	4.5230e-003	0.00
tblFleetMix	MCY	4.5230e-003	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MDV	0.10	0.00
tblFleetMix	MH	4.7000e-004	0.00
tblFleetMix	MH	4.7000e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	1.1590e-003	0.00
tblFleetMix	OBUS	1.1590e-003	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	SBUS	5.3600e-004	0.00
tblFleetMix	UBUS	1.1060e-003	0.00

tblFleetMix	UBUS	1.1060e-003	0.00
tblGrading	AcresOfGrading	1,550.00	328.00
tblLandUse	LandUseSquareFeet	6,091,550.00	6,091,551.00
tblLandUse	LotAcreage	139.84	298.00
tblLandUse	LotAcreage	3.22	11.00
tblVehicleTrips	ST_TR	1.32	2.65
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	49.97	64.01
tblVehicleTrips	SU_TR	0.68	2.65
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	25.24	64.01
tblVehicleTrips	WD_TR	6.97	2.65
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	42.70	64.01

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9598	40.5476	21.6176	0.0393	18.2141	2.0454	20.2595	9.9699	1.8818	11.8517	0.0000	3,816.8017	3,816.8017	1.1954	0.0000	3,846.6869
2022	3.2366	33.1287	20.1196	0.0393	18.2141	1.6135	19.8276	9.9699	1.4844	11.4543	0.0000	3,812.5461	3,812.5461	1.1952	0.0000	3,842.4255

South Stockton Commerce Center - San Joaquin County, Winter

	ROG	NOx	CO	SO2	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					
2023	3.3904	34.5605	28.4775	0.0635	6.7474	1.4255	8.1729	3.4144	1.3114	4.7258	0.0000	6,146.7875	6,146.7875	1.9472	0.0000	6,195.4683
2024	3.2824	32.4173	28.1150	0.0634	6.7474	1.3364	8.0838	3.4144	1.2295	4.6438	0.0000	6,139.2458	6,139.2458	1.9464	0.0000	6,187.9047
2025	47.2397	173.4810	164.7186	0.8833	58.5987	1.4068	60.0055	15.8243	1.3146	17.1389	0.0000	90,270.3582	90,270.3582	4.1978	0.0000	90,375.3043
2026	46.2114	171.2387	156.9754	0.8674	58.5988	1.3985	59.9974	15.8243	1.3069	17.1312	0.0000	88,674.7077	88,674.7077	4.1060	0.0000	88,777.3583
2027	45.2187	169.0868	149.3102	0.8532	58.5989	1.3836	59.9825	15.8243	1.2930	17.1173	0.0000	87,255.0294	87,255.0294	4.0146	0.0000	87,355.3929
2028	43.1499	158.7604	127.8944	0.8173	58.4757	0.9464	59.4220	15.7916	0.8907	16.6823	0.0000	83,730.3537	83,730.3537	3.2138	0.0000	83,810.6994
2029	42.1046	157.0907	121.6597	0.8064	58.4757	0.9291	59.4048	15.7916	0.8747	16.6664	0.0000	82,638.8816	82,638.8816	3.1340	0.0000	82,717.2307
2030	40.9724	150.7743	116.1508	0.8009	58.4758	0.5026	58.9784	15.7917	0.4808	16.2724	0.0000	82,029.3936	82,029.3936	2.5736	0.0000	82,093.7330
2031	39.8981	149.4120	110.9091	0.7926	58.4758	0.4877	58.9635	15.7917	0.4670	16.2587	0.0000	81,205.2618	81,205.2618	2.5050	0.0000	81,267.8875
2032	38.9704	148.2146	106.4548	0.7856	58.4758	0.4740	58.9499	15.7917	0.4543	16.2460	0.0000	80,510.4511	80,510.4511	2.4467	0.0000	80,571.6177
2033	38.1675	147.1574	102.6205	0.7797	58.4759	0.4615	58.9373	15.7917	0.4427	16.2344	0.0000	79,917.4226	79,917.4226	2.3943	0.0000	79,977.2803
2034	37.4974	146.2393	99.0827	0.7746	58.4759	0.4497	58.9256	15.7917	0.4319	16.2236	0.0000	79,415.0701	79,415.0701	2.3490	0.0000	79,473.7943
2035	36.8094	144.5871	96.0231	0.7704	58.4759	0.3709	58.8468	15.7917	0.3539	16.1456	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2036	36.8094	144.5871	96.0231	0.7704	58.4759	0.3709	58.8468	15.7917	0.3539	16.1456	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2037	36.8094	144.5871	96.0231	0.7704	58.4759	0.3709	58.8468	15.7917	0.3539	16.1456	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2038	36.8094	144.5871	96.0231	0.7704	58.4759	0.3709	58.8468	15.7917	0.3539	16.1456	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2039	36.8094	144.5871	96.0231	0.7704	58.4759	0.3709	58.8468	15.7917	0.3539	16.1456	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
Maximum	**47.2397**	**173.4810**	**164.7186**	**0.8833**	**58.5989**	**2.0454**	**60.0055**	**15.8243**	**1.8818**	**17.1389**	**0.0000**	**90,270.3582**	**90,270.3582**	**4.1978**	**0.0000**	**90,375.3043**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9598	40.5476	21.6176	0.0393	8.2661	2.0454	10.3115	4.5052	1.8818	6.3870	0.0000	3,816.8017	3,816.8017	1.1954	0.0000	3,846.6869
2022	3.2366	33.1287	20.1196	0.0393	8.2661	1.6135	9.8796	4.5052	1.4844	5.9896	0.0000	3,812.5461	3,812.5461	1.1952	0.0000	3,842.4255
2023	3.3904	34.5605	28.4775	0.0635	3.1139	1.4255	4.5393	1.5573	1.3114	2.8687	0.0000	6,146.7875	6,146.7875	1.9472	0.0000	6,195.4683
2024	3.2824	32.4173	28.1150	0.0634	3.1139	1.3364	4.4502	1.5573	1.2295	2.7867	0.0000	6,139.2458	6,139.2458	1.9464	0.0000	6,187.9047
2025	47.2397	173.4810	164.7186	0.8833	54.1903	1.4068	55.5971	14.7422	1.3146	16.0568	0.0000	90,270.3582	90,270.3582	4.1978	0.0000	90,375.3043
2026	46.2114	171.2387	156.9754	0.8674	54.1903	1.3985	55.5889	14.7422	1.3069	16.0491	0.0000	88,674.7077	88,674.7077	4.1060	0.0000	88,777.3583
2027	45.2187	169.0868	149.3102	0.8532	54.1904	1.3836	55.5740	14.7422	1.2930	16.0353	0.0000	87,255.0294	87,255.0294	4.0146	0.0000	87,355.3929
2028	43.1499	158.7604	127.8944	0.8173	54.0769	0.9464	55.0232	14.7119	0.8907	15.6026	0.0000	83,730.3537	83,730.3537	3.2138	0.0000	83,810.6994
2029	42.1046	157.0907	121.6597	0.8064	54.0769	0.9291	55.0060	14.7119	0.8747	15.5867	0.0000	82,638.8816	82,638.8816	3.1340	0.0000	82,717.2307
2030	40.9724	150.7743	116.1508	0.8009	54.0769	0.5026	54.5796	14.7119	0.4808	15.1927	0.0000	82,029.3936	82,029.3936	2.5736	0.0000	82,093.7330
2031	39.8981	149.4120	110.9091	0.7926	54.0770	0.4877	54.5647	14.7119	0.4670	15.1789	0.0000	81,205.2618	81,205.2618	2.5050	0.0000	81,267.8875
2032	38.9704	148.2146	106.4548	0.7856	54.0770	0.4740	54.5510	14.7120	0.4543	15.1663	0.0000	80,510.4511	80,510.4511	2.4467	0.0000	80,571.6177
2033	38.1675	147.1574	102.6205	0.7797	54.0770	0.4615	54.5385	14.7120	0.4427	15.1547	0.0000	79,917.4226	79,917.4226	2.3943	0.0000	79,977.2803
2034	37.4974	146.2393	99.0827	0.7746	54.0771	0.4497	54.5268	14.7120	0.4319	15.1439	0.0000	79,415.0701	79,415.0701	2.3490	0.0000	79,473.7943
2035	36.8094	144.5871	96.0231	0.7704	54.0771	0.3709	54.4480	14.7120	0.3539	15.0659	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413

South Stockton Commerce Center - San Joaquin County, Winter

	ROG	NOx	CO	SO2	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					
2036	36.8094	144.5871	96.0231	0.7704	54.0771	0.3709	54.4480	14.7120	0.3539	15.0659	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2037	36.8094	144.5871	96.0231	0.7704	54.0771	0.3709	54.4480	14.7120	0.3539	15.0659	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2038	36.8094	144.5871	96.0231	0.7704	54.0771	0.3709	54.4480	14.7120	0.3539	15.0659	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
2039	36.8094	144.5871	96.0231	0.7704	54.0771	0.3709	54.4480	14.7120	0.3539	15.0659	0.0000	78,991.0476	78,991.0476	2.2998	0.0000	79,048.5413
Maximum	**47.2397**	**173.4810**	**164.7186**	**0.8833**	**54.1904**	**2.0454**	**55.5971**	**14.7422**	**1.8818**	**16.0568**	**0.0000**	**90,270.3582**	**90,270.3582**	**4.1978**	**0.0000**	**90,375.3043**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.05**	**0.00**	**9.87**	**11.70**	**0.00**	**11.04**	**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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Energy	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
Mobile	19.1715	594.4751	199.0637	2.4266	136.0920	0.7531	136.8450	36.4099	0.7119	37.1217		252,074.5682	252,074.5682	11.9202		252,372.5725
Total	**181.0668**	**625.4206**	**225.6968**	**2.6123**	**136.0920**	**3.1068**	**139.1987**	**36.4099**	**3.0656**	**39.4754**		**289,203.6298**	**289,203.6298**	**12.6354**	**0.6807**	**289,722.3548**

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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Energy	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
Mobile	19.1715	594.4751	199.0637	2.4266	136.0920	0.7531	136.8450	36.4099	0.7119	37.1217		252,074.5682	252,074.5682	11.9202		252,372.5725
Total	**181.0668**	**625.4206**	**225.6968**	**2.6123**	**136.0920**	**3.1068**	**139.1987**	**36.4099**	**3.0656**	**39.4754**		**289,203.6298**	**289,203.6298**	**12.6354**	**0.6807**	**289,722.3548**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	7/1/2022	5	240	
2	Grading	Grading	7/2/2023	11/14/2025	5	620	
3	Building Construction	Building Construction	11/15/2025	12/30/2039	5	3685	
4	Paving	Paving	11/15/2025	7/23/2027	5	440	
5	Architectural Coating	Architectural Coating	11/15/2025	12/30/2039	5	3685	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 328

Acres of Paving: 59.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,347,852; Non-Residential Outdoor: 3,115,951; Striped Parking Area: 154,725 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	4,674.00	1,830.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	935.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.0505	0.4633	1.3200e-003	0.1479	9.4000e-004	0.1488	0.0392	8.7000e-004	0.0401		131.1448	131.1448	3.3900e-003		131.2296
Total	**0.0716**	**0.0505**	**0.4633**	**1.3200e-003**	**0.1479**	**9.4000e-004**	**0.1488**	**0.0392**	**8.7000e-004**	**0.0401**		**131.1448**	**131.1448**	**3.3900e-003**		**131.2296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**8.1298**	**2.0445**	**10.1743**	**4.4688**	**1.8809**	**6.3497**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.0505	0.4633	1.3200e-003	0.1363	9.4000e-004	0.1372	0.0364	8.7000e-004	0.0373		131.1448	131.1448	3.3900e-003		131.2296
Total	**0.0716**	**0.0505**	**0.4633**	**1.3200e-003**	**0.1363**	**9.4000e-004**	**0.1372**	**0.0364**	**8.7000e-004**	**0.0373**		**131.1448**	**131.1448**	**3.3900e-003**		**131.2296**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0452	0.4219	1.2700e-003	0.1479	9.1000e-004	0.1488	0.0392	8.4000e-004	0.0401		126.4842	126.4842	3.0300e-003		126.5600
Total	**0.0664**	**0.0452**	**0.4219**	**1.2700e-003**	**0.1479**	**9.1000e-004**	**0.1488**	**0.0392**	**8.4000e-004**	**0.0401**		**126.4842**	**126.4842**	**3.0300e-003**		**126.5600**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.1298**	**1.6126**	**9.7424**	**4.4688**	**1.4836**	**5.9524**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0452	0.4219	1.2700e-003	0.1363	9.1000e-004	0.1372	0.0364	8.4000e-004	0.0372		126.4842	126.4842	3.0300e-003		126.5600
Total	**0.0664**	**0.0452**	**0.4219**	**1.2700e-003**	**0.1363**	**9.1000e-004**	**0.1372**	**0.0364**	**8.4000e-004**	**0.0372**		**126.4842**	**126.4842**	**3.0300e-003**		**126.5600**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**6.5831**	**1.4245**	**8.0076**	**3.3708**	**1.3105**	**4.6813**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

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	0.0687	0.0449	0.4263	1.3600e-003	0.1643	9.8000e-004	0.1653	0.0436	9.1000e-004	0.0445		135.3097	135.3097	3.0000e-003		135.3847
Total	**0.0687**	**0.0449**	**0.4263**	**1.3600e-003**	**0.1643**	**9.8000e-004**	**0.1653**	**0.0436**	**9.1000e-004**	**0.0445**		**135.3097**	**135.3097**	**3.0000e-003**		**135.3847**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**2.9624**	**1.4245**	**4.3869**	**1.5169**	**1.3105**	**2.8274**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.3 Grading - 2023

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	0.0687	0.0449	0.4263	1.3600e-003	0.1514	9.8000e-004	0.1524	0.0404	9.1000e-004	0.0413		135.3097	135.3097	3.0000e-003		135.3847
Total	**0.0687**	**0.0449**	**0.4263**	**1.3600e-003**	**0.1514**	**9.8000e-004**	**0.1524**	**0.0404**	**9.1000e-004**	**0.0413**		**135.3097**	**135.3097**	**3.0000e-003**		**135.3847**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**6.5831**	**1.3354**	**7.9185**	**3.3708**	**1.2286**	**4.5994**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0642	0.0404	0.3922	1.3000e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		129.4972	129.4972	2.6800e-003		129.5641
Total	**0.0642**	**0.0404**	**0.3922**	**1.3000e-003**	**0.1643**	**9.6000e-004**	**0.1653**	**0.0436**	**8.8000e-004**	**0.0445**		**129.4972**	**129.4972**	**2.6800e-003**		**129.5641**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**2.9624**	**1.3354**	**4.2978**	**1.5169**	**1.2286**	**2.7454**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

3.3 Grading - 2024

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	0.0642	0.0404	0.3922	1.3000e-003	0.1514	9.6000e-004	0.1524	0.0404	8.8000e-004	0.0413		129.4972	129.4972	2.6800e-003		129.5641
Total	**0.0642**	**0.0404**	**0.3922**	**1.3000e-003**	**0.1514**	**9.6000e-004**	**0.1524**	**0.0404**	**8.8000e-004**	**0.0413**		**129.4972**	**129.4972**	**2.6800e-003**		**129.5641**

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5831	0.0000	6.5831	3.3708	0.0000	3.3708			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404		6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**6.5831**	**1.1309**	**7.7140**	**3.3708**	**1.0404**	**4.4112**		**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

3.3 Grading - 2025

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	0.0604	0.0365	0.3612	1.2500e-003	0.1643	9.4000e-004	0.1652	0.0436	8.6000e-004	0.0444		124.3754	124.3754	2.4200e-003		124.4359
Total	**0.0604**	**0.0365**	**0.3612**	**1.2500e-003**	**0.1643**	**9.4000e-004**	**0.1652**	**0.0436**	**8.6000e-004**	**0.0444**		**124.3754**	**124.3754**	**2.4200e-003**		**124.4359**

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					2.9624	0.0000	2.9624	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404	0.0000	6,008.2814	6,008.2814	1.9432		6,056.8614
Total	**2.9012**	**27.9429**	**26.3311**	**0.0621**	**2.9624**	**1.1309**	**4.0933**	**1.5169**	**1.0404**	**2.5573**	**0.0000**	**6,008.2814**	**6,008.2814**	**1.9432**		**6,056.8614**

3.3 Grading - 2025

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	0.0604	0.0365	0.3612	1.2500e-003	0.1514	9.4000e-004	0.1524	0.0404	8.6000e-004	0.0413		124.3754	124.3754	2.4200e-003		124.4359
Total	**0.0604**	**0.0365**	**0.3612**	**1.2500e-003**	**0.1514**	**9.4000e-004**	**0.1524**	**0.0404**	**8.6000e-004**	**0.0413**		**124.3754**	**124.3754**	**2.4200e-003**		**124.4359**

3.4 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.8906	141.0129	30.6928	0.4799	12.3989	0.1459	12.5449	3.5699	0.1395	3.7094		50,251.3236	50,251.3236	2.1881		50,306.0252
Worker	14.1117	8.5363	84.3996	0.2915	38.3958	0.2188	38.6146	10.1844	0.2014	10.3857		29,066.5348	29,066.5348	0.5650		29,080.6584
Total	**18.0023**	**149.5492**	**115.0924**	**0.7714**	**50.7947**	**0.3647**	**51.1595**	**13.7543**	**0.3409**	**14.0951**		**79,317.8584**	**79,317.8584**	**2.7530**		**79,386.6836**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.8906	141.0129	30.6928	0.4799	11.6041	0.1459	11.7501	3.3748	0.1395	3.5143		50,251.3236	50,251.3236	2.1881		50,306.0252
Worker	14.1117	8.5363	84.3996	0.2915	35.3925	0.2188	35.6113	9.4472	0.2014	9.6486		29,066.5348	29,066.5348	0.5650		29,080.6584
Total	**18.0023**	**149.5492**	**115.0924**	**0.7714**	**46.9967**	**0.3647**	**47.3614**	**12.8220**	**0.3409**	**13.1629**		**79,317.8584**	**79,317.8584**	**2.7530**		**79,386.6836**

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7927	139.6803	29.5565	0.4769	12.3990	0.1439	12.5429	3.5699	0.1375	3.7075		49,939.8342	49,939.8342	2.1550		49,993.7102
Worker	13.3384	7.7803	78.9088	0.2807	38.3958	0.2137	38.6095	10.1844	0.1966	10.3810		27,999.2928	27,999.2928	0.5161		28,012.1949
Total	**17.1311**	**147.4606**	**108.4652**	**0.7576**	**50.7948**	**0.3575**	**51.1523**	**13.7543**	**0.3341**	**14.0884**		**77,939.1270**	**77,939.1270**	**2.6711**		**78,005.9050**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7927	139.6803	29.5565	0.4769	11.6042	0.1439	11.7481	3.3748	0.1375	3.5124		49,939.8342	49,939.8342	2.1550		49,993.7102
Worker	13.3384	7.7803	78.9088	0.2807	35.3925	0.2137	35.6062	9.4472	0.1966	9.6438		27,999.2928	27,999.2928	0.5161		28,012.1949
Total	**17.1311**	**147.4606**	**108.4652**	**0.7576**	**46.9967**	**0.3575**	**47.3543**	**12.8220**	**0.3341**	**13.1562**		**77,939.1270**	**77,939.1270**	**2.6711**		**78,005.9050**

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7076	138.3404	28.5996	0.4743	12.3991	0.1416	12.5407	3.5700	0.1354	3.7053		49,665.1220	49,665.1220	2.1201		49,718.1244
Worker	12.5842	7.1055	73.3337	0.2711	38.3958	0.2031	38.5989	10.1844	0.1869	10.3712		27,047.7331	27,047.7331	0.4691		27,059.4605
Total	**16.2917**	**145.4458**	**101.9332**	**0.7454**	**50.7949**	**0.3447**	**51.1396**	**13.7543**	**0.3223**	**14.0766**		**76,712.8551**	**76,712.8551**	**2.5892**		**76,777.5849**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7076	138.3404	28.5996	0.4743	11.6043	0.1416	11.7459	3.3749	0.1354	3.5103		49,665.1220	49,665.1220	2.1201		49,718.1244
Worker	12.5842	7.1055	73.3337	0.2711	35.3925	0.2031	35.5956	9.4472	0.1869	9.6341		27,047.7331	27,047.7331	0.4691		27,059.4605
Total	**16.2917**	**145.4458**	**101.9332**	**0.7454**	**46.9968**	**0.3447**	**47.3415**	**12.8221**	**0.3223**	**13.1443**		**76,712.8551**	**76,712.8551**	**2.5892**		**76,777.5849**

3.4 Building Construction - 2028

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6375	137.3419	27.8505	0.4722	12.3991	0.1400	12.5391	3.5700	0.1338	3.7038		49,447.2406	49,447.2406	2.0832		49,499.3211
Worker	11.8052	6.5026	68.4560	0.2626	38.3958	0.1894	38.5852	10.1844	0.1742	10.3586		26,203.3913	26,203.3913	0.4286		26,214.1056
Total	**15.4427**	**143.8445**	**96.3065**	**0.7348**	**50.7949**	**0.3294**	**51.1243**	**13.7543**	**0.3081**	**14.0624**		**75,650.6318**	**75,650.6318**	**2.5118**		**75,713.4266**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.6375	137.3419	27.8505	0.4722	11.6043	0.1400	11.7443	3.3749	0.1338	3.5087		49,447.2406	49,447.2406	2.0832		49,499.3211
Worker	11.8052	6.5026	68.4560	0.2626	35.3925	0.1894	35.5819	9.4472	0.1742	9.6214		26,203.3913	26,203.3913	0.4286		26,214.1056
Total	**15.4427**	**143.8445**	**96.3065**	**0.7348**	**46.9968**	**0.3294**	**47.3262**	**12.8221**	**0.3081**	**13.1301**		**75,650.6318**	**75,650.6318**	**2.5118**		**75,713.4266**

3.4 Building Construction - 2029

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5740	136.3424	27.1749	0.4703	12.3991	0.1382	12.5373	3.5700	0.1321	3.7021		49,255.0204	49,255.0204	2.0493		49,306.2517
Worker	10.9871	5.9441	63.8236	0.2551	38.3958	0.1765	38.5723	10.1844	0.1624	10.3467		25,454.0414	25,454.0414	0.3903		25,463.7996
Total	**14.5611**	**142.2865**	**90.9985**	**0.7254**	**50.7949**	**0.3147**	**51.1097**	**13.7543**	**0.2945**	**14.0488**		**74,709.0618**	**74,709.0618**	**2.4396**		**74,770.0513**

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5740	136.3424	27.1749	0.4703	11.6043	0.1382	11.7425	3.3749	0.1321	3.5070		49,255.0204	49,255.0204	2.0493		49,306.2517
Worker	10.9871	5.9441	63.8236	0.2551	35.3925	0.1765	35.5691	9.4472	0.1624	9.6096		25,454.0414	25,454.0414	0.3903		25,463.7996
Total	**14.5611**	**142.2865**	**90.9985**	**0.7254**	**46.9969**	**0.3147**	**47.3116**	**12.8221**	**0.2945**	**13.1166**		**74,709.0618**	**74,709.0618**	**2.4396**		**74,770.0513**

3.4 Building Construction - 2030

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5226	135.4675	26.6575	0.4689	12.3992	0.1366	12.5358	3.5700	0.1306	3.7006		49,101.6767	49,101.6767	2.0190		49,152.1507
Worker	10.1685	5.4297	59.6134	0.2484	38.3958	0.1646	38.5604	10.1844	0.1514	10.3358		24,789.7178	24,789.7178	0.3558		24,798.6129
Total	**13.6910**	**140.8972**	**86.2709**	**0.7173**	**50.7950**	**0.3013**	**51.0962**	**13.7544**	**0.2820**	**14.0364**		**73,891.3945**	**73,891.3945**	**2.3748**		**73,950.7637**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5226	135.4675	26.6575	0.4689	11.6044	0.1366	11.7410	3.3749	0.1306	3.5055		49,101.6767	49,101.6767	2.0190		49,152.1507
Worker	10.1685	5.4297	59.6134	0.2484	35.3925	0.1646	35.5572	9.4472	0.1514	9.5986		24,789.7178	24,789.7178	0.3558		24,798.6129
Total	**13.6910**	**140.8972**	**86.2709**	**0.7173**	**46.9969**	**0.3013**	**47.2982**	**12.8221**	**0.2820**	**13.1041**		**73,891.3945**	**73,891.3945**	**2.3748**		**73,950.7637**

3.4 Building Construction - 2031

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4824	134.6941	26.2660	0.4677	12.3992	0.1352	12.5343	3.5700	0.1292	3.6992		48,982.1650	48,982.1650	1.9895		49,031.9018
Worker	9.3067	4.9390	55.5717	0.2424	38.3958	0.1534	38.5492	10.1844	0.1411	10.3255		24,202.5553	24,202.5553	0.3233		24,210.6367
Total	**12.7891**	**139.6331**	**81.8377**	**0.7102**	**50.7950**	**0.2886**	**51.0836**	**13.7544**	**0.2703**	**14.0247**		**73,184.7203**	**73,184.7203**	**2.3127**		**73,242.5385**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4824	134.6941	26.2660	0.4677	11.6044	0.1352	11.7396	3.3749	0.1292	3.5041		48,982.1650	48,982.1650	1.9895		49,031.9018
Worker	9.3067	4.9390	55.5717	0.2424	35.3925	0.1534	35.5460	9.4472	0.1411	9.5883		24,202.5553	24,202.5553	0.3233		24,210.6367
Total	**12.7891**	**139.6331**	**81.8377**	**0.7102**	**46.9969**	**0.2886**	**47.2855**	**12.8221**	**0.2703**	**13.0924**		**73,184.7203**	**73,184.7203**	**2.3127**		**73,242.5385**

3.4 Building Construction - 2032

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4521	133.9945	26.0064	0.4670	12.3992	0.1338	12.5330	3.5700	0.1279	3.6979		48,904.6872	48,904.6872	1.9646		48,953.8018
Worker	8.5588	4.5242	52.0763	0.2372	38.3958	0.1432	38.5390	10.1844	0.1317	10.3160		23,688.1296	23,688.1296	0.2954		23,695.5136
Total	**12.0109**	**138.5187**	**78.0826**	**0.7042**	**50.7950**	**0.2769**	**51.0720**	**13.7544**	**0.2595**	**14.0139**		**72,592.8168**	**72,592.8168**	**2.2599**		**72,649.3154**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4521	133.9945	26.0064	0.4670	11.6044	0.1338	11.7382	3.3749	0.1279	3.5028		48,904.6872	48,904.6872	1.9646		48,953.8018
Worker	8.5588	4.5242	52.0763	0.2372	35.3925	0.1432	35.5357	9.4472	0.1317	9.5789		23,688.1296	23,688.1296	0.2954		23,695.5136
Total	**12.0109**	**138.5187**	**78.0826**	**0.7042**	**46.9970**	**0.2769**	**47.2739**	**12.8221**	**0.2595**	**13.0817**		**72,592.8168**	**72,592.8168**	**2.2599**		**72,649.3154**

3.4 Building Construction - 2033

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4303	133.3616	25.8138	0.4665	12.3993	0.1325	12.5318	3.5700	0.1267	3.6967		48,850.0014	48,850.0014	1.9412		48,898.5302
Worker	7.9080	4.1706	49.0416	0.2327	38.3958	0.1338	38.5296	10.1844	0.1230	10.3074		23,239.5267	23,239.5267	0.2713		23,246.3082
Total	**11.3383**	**137.5322**	**74.8553**	**0.6992**	**50.7951**	**0.2663**	**51.0613**	**13.7544**	**0.2497**	**14.0041**		**72,089.5281**	**72,089.5281**	**2.2124**		**72,144.8383**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4303	133.3616	25.8138	0.4665	11.6045	0.1325	11.7370	3.3749	0.1267	3.5016		48,850.0014	48,850.0014	1.9412		48,898.5302
Worker	7.9080	4.1706	49.0416	0.2327	35.3925	0.1338	35.5263	9.4472	0.1230	9.5702		23,239.5267	23,239.5267	0.2713		23,246.3082
Total	**11.3383**	**137.5322**	**74.8553**	**0.6992**	**46.9970**	**0.2663**	**47.2633**	**12.8221**	**0.2497**	**13.0718**		**72,089.5281**	**72,089.5281**	**2.2124**		**72,144.8383**

3.4 Building Construction - 2034

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4119	132.7928	25.6513	0.4662	12.3993	0.1313	12.5306	3.5700	0.1255	3.6955		48,815.8453	48,815.8453	1.9222		48,863.8996
Worker	7.3649	3.8796	46.2290	0.2288	38.3958	0.1250	38.5208	10.1844	0.1149	10.2993		22,849.3769	22,849.3769	0.2493		22,855.6092
Total	**10.7768**	**136.6724**	**71.8802**	**0.6949**	**50.7951**	**0.2563**	**51.0514**	**13.7544**	**0.2404**	**13.9948**		**71,665.2222**	**71,665.2222**	**2.1715**		**71,719.5088**

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	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

3.4 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4119	132.7928	25.6513	0.4662	11.6045	0.1313	11.7358	3.3750	0.1255	3.5005		48,815.8453	48,815.8453	1.9222		48,863.8996
Worker	7.3649	3.8796	46.2290	0.2288	35.3925	0.1250	35.5175	9.4472	0.1149	9.5621		22,849.3769	22,849.3769	0.2493		22,855.6092
Total	**10.7768**	**136.6724**	**71.8802**	**0.6949**	**46.9970**	**0.2563**	**47.2533**	**12.8221**	**0.2404**	**13.0626**		**71,665.2222**	**71,665.2222**	**2.1715**		**71,719.5088**

3.4 Building Construction - 2035

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	12.3993	0.1302	12.5295	3.5700	0.1244	3.6945		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**50.7951**	**0.2472**	**51.0423**	**13.7544**	**0.2321**	**13.9865**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	11.6045	0.1302	11.7347	3.3750	0.1244	3.4994		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**46.9971**	**0.2472**	**47.2443**	**12.8222**	**0.2321**	**13.0542**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

3.4 Building Construction - 2036

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	12.3993	0.1302	12.5295	3.5700	0.1244	3.6945		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**50.7951**	**0.2472**	**51.0423**	**13.7544**	**0.2321**	**13.9865**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	11.6045	0.1302	11.7347	3.3750	0.1244	3.4994		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**46.9971**	**0.2472**	**47.2443**	**12.8222**	**0.2321**	**13.0542**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

3.4 Building Construction - 2037

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	12.3993	0.1302	12.5295	3.5700	0.1244	3.6945		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**50.7951**	**0.2472**	**51.0423**	**13.7544**	**0.2321**	**13.9865**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	11.6045	0.1302	11.7347	3.3750	0.1244	3.4994		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**46.9971**	**0.2472**	**47.2443**	**12.8222**	**0.2321**	**13.0542**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

3.4 Building Construction - 2038

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	12.3993	0.1302	12.5295	3.5700	0.1244	3.6945		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**50.7951**	**0.2472**	**51.0423**	**13.7544**	**0.2321**	**13.9865**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	11.6045	0.1302	11.7347	3.3750	0.1244	3.4994		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**46.9971**	**0.2472**	**47.2443**	**12.8222**	**0.2321**	**13.0542**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

3.4 Building Construction - 2039

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	12.3993	0.1302	12.5295	3.5700	0.1244	3.6945		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	38.3958	0.1170	38.5128	10.1844	0.1076	10.2920		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**50.7951**	**0.2472**	**51.0423**	**13.7544**	**0.2321**	**13.9865**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

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	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

3.4 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.3954	132.2836	25.5194	0.4660	11.6045	0.1302	11.7347	3.3750	0.1244	3.4994		48,793.1823	48,793.1823	1.9046		48,840.7982
Worker	6.8931	3.6536	43.8248	0.2254	35.3925	0.1170	35.5096	9.4472	0.1076	9.5548		22,514.9226	22,514.9226	0.2307		22,520.6889
Total	**10.2884**	**135.9372**	**69.3442**	**0.6914**	**46.9971**	**0.2472**	**47.2443**	**12.8222**	**0.2321**	**13.0542**		**71,308.1049**	**71,308.1049**	**2.1353**		**71,361.4871**

3.5 Paving - 2025

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2025

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	0.0453	0.0274	0.2709	9.4000e-004	0.1232	7.0000e-004	0.1239	0.0327	6.5000e-004	0.0333		93.2816	93.2816	1.8100e-003		93.3269
Total	**0.0453**	**0.0274**	**0.2709**	**9.4000e-004**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.5000e-004**	**0.0333**		**93.2816**	**93.2816**	**1.8100e-003**		**93.3269**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2025

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	0.0453	0.0274	0.2709	9.4000e-004	0.1136	7.0000e-004	0.1143	0.0303	6.5000e-004	0.0310		93.2816	93.2816	1.8100e-003		93.3269
Total	**0.0453**	**0.0274**	**0.2709**	**9.4000e-004**	**0.1136**	**7.0000e-004**	**0.1143**	**0.0303**	**6.5000e-004**	**0.0310**		**93.2816**	**93.2816**	**1.8100e-003**		**93.3269**

3.5 Paving - 2026

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2026

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	0.0428	0.0250	0.2532	9.0000e-004	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		89.8565	89.8565	1.6600e-003		89.8979
Total	**0.0428**	**0.0250**	**0.2532**	**9.0000e-004**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**89.8565**	**89.8565**	**1.6600e-003**		**89.8979**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2026

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	0.0428	0.0250	0.2532	9.0000e-004	0.1136	6.9000e-004	0.1143	0.0303	6.3000e-004	0.0310		89.8565	89.8565	1.6600e-003		89.8979
Total	**0.0428**	**0.0250**	**0.2532**	**9.0000e-004**	**0.1136**	**6.9000e-004**	**0.1143**	**0.0303**	**6.3000e-004**	**0.0310**		**89.8565**	**89.8565**	**1.6600e-003**		**89.8979**

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2027

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	0.0404	0.0228	0.2354	8.7000e-004	0.1232	6.5000e-004	0.1239	0.0327	6.0000e-004	0.0333		86.8027	86.8027	1.5100e-003		86.8404
Total	**0.0404**	**0.0228**	**0.2354**	**8.7000e-004**	**0.1232**	**6.5000e-004**	**0.1239**	**0.0327**	**6.0000e-004**	**0.0333**		**86.8027**	**86.8027**	**1.5100e-003**		**86.8404**

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.1084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0235**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2027

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	0.0404	0.0228	0.2354	8.7000e-004	0.1136	6.5000e-004	0.1142	0.0303	6.0000e-004	0.0309		86.8027	86.8027	1.5100e-003		86.8404
Total	**0.0404**	**0.0228**	**0.2354**	**8.7000e-004**	**0.1136**	**6.5000e-004**	**0.1142**	**0.0303**	**6.0000e-004**	**0.0309**		**86.8027**	**86.8027**	**1.5100e-003**		**86.8404**

3.6 Architectural Coating - 2025

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2025

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	2.8229	1.7076	16.8835	0.0583	7.6808	0.0438	7.7246	2.0373	0.0403	2.0776		5,814.5507	5,814.5507	0.1130		5,817.3760
Total	**2.8229**	**1.7076**	**16.8835**	**0.0583**	**7.6808**	**0.0438**	**7.7246**	**2.0373**	**0.0403**	**2.0776**		**5,814.5507**	**5,814.5507**	**0.1130**		**5,817.3760**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2025

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	2.8229	1.7076	16.8835	0.0583	7.0800	0.0438	7.1238	1.8898	0.0403	1.9301		5,814.5507	5,814.5507	0.1130		5,817.3760
Total	**2.8229**	**1.7076**	**16.8835**	**0.0583**	**7.0800**	**0.0438**	**7.1238**	**1.8898**	**0.0403**	**1.9301**		**5,814.5507**	**5,814.5507**	**0.1130**		**5,817.3760**

3.6 Architectural Coating - 2026

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2026

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	2.6683	1.5564	15.7851	0.0562	7.6808	0.0427	7.7235	2.0373	0.0393	2.0766		5,601.0567	5,601.0567	0.1032		5,603.6376
Total	**2.6683**	**1.5564**	**15.7851**	**0.0562**	**7.6808**	**0.0427**	**7.7235**	**2.0373**	**0.0393**	**2.0766**		**5,601.0567**	**5,601.0567**	**0.1032**		**5,603.6376**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2026

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	2.6683	1.5564	15.7851	0.0562	7.0800	0.0427	7.1228	1.8898	0.0393	1.9292		5,601.0567	5,601.0567	0.1032		5,603.6376
Total	**2.6683**	**1.5564**	**15.7851**	**0.0562**	**7.0800**	**0.0427**	**7.1228**	**1.8898**	**0.0393**	**1.9292**		**5,601.0567**	**5,601.0567**	**0.1032**		**5,603.6376**

3.6 Architectural Coating - 2027

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2027

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	2.5174	1.4214	14.6699	0.0542	7.6808	0.0406	7.7214	2.0373	0.0374	2.0747		5,410.7040	5,410.7040	0.0938		5,413.0500
Total	**2.5174**	**1.4214**	**14.6699**	**0.0542**	**7.6808**	**0.0406**	**7.7214**	**2.0373**	**0.0374**	**2.0747**		**5,410.7040**	**5,410.7040**	**0.0938**		**5,413.0500**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2027

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	2.5174	1.4214	14.6699	0.0542	7.0800	0.0406	7.1207	1.8898	0.0374	1.9272		5,410.7040	5,410.7040	0.0938		5,413.0500
Total	**2.5174**	**1.4214**	**14.6699**	**0.0542**	**7.0800**	**0.0406**	**7.1207**	**1.8898**	**0.0374**	**1.9272**		**5,410.7040**	**5,410.7040**	**0.0938**		**5,413.0500**

3.6 Architectural Coating - 2028

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

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	2.3615	1.3008	13.6941	0.0525	7.6808	0.0379	7.7187	2.0373	0.0349	2.0722		5,241.7995	5,241.7995	0.0857		5,243.9428
Total	**2.3615**	**1.3008**	**13.6941**	**0.0525**	**7.6808**	**0.0379**	**7.7187**	**2.0373**	**0.0349**	**2.0722**		**5,241.7995**	**5,241.7995**	**0.0857**		**5,243.9428**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

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	2.3615	1.3008	13.6941	0.0525	7.0800	0.0379	7.1179	1.8898	0.0349	1.9247		5,241.7995	5,241.7995	0.0857		5,243.9428
Total	**2.3615**	**1.3008**	**13.6941**	**0.0525**	**7.0800**	**0.0379**	**7.1179**	**1.8898**	**0.0349**	**1.9247**		**5,241.7995**	**5,241.7995**	**0.0857**		**5,243.9428**

3.6 Architectural Coating - 2029

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2029

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	2.1979	1.1891	12.7674	0.0510	7.6808	0.0353	7.7161	2.0373	0.0325	2.0698		5,091.8975	5,091.8975	0.0781		5,093.8495
Total	**2.1979**	**1.1891**	**12.7674**	**0.0510**	**7.6808**	**0.0353**	**7.7161**	**2.0373**	**0.0325**	**2.0698**		**5,091.8975**	**5,091.8975**	**0.0781**		**5,093.8495**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**23.9783**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2029

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	2.1979	1.1891	12.7674	0.0510	7.0800	0.0353	7.1153	1.8898	0.0325	1.9223		5,091.8975	5,091.8975	0.0781		5,093.8495
Total	**2.1979**	**1.1891**	**12.7674**	**0.0510**	**7.0800**	**0.0353**	**7.1153**	**1.8898**	**0.0325**	**1.9223**		**5,091.8975**	**5,091.8975**	**0.0781**		**5,093.8495**

3.6 Architectural Coating - 2030

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2030

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	2.0341	1.0862	11.9252	0.0497	7.6808	0.0329	7.7137	2.0373	0.0303	2.0676		4,959.0043	4,959.0043	0.0712		4,960.7837
Total	**2.0341**	**1.0862**	**11.9252**	**0.0497**	**7.6808**	**0.0329**	**7.7137**	**2.0373**	**0.0303**	**2.0676**		**4,959.0043**	**4,959.0043**	**0.0712**		**4,960.7837**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2030

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	2.0341	1.0862	11.9252	0.0497	7.0800	0.0329	7.1130	1.8898	0.0303	1.9201		4,959.0043	4,959.0043	0.0712		4,960.7837
Total	**2.0341**	**1.0862**	**11.9252**	**0.0497**	**7.0800**	**0.0329**	**7.1130**	**1.8898**	**0.0303**	**1.9201**		**4,959.0043**	**4,959.0043**	**0.0712**		**4,960.7837**

3.6 Architectural Coating - 2031

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2031

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	1.8617	0.9880	11.1167	0.0485	7.6808	0.0307	7.7115	2.0373	0.0282	2.0655		4,841.5467	4,841.5467	0.0647		4,843.1633
Total	**1.8617**	**0.9880**	**11.1167**	**0.0485**	**7.6808**	**0.0307**	**7.7115**	**2.0373**	**0.0282**	**2.0655**		**4,841.5467**	**4,841.5467**	**0.0647**		**4,843.1633**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2031

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	1.8617	0.9880	11.1167	0.0485	7.0800	0.0307	7.1107	1.8898	0.0282	1.9181		4,841.5467	4,841.5467	0.0647		4,843.1633
Total	**1.8617**	**0.9880**	**11.1167**	**0.0485**	**7.0800**	**0.0307**	**7.1107**	**1.8898**	**0.0282**	**1.9181**		**4,841.5467**	**4,841.5467**	**0.0647**		**4,843.1633**

3.6 Architectural Coating - 2032

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2032

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	1.7121	0.9050	10.4175	0.0475	7.6808	0.0286	7.7094	2.0373	0.0263	2.0637		4,738.6395	4,738.6395	0.0591		4,740.1167
Total	**1.7121**	**0.9050**	**10.4175**	**0.0475**	**7.6808**	**0.0286**	**7.7094**	**2.0373**	**0.0263**	**2.0637**		**4,738.6395**	**4,738.6395**	**0.0591**		**4,740.1167**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2032

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	1.7121	0.9050	10.4175	0.0475	7.0800	0.0286	7.1087	1.8898	0.0263	1.9162		4,738.6395	4,738.6395	0.0591		4,740.1167
Total	**1.7121**	**0.9050**	**10.4175**	**0.0475**	**7.0800**	**0.0286**	**7.1087**	**1.8898**	**0.0263**	**1.9162**		**4,738.6395**	**4,738.6395**	**0.0591**		**4,740.1167**

3.6 Architectural Coating - 2033

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2033

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	1.5819	0.8343	9.8104	0.0466	7.6808	0.0268	7.7076	2.0373	0.0246	2.0619		4,648.8998	4,648.8998	0.0543		4,650.2563
Total	**1.5819**	**0.8343**	**9.8104**	**0.0466**	**7.6808**	**0.0268**	**7.7076**	**2.0373**	**0.0246**	**2.0619**		**4,648.8998**	**4,648.8998**	**0.0543**		**4,650.2563**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2033

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	1.5819	0.8343	9.8104	0.0466	7.0800	0.0268	7.1068	1.8898	0.0246	1.9145		4,648.8998	4,648.8998	0.0543		4,650.2563
Total	**1.5819**	**0.8343**	**9.8104**	**0.0466**	**7.0800**	**0.0268**	**7.1068**	**1.8898**	**0.0246**	**1.9145**		**4,648.8998**	**4,648.8998**	**0.0543**		**4,650.2563**

3.6 Architectural Coating - 2034

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2034

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	1.4733	0.7761	9.2478	0.0458	7.6808	0.0250	7.7058	2.0373	0.0230	2.0603		4,570.8531	4,570.8531	0.0499		4,572.0998
Total	**1.4733**	**0.7761**	**9.2478**	**0.0458**	**7.6808**	**0.0250**	**7.7058**	**2.0373**	**0.0230**	**2.0603**		**4,570.8531**	**4,570.8531**	**0.0499**		**4,572.0998**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**23.9382**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

3.6 Architectural Coating - 2034

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	1.4733	0.7761	9.2478	0.0458	7.0800	0.0250	7.1050	1.8898	0.0230	1.9128		4,570.8531	4,570.8531	0.0499		4,572.0998
Total	**1.4733**	**0.7761**	**9.2478**	**0.0458**	**7.0800**	**0.0250**	**7.1050**	**1.8898**	**0.0230**	**1.9128**		**4,570.8531**	**4,570.8531**	**0.0499**		**4,572.0998**

3.6 Architectural Coating - 2035

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2035

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	1.3789	0.7309	8.7668	0.0451	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2035

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	1.3789	0.7309	8.7668	0.0451	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

3.6 Architectural Coating - 2036

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2036

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	1.3789	0.7309	8.7668	0.0451	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2036

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	1.3789	0.7309	8.7668	0.0451	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

3.6 Architectural Coating - 2037

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2037

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	1.3789	0.7309	8.7668	0.0451	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2037

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	1.3789	0.7309	8.7668	0.0451	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

3.6 Architectural Coating - 2038

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2038

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	1.3789	0.7309	8.7668	0.0451	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2038

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	1.3789	0.7309	8.7668	0.0451	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

3.6 Architectural Coating - 2039

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2039

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	1.3789	0.7309	8.7668	0.0451	7.6808	0.0234	7.7042	2.0373	0.0215	2.0588		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.6808**	**0.0234**	**7.7042**	**2.0373**	**0.0215**	**2.0588**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

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	23.8074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**23.9253**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

3.6 Architectural Coating - 2039

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	1.3789	0.7309	8.7668	0.0451	7.0800	0.0234	7.1034	1.8898	0.0215	1.9114		4,503.9479	4,503.9479	0.0461		4,505.1014
Total	**1.3789**	**0.7309**	**8.7668**	**0.0451**	**7.0800**	**0.0234**	**7.1034**	**1.8898**	**0.0215**	**1.9114**		**4,503.9479**	**4,503.9479**	**0.0461**		**4,505.1014**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.1715	594.4751	199.0637	2.4266	136.0920	0.7531	136.8450	36.4099	0.7119	37.1217		252,074.5682	252,074.5682	11.9202		252,372.5725
Unmitigated	19.1715	594.4751	199.0637	2.4266	136.0920	0.7531	136.8450	36.4099	0.7119	37.1217		252,074.5682	252,074.5682	11.9202		252,372.5725

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	16,142.61	16,142.61	16142.61	47,128,530	47,128,530
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Regional Shopping Center	8,983.80	8,983.80	8983.80	15,751,346	15,751,346
Total	25,126.41	25,126.41	25,126.41	62,879,876	62,879,876

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000
City Park	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Other Non-Asphalt Surfaces	0.588508	0.031651	0.193340	0.096686	0.008696	0.003688	0.014919	0.054718	0.001159	0.001106	0.004523	0.000536	0.000470
Regional Shopping Center	0.545967	0.029363	0.179364	0.000000	0.000000	0.000000	0.000000	0.245306	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043
NaturalGas Unmitigated	3.4034	30.9397	25.9894	0.1856		2.3514	2.3514		2.3514	2.3514		37,127.6731	37,127.6731	0.7116	0.6807	37,348.3043

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Light Industry	311086	3.3549	30.4987	25.6189	0.1830		2.3179	2.3179		2.3179	2.3179		36,598.3918	36,598.3918	0.7015	0.6710	36,815.8778
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	4498.89	0.0485	0.4411	0.3705	2.6500e-003		0.0335	0.0335		0.0335	0.0335		529.2812	529.2812	0.0101	9.7000e-003	532.4265
Total		**3.4034**	**30.9397**	**25.9894**	**0.1856**		**2.3514**	**2.3514**		**2.3514**	**2.3514**		**37,127.6731**	**37,127.6731**	**0.7116**	**0.6807**	**37,348.3043**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Light Industry	311.086	3.3549	30.4987	25.6189	0.1830		2.3179	2.3179		2.3179	2.3179		36,598.3918	36,598.3918	0.7015	0.6710	36,815.8778
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Regional Shopping Center	4.49889	0.0485	0.4411	0.3705	2.6500e-003		0.0335	0.0335		0.0335	0.0335		529.2812	529.2812	0.0101	9.7000e-003	532.4265
Total		**3.4034**	**30.9397**	**25.9894**	**0.1856**		**2.3514**	**2.3514**		**2.3514**	**2.3514**		**37,127.6731**	**37,127.6731**	**0.7116**	**0.6807**	**37,348.3043**

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	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Unmitigated	158.4919	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781

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	24.0357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	134.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0589	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Total	**158.4919**	**5.7800e-003**	**0.6437**	**5.0000e-005**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**		**1.3886**	**1.3886**	**3.5800e-003**		**1.4781**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	24.0357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	134.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0589	5.7800e-003	0.6437	5.0000e-005		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003		1.3886	1.3886	3.5800e-003		1.4781
Total	**158.4919**	**5.7800e-003**	**0.6437**	**5.0000e-005**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**		**1.3886**	**1.3886**	**3.5800e-003**		**1.4781**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B.2

Energy Outputs

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption	MPG	
SAN JOAQUIN	2021	All Other Buses	Aggregated	Aggregated	DSL	69.64362884	3798.176602	585.0064823	0.433923467	**8.753103**	
SAN JOAQUIN	2021	LDA	Aggregated	Aggregated	GAS	286267.8223	11331154.17	1340711.479	369.880954	**30.6346**	
SAN JOAQUIN	2021	LDA	Aggregated	Aggregated	DSL	2226.814274	94152.13382	10574.47042	1.916141145	**49.13632**	
SAN JOAQUIN	2021	LDA	Aggregated	Aggregated	ELEC	3716.128485	145672.723	18655.36486	0		
SAN JOAQUIN	2021	LDT1	Aggregated	Aggregated	GAS	29154.07954	1025942.82	131402.2718	39.08987559	**26.24574**	
SAN JOAQUIN	2021	LDT1	Aggregated	Aggregated	DSL	24.7964189	441.5487246	85.78495419	0.018855057	**23.41805**	
SAN JOAQUIN	2021	LDT1	Aggregated	Aggregated	ELEC	96.9868293	3961.982168	492.4093528	0		
SAN JOAQUIN	2021	LDT2	Aggregated	Aggregated	GAS	93274.26907	3447688.028	430889.5144	142.9035653	**24.12598**	
SAN JOAQUIN	2021	LDT2	Aggregated	Aggregated	DSL	436.8525286	19843.57826	2148.405137	0.545866223	**36.35246**	
SAN JOAQUIN	2021	LDT2	Aggregated	Aggregated	ELEC	566.6785511	18259.36084	2871.386235	0		
SAN JOAQUIN	2021	LHD1	Aggregated	Aggregated	GAS	7966.254064	254686.7324	118685.3158	30.77208736	**8.27655**	
SAN JOAQUIN	2021	LHD1	Aggregated	Aggregated	DSL	8686.179642	288255.8686	109261.2127	16.3340585	**17.64753**	
SAN JOAQUIN	2021	LHD2	Aggregated	Aggregated	GAS	1062.066033	34784.66034	15823.20141	4.799249116	**7.247938**	
SAN JOAQUIN	2021	LHD2	Aggregated	Aggregated	DSL	2690.250305	93304.09058	33839.9645	5.908215081	**15.79226**	
SAN JOAQUIN	2021	MCY	Aggregated	Aggregated	GAS	13653.72518	101089.2873	27307.45037	2.720599198	**37.15699**	
SAN JOAQUIN	2021	MDV	Aggregated	Aggregated	GAS	91099.84328	2958779.364	411208.0578	153.5234997	**19.27249**	
SAN JOAQUIN	2021	MDV	Aggregated	Aggregated	DSL	1618.986421	66498.02606	7829.273778	2.51045655	**26.48842**	
SAN JOAQUIN	2021	MDV	Aggregated	Aggregated	ELEC	242.501609	8104.209822	1243.39086	0		
SAN JOAQUIN	2021	MH	Aggregated	Aggregated	GAS	1671.099052	13538.81777	167.1767492	2.874734355	**4.709589**	
SAN JOAQUIN	2021	MH	Aggregated	Aggregated	DSL	642.9095317	5406.775948	64.29095317	0.560468293	**9.64689**	
SAN JOAQUIN	2021	Motor Coach	Aggregated	Aggregated	DSL	20.26764279	2634.778672	295.9075848	0.421287109	**6.254117**	
SAN JOAQUIN	2021	OBUS	Aggregated	Aggregated	GAS	195.7409415	9310.146416	3916.384757	1.98898918	**4.680843**	
SAN JOAQUIN	2021	PTO	Aggregated	Aggregated	DSL	0	11686.88863	0	2.419169717	**4.83095**	
SAN JOAQUIN	2021	SBUS	Aggregated	Aggregated	GAS	41.68573532	2131.992934	166.7429413	0.227144021	**9.386084**	
SAN JOAQUIN	2021	SBUS	Aggregated	Aggregated	DSL	615.0183776	19430.40721	7097.226808	2.454444902	**7.916416**	**MHD**
SAN JOAQUIN	2021	T6 Ag	Aggregated	Aggregated	DSL	91.35208547	1118.959516	401.9491761	0.124660736	**8.976038**	**8.984753**
SAN JOAQUIN	2021	T6 CAIRP heavy	Aggregated	Aggregated	DSL	102.9308945	20247.91576	1502.79106	1.836577303	**11.02481**	
SAN JOAQUIN	2021	T6 CAIRP small	Aggregated	Aggregated	DSL	54.57391475	2861.739008	796.7791554	0.275737978	**10.37847**	
SAN JOAQUIN	2021	T6 instate construction	Aggregated	Aggregated	DSL	289.3367577	19688.86951	1308.080232	2.450024844	**8.036192**	
SAN JOAQUIN	2021	T6 instate construction	Aggregated	Aggregated	DSL	1516.329948	78458.90418	6855.268738	9.698846242	**8.089509**	
SAN JOAQUIN	2021	T6 instate heavy	Aggregated	Aggregated	DSL	1391.016683	164000.3379	16052.13967	17.36742296	**9.442986**	
SAN JOAQUIN	2021	T6 instate small	Aggregated	Aggregated	DSL	2799.131567	131067.3136	32301.59019	14.22689859	**9.212641**	
SAN JOAQUIN	2021	T6 OOS heavy	Aggregated	Aggregated	DSL	58.66500303	11625.3574	856.5090442	1.053429361	**11.03573**	
SAN JOAQUIN	2021	T6 OOS small	Aggregated	Aggregated	DSL	31.50965711	1636.402664	460.0409939	0.15789015	**10.36418**	
SAN JOAQUIN	2021	T6 Public	Aggregated	Aggregated	DSL	476.9983519	7598.49004	1446.894999	1.016600354	**7.474412**	
SAN JOAQUIN	2021	T6 utility	Aggregated	Aggregated	DSL	75.9700855	1278.477629	873.6559833	0.141986219	**9.004237**	
SAN JOAQUIN	2021	T6TS	Aggregated	Aggregated	GAS	558.9020249	29141.79999	11182.51171	6.099389397	**4.777823**	**HHD**
SAN JOAQUIN	2021	T7 Ag	Aggregated	Aggregated	DSL	63.09921483	908.1025101	277.6365453	0.15835692	**5.73453**	**5.380834**
SAN JOAQUIN	2021	T7 CAIRP	Aggregated	Aggregated	DSL	1484.277133	263585.597	21670.44614	39.57415851	**6.660548**	
SAN JOAQUIN	2021	T7 CAIRP construction	Aggregated	Aggregated	DSL	78.26736153	14142.686	353.8436984	2.458768859	**5.751938**	
SAN JOAQUIN	2021	T7 NNOOS	Aggregated	Aggregated	DSL	1601.854981	321331.1539	23387.08272	46.44161833	**6.919034**	
SAN JOAQUIN	2021	T7 NOOS	Aggregated	Aggregated	DSL	582.7832344	103558.3637	8508.635223	15.91313993	**6.507727**	
SAN JOAQUIN	2021	T7 other port	Aggregated	Aggregated	DSL	30.1346366	4810.716206	229.0232382	0.879814201	**5.467877**	
SAN JOAQUIN	2021	T7 POAK	Aggregated	Aggregated	DSL	159.2362607	18312.223	1210.195581	3.501866933	**5.229274**	
SAN JOAQUIN	2021	T7 POLA	Aggregated	Aggregated	DSL	141.2496883	17744.33851	1073.497631	3.409280904	**5.204716**	
SAN JOAQUIN	2021	T7 Public	Aggregated	Aggregated	DSL	478.1302497	9675.878524	1450.328423	1.824298002	**5.303891**	
SAN JOAQUIN	2021	T7 Single	Aggregated	Aggregated	DSL	849.4934503	58857.50716	9803.036638	9.680324065	**6.080117**	
SAN JOAQUIN	2021	T7 single construction	Aggregated	Aggregated	DSL	498.9874784	35085.40269	2255.902989	6.602419541	**5.314022**	
SAN JOAQUIN	2021	T7 SWCV	Aggregated	Aggregated	DSL	225.3362121	9190.993454	878.811227	3.706396195	**2.479766**	
SAN JOAQUIN	2021	T7 SWCV	Aggregated	Aggregated	NG	34.66386001	1413.537849	135.189054	0.613070391	**2.30567**	
SAN JOAQUIN	2021	T7 tractor	Aggregated	Aggregated	DSL	2787.655008	381099.8208	35403.2186	52.92700705	**7.200479**	
SAN JOAQUIN	2021	T7 tractor construction	Aggregated	Aggregated	DSL	416.6841119	28942.36827	1883.812669	5.485850939	**5.275821**	
SAN JOAQUIN	2021	T7 utility	Aggregated	Aggregated	DSL	19.88620819	403.4595405	228.6913942	0.068633937	**5.878426**	
SAN JOAQUIN	2021	T7IS	Aggregated	Aggregated	GAS	2.006552531	196.6053117	40.14710304	0.047256986	**4.160344**	
SAN JOAQUIN	2021	UBUS	Aggregated	Aggregated	GAS	15.84914115	1442.965721	63.3965646	0.312746036	**4.613858**	
SAN JOAQUIN	2021	UBUS	Aggregated	Aggregated	DSL	64.04919124	5071.660773	256.196765	0.717472632	**7.068786**	
SAN JOAQUIN	2021	UBUS	Aggregated	Aggregated	ELEC	2.042727277	124.318219	8.170909109	0		
SAN JOAQUIN	2021	UBUS	Aggregated	Aggregated	NG	106.2074629	6765.746654	424.8298518	1.37346578	**4.926039**	

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption	MPG	
SAN JOAQUIN	2040	All Other Buses	Aggregated	Aggregated	DSL	103.8010758	5396.166958	871.9290369	0.477128851	**11.30966**	
SAN JOAQUIN	2040	LDA	Aggregated	Aggregated	GAS	446350.6654	14504635.68	2075050.75	339.7406616	**42.69326**	
SAN JOAQUIN	2040	LDA	Aggregated	Aggregated	DSL	5427.221703	179559.8133	25399.90892	2.724806271	**65.89819**	
SAN JOAQUIN	2040	LDA	Aggregated	Aggregated	ELEC	27422.87309	868360.2937	129680.9248	0		
SAN JOAQUIN	2040	LDT1	Aggregated	Aggregated	GAS	45639.44906	1382006.576	208823.2579	37.64484902	**36.7117**	
SAN JOAQUIN	2040	LDT1	Aggregated	Aggregated	DSL	6.836597457	198.8516412	30.71651851	0.005868029	**33.8873**	
SAN JOAQUIN	2040	LDT1	Aggregated	Aggregated	ELEC	1609.636111	50597.38386	7592.789216	0		
SAN JOAQUIN	2040	LDT2	Aggregated	Aggregated	GAS	140592.1526	4337261.708	647429.3541	117.1672895	**37.01768**	
SAN JOAQUIN	2040	LDT2	Aggregated	Aggregated	DSL	1398.596528	44382.21208	6524.354885	0.894092501	**49.6394**	
SAN JOAQUIN	2040	LDT2	Aggregated	Aggregated	ELEC	5955.647693	129821.5209	28110.99701	0		
SAN JOAQUIN	2040	LHD1	Aggregated	Aggregated	GAS	7690.492612	230698.541	114576.8811	22.51281969	**10.24743**	
SAN JOAQUIN	2040	LHD1	Aggregated	Aggregated	DSL	7481.580415	218859.765	94108.8698	9.771028935	**22.39885**	
SAN JOAQUIN	2040	LHD2	Aggregated	Aggregated	GAS	1067.178662	31884.77788	15899.37196	3.568772905	**8.934381**	
SAN JOAQUIN	2040	LHD2	Aggregated	Aggregated	DSL	3028.805378	85716.60119	38098.56142	4.328332168	**19.80361**	
SAN JOAQUIN	2040	MCY	Aggregated	Aggregated	GAS	16567.33022	101614.929	33134.66044	2.723355067	**37.31241**	
SAN JOAQUIN	2040	MDV	Aggregated	Aggregated	GAS	93321.0282	2663540.366	423830.8361	88.16061887	**30.21236**	
SAN JOAQUIN	2040	MDV	Aggregated	Aggregated	DSL	3233.381988	95676.12108	14938.5507	2.527903773	**37.84801**	
SAN JOAQUIN	2040	MDV	Aggregated	Aggregated	ELEC	4340.88809	94869.28889	20509.77208	0		
SAN JOAQUIN	2040	MH	Aggregated	Aggregated	GAS	1156.224491	10057.98135	115.6686981	1.68534617	**5.967902**	
SAN JOAQUIN	2040	MH	Aggregated	Aggregated	DSL	627.3518977	4650.6461	62.73518977	0.39795076	**11.68649**	
SAN JOAQUIN	2040	Motor Coach	Aggregated	Aggregated	DSL	27.18044884	3361.129987	396.8345531	0.417637373	**8.047963**	
SAN JOAQUIN	2040	OBUS	Aggregated	Aggregated	GAS	206.9465991	8786.802473	4140.587555	1.478361843	**5.943607**	
SAN JOAQUIN	2040	PTO	Aggregated	Aggregated	DSL	0	13602.46466	0	2.156834795	**6.306679**	
SAN JOAQUIN	2040	SBUS	Aggregated	Aggregated	GAS	137.3364501	5889.333955	549.3458003	0.530478353	**11.10193**	
SAN JOAQUIN	2040	SBUS	Aggregated	Aggregated	DSL	504.8254459	15921.11332	5825.615654	1.604403093	**9.923387**	**MHD**
SAN JOAQUIN	2040	T6 Ag	Aggregated	Aggregated	DSL	53.48204947	60.34964097	235.3210176	0.009729975	**6.202446**	**11.21131**
SAN JOAQUIN	2040	T6 CAIRP heavy	Aggregated	Aggregated	DSL	155.4524984	25872.25503	2269.606476	1.741581442	**14.85561**	
SAN JOAQUIN	2040	T6 CAIRP small	Aggregated	Aggregated	DSL	86.48663854	3707.132887	1262.704923	0.27953958	**13.26157**	
SAN JOAQUIN	2040	T6 instate constructi	Aggregated	Aggregated	DSL	431.8223941	28306.76183	1952.252255	2.909816787	**9.728022**	
SAN JOAQUIN	2040	T6 instate constructi	Aggregated	Aggregated	DSL	2267.124222	112800.662	10249.58046	10.68124872	**10.56062**	
SAN JOAQUIN	2040	T6 instate heavy	Aggregated	Aggregated	DSL	1505.651134	130274.7705	17375.00533	10.67313036	**12.20586**	
SAN JOAQUIN	2040	T6 instate small	Aggregated	Aggregated	DSL	3326.557936	148067.8405	38388.01737	12.05350612	**12.28421**	
SAN JOAQUIN	2040	T6 OOS heavy	Aggregated	Aggregated	DSL	88.7898146	14874.67632	1296.331293	1.000580826	**14.86604**	
SAN JOAQUIN	2040	T6 OOS small	Aggregated	Aggregated	DSL	49.90273025	2114.664722	728.5798616	0.159769273	**13.23574**	
SAN JOAQUIN	2040	T6 Public	Aggregated	Aggregated	DSL	711.8868769	11074.44696	2159.390191	1.148736593	**9.640545**	
SAN JOAQUIN	2040	T6 utility	Aggregated	Aggregated	DSL	88.36701964	1473.719776	1016.220726	0.125936963	**11.70204**	
SAN JOAQUIN	2040	T6TS	Aggregated	Aggregated	GAS	860.6385614	42137.73861	17219.65634	7.031193839	**5.992971**	**HHD**
SAN JOAQUIN	2040	T7 Ag	Aggregated	Aggregated	DSL	57.99952805	98.2426446	255.1979234	0.027443517	**3.579812**	**7.384079**
SAN JOAQUIN	2040	T7 CAIRP	Aggregated	Aggregated	DSL	1593.669328	337161.7457	23267.57219	34.48380359	**9.777394**	
SAN JOAQUIN	2040	T7 CAIRP constructio	Aggregated	Aggregated	DSL	113.8555359	20332.99292	514.7364509	2.599658162	**7.82141**	
SAN JOAQUIN	2040	T7 NNOOS	Aggregated	Aggregated	DSL	2468.735605	411005.6563	36043.53983	44.15515075	**9.308215**	
SAN JOAQUIN	2040	T7 NOOS	Aggregated	Aggregated	DSL	633.2469646	132465.9189	9245.405683	13.86885304	**9.551325**	
SAN JOAQUIN	2040	T7 other port	Aggregated	Aggregated	DSL	40.42243251	6886.508768	307.2104871	0.793897347	**8.674306**	
SAN JOAQUIN	2040	T7 POAK	Aggregated	Aggregated	DSL	234.5640711	40602.87244	1782.68694	4.731752864	**8.580937**	
SAN JOAQUIN	2040	T7 POLA	Aggregated	Aggregated	DSL	168.7082511	34867.60197	1282.182708	4.275654171	**8.154916**	
SAN JOAQUIN	2040	T7 Public	Aggregated	Aggregated	DSL	712.6790225	14437.05495	2161.793033	1.968682899	**7.333357**	
SAN JOAQUIN	2040	T7 Single	Aggregated	Aggregated	DSL	863.3569589	68504.73091	9963.019606	8.438823549	**8.117806**	
SAN JOAQUIN	2040	T7 single constructio	Aggregated	Aggregated	DSL	662.5656125	50442.41557	2995.433374	7.159966901	**7.045063**	
SAN JOAQUIN	2040	T7 SWCV	Aggregated	Aggregated	DSL	216.4320883	8825.130875	844.0851446	2.607105389	**3.38503**	
SAN JOAQUIN	2040	T7 SWCV	Aggregated	Aggregated	NG	37.64816761	1535.113257	146.8278537	0.518844628	**2.958715**	
SAN JOAQUIN	2040	T7 tractor	Aggregated	Aggregated	DSL	4048.661731	506581.719	51418.00398	48.45678463	**10.4543**	
SAN JOAQUIN	2040	T7 tractor constructi	Aggregated	Aggregated	DSL	555.2504449	41610.55185	2510.265673	5.781929979	**7.196654**	
SAN JOAQUIN	2040	T7 utility	Aggregated	Aggregated	DSL	23.11542991	468.5751626	265.827444	0.058456158	**8.015839**	
SAN JOAQUIN	2040	T7IS	Aggregated	Aggregated	GAS	3.313187675	390.4008763	66.290259	0.070036417	**5.574255**	
SAN JOAQUIN	2040	UBUS	Aggregated	Aggregated	GAS	21.1445369	1925.078567	84.5781476	0.327673946	**5.874982**	
SAN JOAQUIN	2040	UBUS	Aggregated	Aggregated	DSL	45.71213857	3173.52306	182.8485543	0.410579235	**7.72938**	
SAN JOAQUIN	2040	UBUS	Aggregated	Aggregated	NG	184.1546154	12784.76433	736.6184615	2.826625772	**4.522977**	

On-road Mobile (Operational) Energy Usage

Unmitigated:

Step 1:

Therefore:

Average Daily VMT:

22,633	Source: Fehr & Peers

Step 2: Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
30.1878%	26.4143%	12.8298%	0.0000%	3.7735%	2.2641%	6.1326%	18.3979%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2040 (EMFAC2017 Output)

LDA	LDT1	LDT2	MDV	MCY	MH
42.69325789	36.7117	37.01768	30.21236012	37.31240566	5.967902338

Diesel MPG Factors for each Vehicle Class - Year 2040 (EMFAC2017 Output)

LHD1	LHD2	MHD	HHD	OBUS	UBUS	SBUS
22.39884524	19.80361	11.21131	7.384078565	5.943607456	7.729380318	9.923387

Therefore:

Weighted Average MPG Factors

Gasoline: **39.4** Diesel: **10.9**

Step 3: **Therefore:**

399	**daily gallons of gasoline**	**633**	**daily gallons of diesel**

or

145,694	**annual gallons of gasoline**	**231,137**	**annual gallons of diesel**

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source. Demolition (if applicable), Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	**2,108.2**	**metric tons**	**CO2**	**(provided in CalEEMod Output File)**
Conversion Factor:	2204.6262	pounds	per metric ton	
Intermediate Result:	**4,647,825**	**pounds**	**CO2**	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	**207,677.63**	**gallons**	**diesel fuel**	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Site Preparation - 2021	185.38
Site Preparation - 2022	219.11
Grading - 2023	357.3446
Grading - 2024	719.9796

On-road Mobile (Construction) Energy Usage - Site Preparation

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

194

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2021

LDA	**LDT1**	**LDT2**
30.634598	26.245743	24.125976

Therefore:

Weighted Average Worker MPG Factor

27.9

Step 3: **Therefore:**

7.0 **Worker daily gallons of gasoline**

Step 4: 240 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,672** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

20

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

216

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2021

LDA	LDT1	LDT2
30.634598	26.245743	24.125976

Therefore:

Weighted Average Worker MPG Factor

27.9

Step 3: **Therefore:**

7.7 Worker daily gallons of gasoline

Step 4: 620 **# of Days (CalEEMod Output)**

Therefore:

Result: **4,798** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Building Construction

Step 1:

Total Daily Worker Trips (CalEEMod Output)			Total Daily Vendor Trips (CalEEMod Output)		
4,674	5%	**234**	1,830	5%	**92**

Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)	Vendor Trip Length (miles) (CalEEMod Output)
10.8	7.3

Therefore:

Average Worker Daily VMT:	Average Vendor Daily VMT:
2,524	**668**

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

Fleet Mix for Workers (CalEEMod Output)

MHD	HHD
0%	100%

Assumed Fleet Mix for Vendors

And:

MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2021

Gasoline:			**Diesel:**	
LDA	**LDT1**	**LDT2**	**MHD**	**HHD**
30.6345976	26.24574	24.12598	8.98475261	5.380834

Therefore:

Weighted Average Worker (Gasoline) MPG Factor	Weighted Average Vendor (Diesel) MPG Factor
27.9	**5.4**

Step 3:

Therefore:		Therefore:	
90	**Worker daily gallons of gasoline**	**124**	**Vendor daily gallons of diesel**

Step 4: 3685 **# of Days (CalEEMod Output)**

Therefore:		Therefore:	
333,240	**Total gallons of gasoline**	**457,438**	**Total gallons of diesel**

On-road Mobile (Construction) Energy Usage - Paving

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

162

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (from EMFAC2017) - Year 2021

LDA	LDT1	LDT2
30.634598	26.245743	24.125976

Therefore:

Weighted Average Worker MPG Factor

27.9

Step 3: **Therefore:**

5.8 **Worker daily gallons of gasoline**

Step 4: 440 **# of Days (CalEEMod Output)**

Therefore:

Result: **2,554** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Architectural Coating

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

935	5%	47

Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

505

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2017 Output) - Year 2021

LDA	LDT1	LDT2
30.634598	26.245743	24.125976

Therefore:

Weighted Average Worker MPG Factor

27.9

Step 3: **Therefore:**

18.1 Worker daily gallons of gasoline

Step 4: 3,685 **# of Days (CalEEMod Output)**

Therefore:

Result: **66,662** **Total gallons of gasoline**

APPENDIX B.3

Health Risk Assessment

ANALYSIS OF PUBLIC HEALTH RISKS

FOR THE

SOUTH STOCKTON COMMERCE CENTER

STOCKTON CALIFORNIA

FEBRUARY 23, 2021

PROJECT TITLE

South Stockton Commerce Center

PREPARED BY:

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CONTENTS

INTRODUCTION

This Health Risk Assessment (HRA) was prepared to assess potential public health risks that may be present at the proposed South Stockton Commerce Center in the city of Stockton, San Joaquin County, California. This report analyzes the emissions of toxic air pollutants within the project area and their impacts on public health.

PROJECT DESCRIPTION

PROJECT LOCATION

The South Stockton Commerce Center Project site (proposed Project site) is comprised of 422.20 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport. The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way.

EXISTING SURROUNDING USES

The Project site is primarily bounded by lands within the County to the north, east and south. Lands within the City of Stockton are located to the west. Uses within the surrounding area include the following:

- North – Rydberg Creek, Army National Guard, and Stockton Airport to the north within County.
- East – Agricultural lands, 99 Frontage Road and SR 99.
- South – Agricultural lands and Duck and Lone Tree Creeks.
- West – The UPPR, Airport Way, and agricultural lands.

PROJECT CHARACTERISTICS

The SSCC Project proposes a Tentative Map for the 422.2-acre site to create 13 development lots, two basin lots, one park lot, one open space lot, and one sewer pump station lot. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses.

More specifically, the SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. Although a Site Plan is not currently proposed, for planning purposes a conceptual site plan was prepared to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and for purposes of environmental review. Based on a FAR of 0.47, a maximum of 6,091,551 square feet of industrial type land uses could be developed throughout the site.

The SSCC Tentative Map also proposes approximately 11 acres of general commercial uses located between Airport Way and the UPRR right-of-way. Similar to the industrial uses, a Site Plan is not currently proposed; however, based on a FAR of 0.30, a maximum of 140,350 square feet of commercial land uses could be developed in this area.

The project proposes approximately 54 acres of open space area within the site, which will include approximately seven acres of park space located east of the UPRR and south of the future Commerce Drive (refer to the Circulation Improvements discussion below). The Project anticipates development of a passive park with shade structures and picnic tables for use by employees and visitors within the site.

Approximately 41 acres of the site will be for public facilities uses to serve the development, including storm basins, outfall, and pump stations; refer to the Utilities and Planned Infrastructure Improvements discussion below. The Project proposes to locate a sewer pump lot (0.28 acres) at the northeast corner of Airport Way and future Commerce Drive, within the portion of the site designated Commercial.

Approximately 18 acres of the site will consist of the proposed west-east road right-of-way (referred to as Commerce Drive), which will provide connections to the SR 99 Frontage Road and Airport Way; refer to the Circulation Improvements discussion below.

SCOPE OF RISK ASSESSMENT

Preparation of risk assessments is a three-step process. The first step is to identify potential contaminants that may lead to public health risks. The second step is to assess the magnitude of contaminants that may reach the public (exposure assessment). The last step is to calculate the magnitude of the health risk as a result of exposure to harmful contaminants on the basis of the toxicology of the contaminants.

The Office of Environmental Health Hazard Assessment, and the San Joaquin Valley Air Pollution Control District (SJVAPCD) provide guidance on the procedures that should be used, including, toxicological data for individual contaminants. This risk assessment is based on the guidance provided within these guidance documents. It should be noted that while this risk assessment uses certain procedures and data from these Guidelines, this assessment is not intended to satisfy the reporting requirements under AB-2588 “Air Toxics” Hot Spots program.

The health risks that are evaluated in this study include:

- Residential Cancer Risk (70-year exposure; start at third trimester);
- Workplace Cancer Risk (40-year exposure; start at age 16); and
- Acute and Chronic Hazard Indices.

The 70-year risk applies to residential areas where exposure may potentially occur 24 hours/day, 365 days/year. The 40-year risk is applicable to workplace exposure and therefore accounts for a reduced exposure for the fact that individuals typically would be exposed 8-hrs per day, 5 days per week, and 50 weeks per year. Non-cancer risks can be described as acute (short-term, exposure) or chronic health impacts.

SIGNIFICANCE CRITERIA

The following significance criteria shown in Table 1, based on guidance from the SJVAPCD, are used in this report to assess the significance of public health risks.

TABLE 1 THRESHOLDS OF SIGNIFICANCE FOR PUBLIC HEALTH RISKS

Risk Metric	*Significance Threshold*
Residential Cancer Risk	20 per million
Workplace Cancer Risk	20 per million
Chronic and Acute non-cancer hazard Indices	non-cancer health hazard exposure index of 1.0

SOURCE: SJVAPCD, 2015.

As shown in Table 1, a project that contributes a cancer risk in excess of 20 new cases in a population of one million persons at identified receptors, or a non-cancer hazard index of greater than or equal to 1.0 would be considered to have a significant project-level impact.

EMISSION SOURCES AND EXPOSURE

The main source of toxic air pollutants (TACs) within the proposed truck stop project is diesel particulate matter (DPM) from truck idle and mobile emissions, and the operation of Truck Refrigeration Units (TRUs). Based on numerous studies by the California Air Resources Board (ARB), DPM represents the largest single contributor to public health risks. Additionally, in its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Emissions from the following project sources were analyzed and are shown in Table 2:

- Truck on-site mobile emissions
- Truck on-site idling emissions
- TRU generated emissions

TABLE 2: EMISSION SOURCE ASSUMPTIONS

Source Type / Emission	Configuration	Assumptions
On-site Mobile Diesel Truck Circulation (DPM)	*Modeled as line-volume sources* Release Height = 6 ft Plume Height = 12 ft Plume Width = 12 ft (width of a truck) Line Lengths = based on path of travel	• On-site travel of 2,776 trucks per day (Fehr & Peers, 2021). All truck entering project site assumed to refuel. • Traveling distance based on proposed site plan layout. • PM_{10} mobile emissions factor provided by EMFAC 2017 (Parameters: San Joaquin County, Annual, Year 2021; emission factor for T7 Tractor)
On-site Diesel Truck Idling (DPM)	*Modeled as point sources* Release Height = 12 ft Diameter = 0.1 meter Velocity = 57.1 m/s @ 1500 rpm Temperature = 366 K	• On-site Idle of 2,776 trucks per day (Kimley-Horn, 2020) • 5 minutes idling per vehicle • Emissions Factors based on EMFAC 2014 Technical Documentation Guidebook average of summer and winter high idle emissions rates
TRUs (DPM)	*Modeled as point sources* Release Height = 12 ft Diameter = 0.1 meter Velocity = 57.1 m/s @ 1500 rpm Temperature = 366 K	• Trucks are assumed to run their TRUs for 15 minutes per hour. • 34 hp rated TRUs • Emission factor (Source: ARB Guidelines for in-use Diesel-Fueled Transport Refrigeration Units TRU) • 0.53 load factor • 15% of trucks have TRUs bases on fleet mix (Source: ATA)

DAILY TRUCK TRIPS

The total diesel truck trips generated by the proposed project is based on the Vehicle Miles Travelled (VMTA) and Transportation Impact Assessment (TIA) for the proposed project prepared by Fehr & Peers in February 2021. According to the VMTA and TIA, the average total daily truck traffic includes 5,552 heavy-duty truck trips per day.

EMISSION RATES

Table 3 provides emissions rates by source and emissions factors. For calculations, data outputs, and reference documents please see Appendix 1.

TABLE 3: EMISSION RATES BY SOURCE

Source	Pollutant	Volume/Size	Emission Factor	Emissions Pounds/Year
On-site Diesel Truck (Mobile) Circulation	Diesel Particulate Matter (DPM)	5,552 truck trips per day traveling 1.284 miles	0.006915 g/mile	39.665
On-site Diesel Truck Idling	Diesel Particulate Matter (DPM)	2,776 trucks per day idling 5 min	0.0035 g/hr -vehicle	0.652
Truck Refrigeration Units (TRUs)	Diesel Particulate Matter (DPM)	15% of all trucks, 34 hp rated TRU engines	0.02 g/hp-hr	2.156

SOURCES: EMFAC 2017 (ON-SITE DIESEL TRUCK CIRCULATION); TABLES 3.2-41 AND 42, OF THE EMFAC2014 VOLUME III - TECHNICAL DOCUMENTATION GUIDEBOOK ON IDLING EMISSIONS. SEE TABLE 2 OF THIS DOCUMENT AND APPENDIX 1 FOR FURTHER DETAIL.

EXPOSURE ASSESSMENT

Exposure assessment involves translating the emission rate (e.g., lbs/hr, g/hr) of individual toxic air contaminants into the concentration (e.g., grams/cubic meter g /sec m^2 or parts per million) of each toxic air contaminant. The key step in performing an exposure assessment is the application of an air dispersion model. The dispersion model incorporates the local meteorological data (wind speed, wind direction, local temperature, inversions, etc.), stack height, and exhaust flow characteristics, into the dispersion of individual air contaminant. The Lakes Environmental AERMOD Version 9.9.0 (AERMOD Version 19191) dispersion model was employed for this assessment.

Modeling Receptors: Receptors were placed at locations of nearby sensitive receptors, including residential and workplace locations. This allows for an analysis of the receptors that have the potential be most affected by the TACs generated by the proposed project.

Meteorological Data: Five years of meteorological data was used in the exposure assessment. The meteorological ("Met) data (wind speed, wind direction, temperature, etc.) were recorded at the Stockton Airport location for the years 2013 through 2017.

RISK ASSESSMENT

Once the emissions rates of individual air contaminants have been calculated, and an air dispersion model has been run through AERMOD, the next step in determining health risks is to determine the cancer risk, and acute and chronic incident rates. Period and 1-hour dispersion files we used in combination with HARP-2 risk modelling software to calculate risk scenarios for residential, and workplace cancer rates, as well as acute and chronic incidences. The Hotspots Analysis and Reporting Program (HARP) is a software suite used to assist with the programmatic requirements of the Air Toxics "Hot Spots" Program [Assembly Bill (AB) 2588]. HARP combines the tools needed to implement the requirements of AB 2588, such as reporting a facilities emissions inventory, determining a facilities prioritization score, conducting air dispersion modeling, and performing a facility health risk assessment. This study utilized the HARP2 Air Dispersion and Risk Tool with dispersion plot files created in AERMOD. After the risk assessment

was complete HARP-2, plot files were then imported back into AREMOD for spatial and visual representation, and analysis of impact areas.

The Intake Rate Percentile sets the intake rate at which a person is exposed to the air pollutant. This study utilized the high-end intake rate to assess risk at the 95th percentile exposure rate for risk scenarios (see Appendix 3 HARP-2 project summary report). Additionally, residential cancer risk is assessed using a 70-year exposure duration starting at the third trimester; workplace cancer risks are assessed at a 40-year exposure duration with age 16 being the first potential exposure year.

RISK ASSESSMENT RESULTS

The results of the risk analysis indicate that cancer risks vary depending on the exposure scenario (residential or worker) and on location. As would be expected, locations nearest the project area have the greatest exposure and the associated risks are considerably lower as distance from the project site increases. Table 4 displays the residential and workplace cancer risk, and acute and chronic incidence rate results at nearest receptors. Figure 1 provides wind patterns at the Stockton Airport location where meteorological data was used for the modeling.

TABLE 3.3-9: SUMMARY OF MAXIMUM HEALTH RISKS

RISK METRIC	*MAXIMUM RISK*	*SIGNIFICANCE THRESHOLD*	*IS THRESHOLD EXCEEDED?*
Residential Cancer Risk (70-year exposure)	1.09	20 per million	No
Workplace Cancer Risk (40-year exposure)	0.14	20 per million	No
Chronic (non-cancer)	<0.01	Hazard Index ≥1	No
Acute (non-cancer)[1]	<0.01	Hazard Index ≥1	No

SOURCES: AERMOD (LAKES ENVIRONMENTAL SOFTWARE, 2021); AND HARP-2 AIR DISPERSION AND RISK TOOL.

The TAC emissions from the project result from the on-site truck travel, idling of diesel-fueled vehicles, and the operation of transport refrigeration units (TRU) used to transport perishable products. Additionally, within the sources of on-site DPM, the operation of trucks on-site produced the greatest DPM emissions and contributed substantially to overall project health risks, including cancer risk.

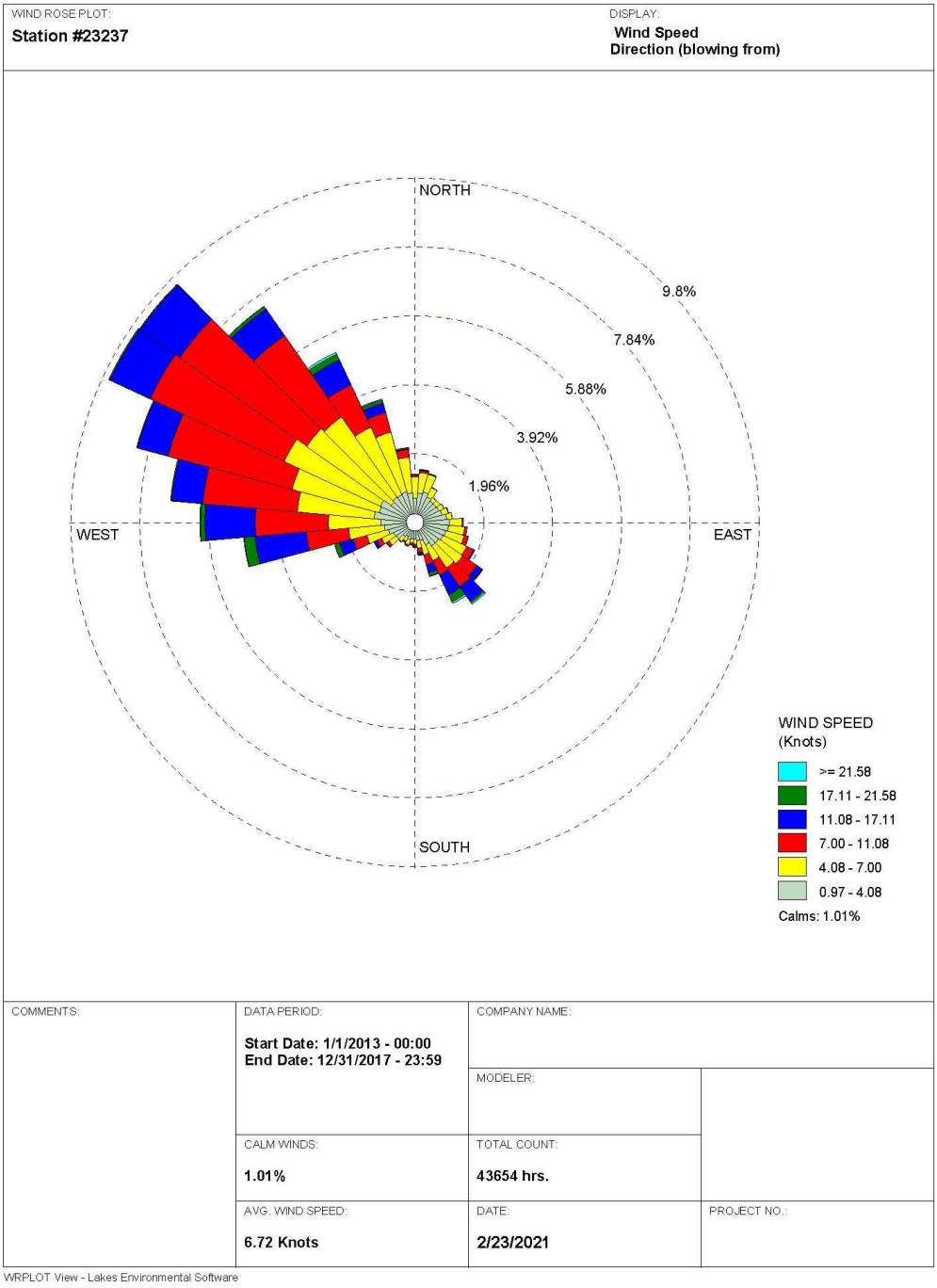
Overall, the results show that residential 70-year cancer risk would remain below the threshold of 20 in a million at areas near the project site that contain residential receptors. However, it is very unlikely any individual would remain at the same location for 70 years; therefore, this result represents a conservative estimate.

The results also show that 40-year workplace cancer risk would remain below the threshold of 20 in a million (the SJVPACD threshold) at the project site, with a maximum value measured

million measured in the northern portion of the project site (the location of maximum cancer risk).

Chronic or long-term exposures and Acute exposure to DPM can result is non-cancer health effects. Chronic and Acute Non-Cancer Hazards results show that the acute and chronic risk on and near the project site would remain below the hazard index of ≥1.

FIGURE-1: WIND PATTERNS (STOCKTON AIRPORT - 2013-2017) AIRPORT LOCATION APPROXIMATELY 1600 FEET NORTHEAST NORTHWEST OF THE PROJECT SITE.



Sources: Prepared by De Novo Planning group (2021); Lakes Environmental AERMOD View 9.9.0

REPORT PREPARERS

This document was prepared by De Novo Planning Group, Inc. of El Dorado Hills under the direction of the City of Stockton. De Novo Planning Group staff participating in document preparation included the following:

- Steve McMurtry, Principal
- Josh Smith, Associate Planner

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Appendix 1 Emissions Calculations:

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	PM10_RUNEX
SAN JOAQUIN	2040	T7 tractor	Aggregated	10	DSL	**0.009863082**

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	PM10_RUNEX
SAN JOAQUIN	2040	T7 tractor	Aggregated	30	DSL	**0.006914523**

EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: SAN JOAQUIN
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	Trips	PM10_RUNEX
SAN JOAQUIN	2040	T7 tractor	Aggregated	Aggregated	DSL	506581.719	51418	**0.026740561**

Mobile Truck Emissions - Commerce Drive

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	1.28400462	miles	AERMOD
2. # of trucks trips per day:	5552	truck trips	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 30 MPH, T7 Instate Heavy):			**0.006915** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

49.2922096 g/day-all trucks
0.10867059 lbs/day-all trucks
39.6647657 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.009056 lbs/hour-all trucks

Mobile Truck Emissions - Building 1

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.31342041	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

1.71628484 g/day-all trucks
0.00378376 lbs/day-all trucks
1.3810709 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000315 lbs/hour-all trucks

Mobile Truck Emissions - Building 2

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.384754	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

2.10690637	**g/day-all trucks**	
0.00464493	lbs/day-all trucks	
1.69539869	**lbs/year-all trucks**	

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000387	**lbs/hour-all trucks**

Mobile Truck Emissions - Building 3

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.44757478	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

2.45091191	**g/day-all trucks**
0.00540333	lbs/day-all trucks
1.97221524	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000450	**lbs/hour-all trucks**

Mobile Truck Emissions - Building 4

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.51027129	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

2.79423693 g/day-all trucks
0.00616023 lbs/day-all trucks
2.24848418 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000513 lbs/hour-all trucks

Mobile Truck Emissions - Building 5

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.1777126	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.9731512	**g/day-all trucks**
0.00214543	lbs/day-all trucks
0.78308144	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000179	**lbs/hour-all trucks**

Mobile Truck Emissions - Building 6

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.13900108	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.76116756	**g/day-all trucks**	
0.00167809	lbs/day-all trucks	
0.61250111	**lbs/year-all trucks**	

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000140	**lbs/hour-all trucks**

Mobile Truck Emissions - Building 7

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.07717449	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.42260622 g/day-all trucks
0.00093169 lbs/day-all trucks
0.34006543 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000078 lbs/hour-all trucks

Mobile Truck Emissions - Building 8

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.06940733	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.38007339 g/day-all trucks
0.00083792 lbs/day-all trucks
0.30583985 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000070 lbs/hour-all trucks

Mobile Truck Emissions - Building 9

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.0630072	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.34502633	**g/day-all trucks**	
0.00076065	lbs/day-all trucks	
0.27763796	**lbs/year-all trucks**	

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000063	**lbs/hour-all trucks**

Mobile Truck Emissions - Building 10

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.0578498	miles	AERMOD
2. # of trucks trips per day (prorated between 10 buildings):	555.2	trucks	Fehr & Peers (TIA)
3. PM10 Mobile Emissions Factors (San Joaquin County, 10 MPH, T7 Instate Heavy):			**0.009863** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

0.31678453	**g/day-all trucks**
0.00069839	lbs/day-all trucks
0.25491217	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000058	**lbs/hour-all trucks**

Truck Idling

Idling Emission Rates taken from tables 3.2-41 and 42, of the EMFAC2014 Volume III - Technical Documentation Guidebook:
http://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf

Idling Emissions: pounds per gram: 0.002205

Table 3.2-40: Revised HHD Diesel Truck Low Idle Emission Rates (after 2009)	PM10	**0.001**	g/hr-truck	
Table 3.2-41: High Idle Emissions Rates for Summer (2009 and later)	PM10	**0.003**	g/hr-truck	Note: using an average of the summer and winter high idle emissions rates for the emission factor calcs
Table 3.2-42: High Idle Emissions Rates for Winter (2009 and later)	PM10	**0.004**	g/hr-truck	

0.00029167	g/5 minutes-truck	Note: assuming 5 minutes of active idling per truck
0.00029167	g/day-truck	
2776	Total # of trucks per day (note: truck trips are round trips; hence, total # of trucks is equal to half the number of truck trips)	
0.80966667	g/day-all trucks	
295.528333	g/year-all trucks	
0.65152767	lbs/year-all trucks	
0.03373611	g/hr-all trucks	
0.00056227	g/min-all trucks	
9.3711E-06	g/sec-all trucks	

As provided by the Kimley Horn Traffic Study (2018):

26.00	Peak hour truck trips (maximum peak hour truck trips is used for the sake of a conservative analysis)
0.00758333	g/5 minutes-26 vehicles
0.0000167	lbs/5 minutes-26 vehicles

Annual Emissions:	**0.04653769**	lbs/year-all trucks for each of the	**14** idling points
Max Hr Emissions:	**0.0000012**	for each sampling point, for max 1 hr	

Truck TRU (Idling)

pounds per gram: 0.002205

0.02	g/hp-hr source: ARB	
34	hp rated TRU engines	
0.15	15% of trucks are refrigerated trucks (based on the # of 500,000 trucks in the U.S being reefers and approximately 3.2 million trucks in use nationwide).	Source ATA
0.53	Load Factor of 0.53 based Walmart Riverwalk Marketplace HRA Impact Sciences, Inc	
0.25	Trucks are expected to run their TRUs for 15 minutes per hour (Leland Vilalvazo, phone conversation)	On/Off Cycle Factor
2776	Total # of trucks per day (note: truck trips are round trips; hence, total # of trucks is equal to half the number of truck trips)	
1	Max hours trucks are assumed to be idle on-site	
37.51764	**Emissions (g/day)**	

Total		
37.51764	**Emissions (g/day)**	
13,694	**Emissions (g/year)**	
30.190	**Emissions (lbs/year)**	
2.156	**Emissions (lbs/year)**	Note: For each of the 14 point sources

Total Max 1 Hr		
4.689705	**Emissions (g/hr)**	
4.689705	**Emissions (g/hour)**	
0.01034	**Emissions (lbs/hour)**	
0.0007385	**Emissions (lbs/hour)**	Note: For each of the 14 point sources

Combined Truck Idling and Truck TRU (Idling) Emissions - Summary

Annual Emissions:	**2.20296133** lbs/year-all trucks for each of the	**14**	idling points
Max Hr Emissions:	**0.0007397** for each of the idling points, for max 1 hr		

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APPENDIX B.4

Analysis of Models and Tools to Correlate Project-Generated Pollutants to Health End Points

APPENDIX B

Appendix B of the Draft EIR includes additional information regarding models and tools for correlating project-generated criteria pollutant emissions to health end points. The following table is an addition to Appendix B.

ANALYSIS OF MODELS AND TOOLS TO CORRELATE PROJECT-GENERATED CRITERIA POLLUTANT EMISSIONS TO HEALTH END POINTS

TOOL	CREATED BY	DESCRIPTION	RESOLUTION	POLLUTANTS ANALYZED	PROJECT-LEVEL CEQA APPLICABILITY
AERMOD Modeling System[1,2]	AERMIC	A steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The modeling system incorporates air dispersion based on a planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}, NH_3	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
AirCounts[3]	Abt Assoc.	Online tool that helps large and medium-sized cities quickly estimate the health benefits of $PM_{2.5}$ emission reductions and economic value of those benefits. The tool estimates the number of deaths (mortality) avoided and economic value related to user-specified regional, annual $PM_{2.5}$ emissions reduction.	City-level	Primary $PM_{2.5}$	This tool is only illustrative, as it is limited to certain cities and does not target specific sectors. The tool is not sector specific, and includes limited California data. It cannot provide results at a project-level. Therefore, the tool is not recommended for project-level CEQA analysis.
Air Pollution Emission Experiments and Policy analysis (APEEP) model[4]	Mueller and Mendelsohn2006, 2009	The Air Pollution Emission Experiments and Policy (APEEP) analysis model (Muller and Mendelsohn 2006, 2009) is a traditional integrated assessment model. Like other integrated assessment models, APEEP connects emissions of air pollution through air-quality modeling to exposures, physical effects, and monetary damages. Making these links requires the use of findings reported in the peer-reviewed literature across several scientific disciplines. The air-quality models in APEEP use the emission data provided by EPA to estimate corresponding ambient concentrations in each county in the coterminous states.	National or county-level	SO_2, ROG, NO_x, Ozone, $PM_{2.5}$, PM_{10}	The model operates at the national scale but may be applied at the county-level (although it is not clear how this adjustment should be made). It cannot provide results at a project-level. The tool is also not commercially available. Therefore, the tool is not recommended for project-level CEQA analysis.

[1] See: https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[2] Note: May require additional software to estimate the level of each specific pollutant at the modeled receptors.

[3] See: https://www.abtassociates.com/tools

[4] See: https://public.tepper.cmu.edu/nmuller/APModel.aspx

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
CALINE3/ CAL3QHC/ CAL3QHCR[1, 2]	USEPA	A steady-state Gaussian dispersion model designed to determine air pollution concentrations at receptor locations downwind of highways located in relatively uncomplicated terrain. CALINE3 is incorporated into the more refined CAL3QHC and CAL3QHCR models. CAL3QHCR is a more refined version based on CAL3QHC that requires local meteorological data.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Complex Terrain Dispersion Model Plus Algorithms for Unstable Situations (CTDMPLUS)[1, 2]	USEPA	A refined point source gaussian air quality model for use in all stability conditions for complex terrain. The purpose of the model is to provide a practical, refined plum model for elevated point sources near complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Co-Benefits Risk Assessment (COBRA)[5]	USEPA	Preliminary screening tool that contains baseline emission estimates of a variety of air pollutants for a single year. COBRA is targeted to state and local governments as a screening assessment for clean energy policies. EPA's CO–Benefits Risk Assessment (COBRA) screening model is a free tool that helps state and local governments: • Explore how changes in air pollution from clean energy policies and programs; • Estimate the economic value of the health benefits associated with clean energy policies and programs to compare against program costs; • Map and visually represent the air quality, human health, and health-related economic benefits from reductions in emissions of particulate matter ($PM_{2.5}$), sulfur dioxide ($S0_2$), nitrogen oxides (NO_X), ammonia (NH_3), and volatile organic compounds (VOCs) that result from clean energy policies and programs.	National, regional, state, or county-levels	$PM_{2.5}$, SO_2, NO_x, NH_3, and ROG	COBRA is a preliminary screening tool only and cannot be used at sub-county resolution. It cannot provide results at a project-level. It also does not account for secondary emission changes resulting from market responses. Accordingly, the tool is not recommended for project-level CEQA analysis.

[5] See: https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
Environmental Benefits and Mapping Program-Community Edition (BenMAP-CE)[6]	USEPA	The USEPA's detailed model for estimating the health impacts from air pollution. It relies on input concentrations and applies concentration-response (C-R) health impact functions, which relate a change in the concentration of a pollutant with a change in the incidence of a health endpoint, including premature mortality, heart attacks, chronic respiratory illnesses, asthma exacerbation and other adverse health effects. Detailed inputs are required for air quality changes (concentrations from AERMOD), population, baseline incidence rates, and effect estimates.	National, County, City, and sub-regional levels	Ozone, PM, NO_2, SO_2, CO	This tool is not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Although this tool is under consideration by some California air districts for use towards project-level analysis, no air district in California has promulgated a methodology (using this tool or any other) that would correlate the expected air quality emissions of projects to the likely health consequences of the increased emissions. Accordingly, the tool is not recommended.
Fast Scenario Screening Tool (TM5-FASST)[7]	Joint Research Centre (Italy)	A tool that allows users to evaluate how air pollutant emissions affect large scale pollutant concentrations and their impact on human health (mortality and years of life lost) and crop yield from national to regional air quality policies, such as climate policies. The target policy domains are national to regional air quality policies, or air pollutant scenarios linked to other policy domains (e.g. climate policy). The tool is web-based and does not require coding or modelling. Users must gain access through publishers.	Global and national-levels	$PM_{2.5}$, Ozone, NO_x, NH_3, CO, ROG, CH_4, SO_2	This tool is applicable at national to global scales. It cannot provide results a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.
Long-range Energy Alternatives Planning System-Integrated Benefits Calculator (LEAP-IBC)[8]	Climate and Clean Air Coalition (CCAC)	A calculator that allows users to rapidly estimate the impacts of reducing emissions on health, climate, and agriculture. The tool uses sensitivity coefficients that link gridded emissions of air pollutants and precursors to health, climate and agricultural impacts at a national level. The tool is primarily used for policy analysis. The tool is currently Excel-based and is available through the developers only. A web-based interface is currently under development.	National-level	$PM_{2.5}$, Ozone, NO_2	This tool is applicable at national scale. Accordingly, the tool is not recommended for project-level CEQA analysis.
Methodology for Estimating Premature Deaths Associated with Long-Term Exposure to Fine Airborne Particulate Matter in California[9]	California Air Resources Board	The staff report identifies a relative risk of premature death associated with $PM_{2.5}$ exposure based on a review of all relevant scientific literature, and a new relative risk factor was developed. This new factor is a 10% increase in risk of premature death per 10 $\mu g/m^3$ increase in exposure to $PM_{2.5}$ concentrations (uncertainty interval: 3% to 20%)	National	$PM_{2.5}$	The primary author of the CARB staff report notes that the analysis method is not suited for small projects and may yield unreliable results due to various uncertainties. The tool also cannot provide results on a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[6] See: https://www.epa.gov/benmap

[7] See: http://tm5-fasst.jrc.ec.europa.eu/

[8] See: https://www.ccacoalition.org/en/resources/long-range-energy-alternatives-planning-integrated-benefits-calculator-leap-ibc-factsheet

[9] See: https://ww3.arb.ca.gov/research/health/pm-mort/pmmortalityreportfinalr10-24-08.pdf

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
Multi-Pollutant Evaluation Method (MPEM)[10]	BAAQMD	Estimates the impacts of control measures on pollutant concentration, population exposures, and health outcomes for criteria, toxic, and GHG pollutants. Monetizes the value of total health benefits from reductions in $PM_{2.5}$, ozone, and certain carcinogens, and the social value of GHG reductions. MPEM was designed for development of a Clean Air Plan for the San Francisco Bay Area. The inputs are specific to the SF region and are not appropriate for projects outside BAAQMD.	Regional level in the SFBAAB	Ozone, PM, air toxics, GHG	This tool is designed to support the BAAQMD in regional planning and emissions analysis within the San Francisco Bay Area Air Basin (SFBAAB). The model applies changes in pollutant concentrations over a four-square kilometer grid. The tool also cannot provide results on a project-level. Additionally, this tool is only applicable for the SFBAAB. Accordingly, the tool is not recommended for project-level CEQA analysis.
Offshore and Coastal Dispersion Model Version 5 (OCD)[1, 2]	USEPA	A straight-line Gaussian model developed to determine the impact of offshore emissions from point, area or line sources on the air quality of coastal regions. OCD incorporates overwater plume transport and dispersion as well as changes that occur as the plume crosses the shoreline. Hourly meteorological data are needed from both offshore and onshore locations.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Response Surface Model (RSM)-based Benefit-per-Ton Estimates[11]	USEPA	Consists of tables reporting the monetized $PM_{2.5}$-related health benefits from reducing $PM_{2.5}$ precursors from certain source types nationally and for 9 US cities/regions. Applying these estimates simply involves multiplying the emissions reduction by the relevant benefit per-ton metric. The resulting value is the PM mortality risk estimate at a 3% discount rate.	National or regional (San Joaquin County only) levels	SOx, VOC, NH_3, NO_x	RSM includes regional values specific to San Joaquin County. The values are also dated. Accordingly, the tool is not recommended for project-level CEQA analysis.
Sector-based Benefit-per-Ton Estimates[12]	USEPA	Two specific sets of Benefit-per-ton (BPT) estimates for 17 key source categories are available. Both are a reduced-form approach based on BenMAP modeling. Applying these factors involves multiplying the emissions reduction (in tons) by the relevant benefit (economic value) or incidence (rates of mortality and morbidity) per-ton metric. The resulting value is the economics, mortality, and morbidity of direct and indirect $PM_{2.5}$ emissions.	National-scale	$PM_{2.5}$, SO_2, NO_x	The BPT estimates do not account for project-specific emissions or receptor locations, local dispersion characteristics, or regional photochemistry. The resultant health effects are therefore reflective of national averages and may not be accurate when applied to the project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[10] See: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/mpem_nov_dec_2016-pdf.pdf?la=en

[11] See: https://www.epa.gov/benmap/response-surface-model-rsm-based-benefit-ton-estimates

[12] See: https://www.epa.gov/benmap/sector-based-pm25-benefit-ton-estimates. The updated Technical Support Document (February 2018) is available at: https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf

APPENDIX C

Determination of Eligibility and Effect

DETERMINATION OF ELIGIBILITY AND EFFECT FOR THE SOUTH STOCKTON COMMERCE CENTER PROJECT SAN JOAQUIN COUNTY, CALIFORNIA

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(Job #20-008)

INTRODUCTION

Project Description

The Project Area is located within the City of Stockton, California. It lies south and adjacent to the Stockton Airport. The Parcels are located west of the State Route 99 Frontage Road and east of Airport Way. French Camp Slough is located near and along the project's southern boundary.

The 437.45-acre site includes the following parcels of land for the future industrial park:

- 6110 S. Airport Way, Stockton CA
  - APN 177-110-040
  - 218.29 Acres
- 7070 S. Airport Way, Stockton CA
  - APN 177-100-030
  - 76.03 Acres
- 6122 S. Airport Way, Stockton CA
  - APN 177-110-050
  - 3.27 Acres
- 9091 S. State Route 99, Stockton CA
  - APN 201-020-010
  - 75.07 Acres

The following Parcel contains right-of-way for the east-west primary roadway; a second storm basin; and sewer pump station:

- 8606 S. Airport Way, Stockton CA
  - APN 177-050-090
  - 64.79 Acres

The South Stockton Commerce Center (SSCC) Tentative Map proposes approximately 300 net acres of limited industrial uses. A conceptual Site Plan was prepared to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of buildable area for the Tentative Map and the technical studies associated with the environmental review. Based on a FAR of 47%, a maximum of 6,091,551 square feet of developable space throughout the site could be developed with industrial type land uses.

The project also includes approximately 11 acres of General Commercial between Airport Way and the Union Pacific railroad right of way. This commercial area was previously studied and approved as part of the Tidewater Master Plan effort. A sewer pump parcel will be located in this area of the project.

The Plan also includes roughly 54 acres of open space area (which includes just under 7 acres of Park space) and nearly 41 acres of detention area. Approximately 19 acres will include the proposed west-east road right of way (future Commerce Drive) which will provide connections to the SR 99 Frontage Road and Airport Way and 10' of right-of-way dedication along Airport Way.

Due to limitations caused by the floodway along French Camp Slough and the location of drive entrances for surrounding developments, the alignment of the future Commerce Drive requires a General Plan Amendment and Rezone of the two land use designations between Airport Way and the Union Pacific Railroad (UP) right of way. The current boundaries of the designations will be re-established to lineup with the future Commerce Drive right of way center line. A Commercial designation will be to the north of the Commerce Drive right of way center line and Industrial to the south.

Approximately 16 acres of the project area will be designated remainder.

The project will include a proposed west-east trending primary road known as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. The project area is bifurcated by the existing UP main line. This requires the grade separated structure to span the UP main line Right of Way and connect to two project areas. The only work within the UP main line would be the building of the spur line (one line that will break into 3 lines along the project's northern boundary with each line serving one of the 3 parcels). No other impact will occur to the UP line.

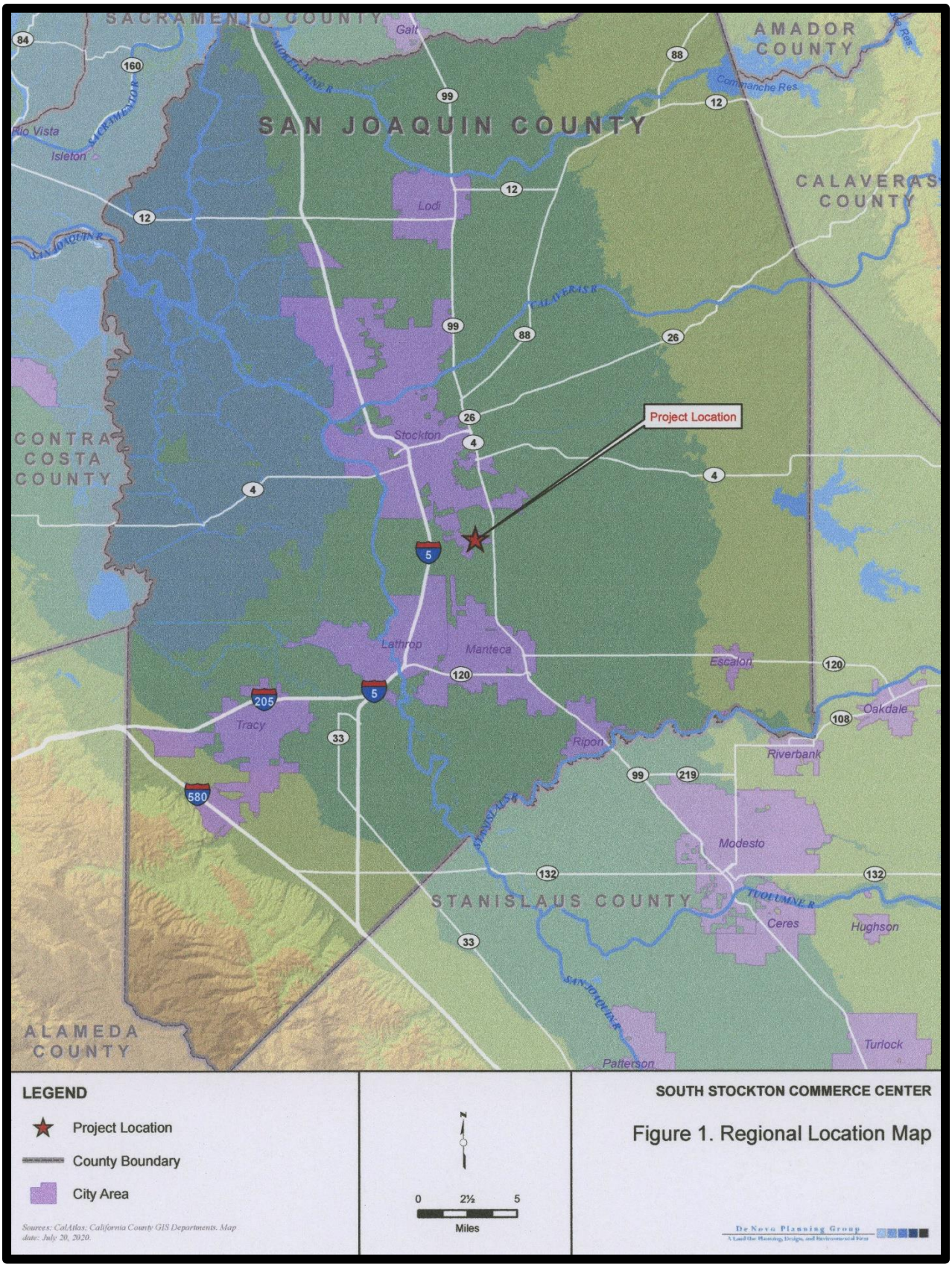
The 99 Frontage Road will provide access to the Arch Road and SR 99 Interchange. Airport Way will provide access to both the French Camp/Arch Road and Interstate 5 Interchange and the French Camp and the SR 99 Interchange.

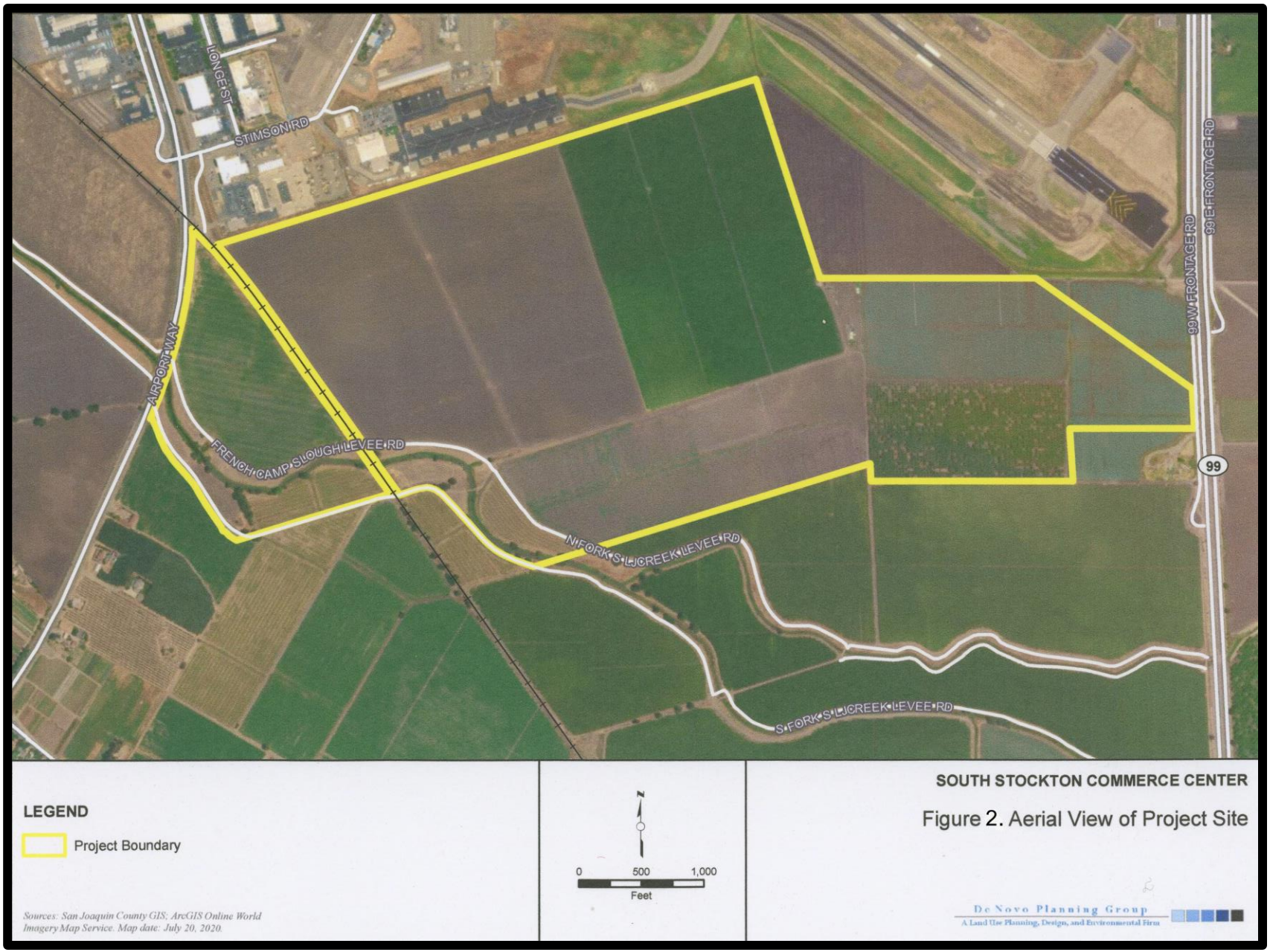
The Project Area is located in San Joaquin County within a portion of the Rancho Campo de los Franceses, mapped on the Stockton East United States Geological Survey 7.5-minute topographic quadrangle (Figures 1, 2 and 3).

Cultural Resources

The following study has been prepared to meet the Guidelines of the Sacramento District Corps of Engineers for Section 106 compliance under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 408) Permissions, revised August 2019. The project included a records search, check of the Native American Heritage Commission Sacred Lands files, and a survey of the APE.

Melinda A. Peak, senior historian/archeologist with Peak & Associates, Inc. served as principal investigator for the study, with archeologist Michael Lawson completing the field survey (resumes, Appendix 1).


SACRAMENTO COUNTY
Galt
AMADOR COUNTY
Rio Vista
Isleton
SAN JOAQUIN COUNTY
Commanche Res
Lodi
CALAVERAS COUNTY
CONTRA COSTA COUNTY
Project Location
Stockton
Lathrop
Manteca
Escalon
Tracy
Oakdale
Ripon
Riverbank
Modesto
STANISLAUS COUNTY
Ceres
Hughson
Turlock
Patterson
ALAMEDA COUNTY
LEGEND
Project Location
County Boundary
City Area
Sources: CalAtlas; California County GIS Departments. Map date: July 20, 2020.
N
0
2½
5
Miles
SOUTH STOCKTON COMMERCE CENTER
Figure 1. Regional Location Map
De Novo Planning Group


LIONGE ST
STIMSON RD
AIRPORT WAY
FRENCH CAMP SLOUGH LEVEE RD
N FORK S LJ CREEK LEVEE RD
S FORK S LJ CREEK LEVEE RD
99 W FRONTAGE RD
99 E FRONTAGE RD
99
LEGEND
Project Boundary
N
0
500
1,000
Feet
Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: July 20, 2020.
SOUTH STOCKTON COMMERCE CENTER
Figure 2. Aerial View of Project Site
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

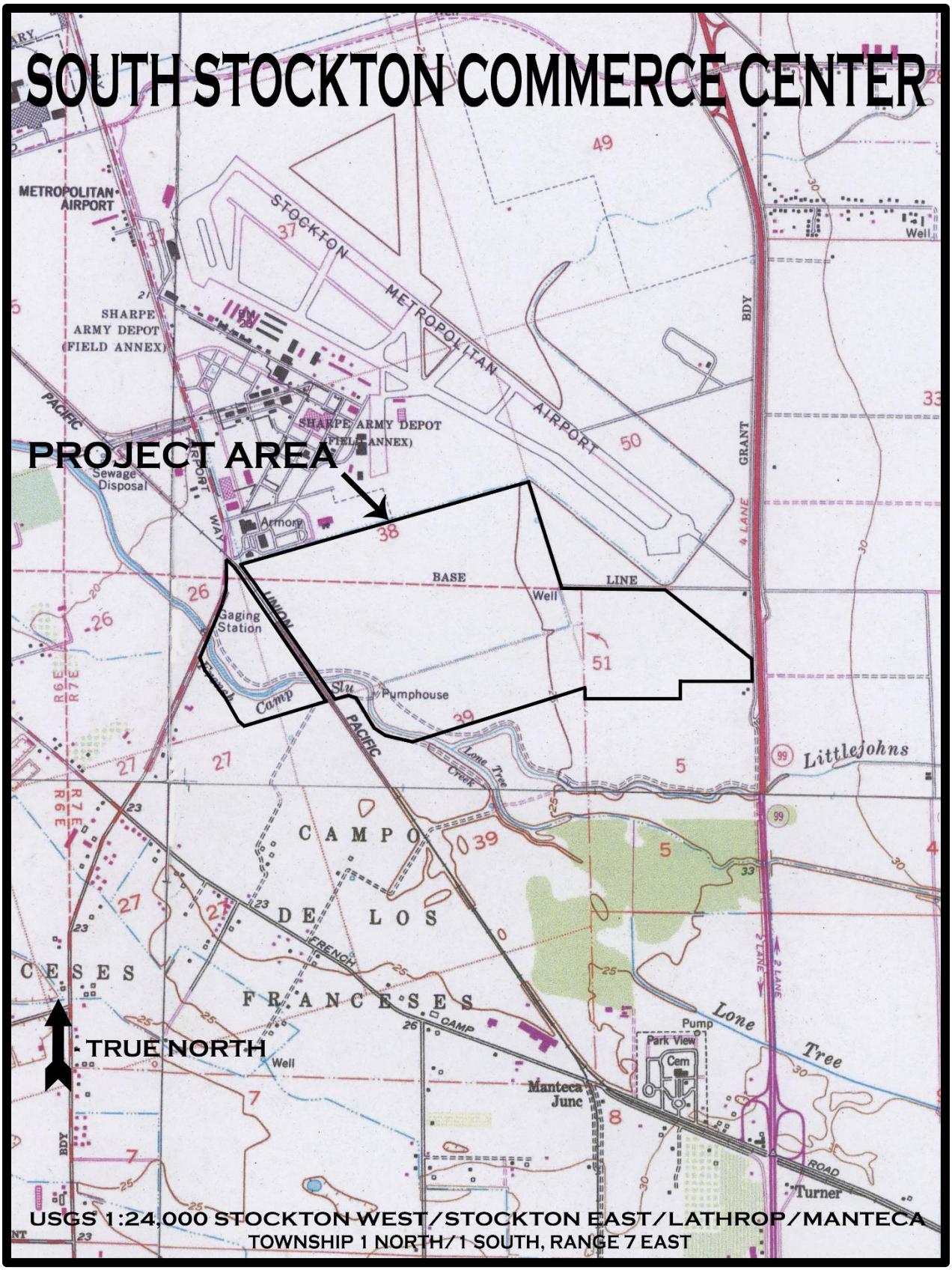

SOUTH STOCKTON COMMERCE CENTER
PROJECT AREA
TRUE NORTH
METROPOLITAN AIRPORT
SHARPE ARMY DEPOT (FIELD ANNEX)
STOCKTON METROPOLITAN AIRPORT
PACIFIC
Sewage Disposal
Armory
BASE LINE
Saging Station
UNION
Camp Stu
Pumphouse
Lone Tree Creek
Littlejohns
CAMPO DE LOS FRANCESES
FRENCH
CAMP
Park View
Cem
Pump
Lone Tree
Manteca Junc
Turner
ROAD
GRANT
BDY
4 LANE
2 LANE
Well
USGS 1:24,000 STOCKTON WEST/STOCKTON EAST/LATHROP/MANTECA
TOWNSHIP 1 NORTH/1 SOUTH, RANGE 7 EAST

Figure 3

REGULATORY CONTEXT

The Section 106 review process is implemented using a five step procedure: 1) identification and evaluation of historic properties; 2) assessment of the effects of the undertaking on properties that are eligible for the National Register; 3) consultation with the State Historic Preservation Office (SHPO) and other agencies for the development of a memorandum of agreement (MOA) that addresses the treatment of historic properties; 4) receipt of Advisory Council on Historic Preservation comments on the MOA or results of consultation; and 5) the project implementation according to the conditions of the MOA.

The Section 106 compliance process may not consist of all the steps above, depending on the situation. For example, if identification and evaluation result in the documented conclusion that no properties included in or eligible for inclusion are present, the process ends with the identification and evaluation step.

FRAMEWORK FOR EVALUATION

Decisions regarding management of cultural resources hinge on determinations of their significance (36 CFR 60.2). As part of this decision-making process the National Park Service has identified components which must be considered in the evaluation process, including:

- criteria for significance;
- historic context; and
- integrity.

Criteria for Significance

Significance of cultural resources is measured against the National Register criteria for evaluation:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and,
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) that are associated with the lives of persons significant in our past; or
>
> (c) that embody the distinctive characteristics of a type, period, or method of construction,

or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Historic Context

The historic context is a narrative statement "that groups information about a series of historic properties based on a shared theme, specific time period, and geographical area." To evaluate resources in accordance with federal guidelines, these sites must be examined to determine whether they are examples of a defined "property type." The property type is a "grouping of individual properties based on shared physical or associative characteristics". Through this evaluation, each site is viewed as a representative of a class of similar properties rather than as a unique phenomenon.

A well-developed historical context helps determine the association between property types and broad patterns of American history. Once this linkage is established, each resource's potential to address specific research issues can be explicated.

Integrity

For a property to be eligible for listing in the National Register it must meet one of the criteria for significance (36 CFR 60.4 [a, b, c, or d]) and retain integrity. Integrity is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period."

The following discussion is derived from National Register Bulletin 15 ("How to Apply the National Register Criteria for Evaluation").

Within the concept of integrity, there are seven aspects or qualities that define integrity in various combinations. The seven aspects are: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will possess several or usually most of these aspects. The retention of specific aspects is necessary for a property to convey this significance.

Determining which of the seven aspects are important involves knowing why, where and when the property is significant.

The prescribed steps in assessing integrity are as follows:

- define the essential physical features that must be present for a property to represent its significance;

- determine whether the essential physical features are visible enough to convey their significance;

- determine whether the property needs to be compared with similar properties; and,

- determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant. All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define why a property is significant.

A property's historic significance depends on certain aspects of integrity. Determining which of the aspects is most important to a particular property requires an understanding of the property's significance and its essential physical features. For example, a property's historic significance can be related to its association with an important event, historical pattern or person. A property that is significant for its historic association is eligible for listing if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person.

A property important for association with an event, historical pattern, or person ideally might retain some features of all seven aspects of integrity. Integrity of design and workmanship, however, might not be as important to the significance, and would not be relevant if the property were an archeological site. A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today. For archeological sites that are eligible under criteria A and B, the seven aspects of integrity can be applied in much the same way as they are to buildings, structures, or objects.

In sum, the assessment of a resource's National Register eligibility hinges on meeting two conditions:

o the site must possess the potential to be eligible for listing in the National Register under one of the evaluation criteria either individually or as a contributing element of a district based on the historic context that is established; and

o the site must possess sufficient integrity, i.e. it must retain the qualities that make it eligible for the National Register.

For the National Register, "a district possesses a significant concentration, linkage, or continuity of ... objects united historically or aesthetically by plan or physical development." The identity of a district derives from the relationship of its resources, which can be an arrangement of functionally related properties.

STATE REGULATIONS

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA Section 15064.5 requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. Public Resources Code Section 21098.1 further cites: A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

An "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1).

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR), *CEQA and Archaeological Resources,* 1994. The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Codes Sections 5097.94 et al).

The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)

The State Historic Preservation Office (SHPO) maintains the California Register of Historical Resources (CRHR). Properties listed, or formally designated as eligible for listing, on the National Register of Historic Places are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource. The criteria are set forth in Section 15064.5(a) (3) of the CEQA Guidelines, and are defined as any resource that does any of the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the CEQA Guidelines, Section 15064.5(a) (4) states:

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

California Health and Safety Code Sections 7050.5, 7051, and 7054

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code Section 15064.5(e)

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. The section establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establishes the Native American Heritage Commission as the entity responsible to resolve disputes regarding the disposition of such remains.

Assembly Bill 52

Assembly Bill (AB) 52 establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts. AB 52 defines a "California Native American Tribe" as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. AB 52 requires formal consultation with California Native American Tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects. AB 52 also requires that consultation address project alternatives, mitigation measures, for significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such measures shall be recommended for inclusion in the environmental document and

adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource.

ENVIRONMENTAL SETTING

The project area has two soil series, Jacktone clay and Stockton clay (www.usda.gov). Jacktone clay is primarily in the northern portion of the project area with Stockton clay to the south. Both soil series cover about one-half of the project area. Jacktone clay and Stockton clay are both derived from alluvial sources. They share similar structural characteristics with both being a clay to clay loam about 42 to 60 inches thick and both rest upon a cemented layer (www.usda.gov).

Jacktone clay soils were deposited sometime between 2,000 to 4,000 years before present in a series of depositional events. Stockton clay was deposited sometime during the previous 2,000 period. Jacktone clay is considered to have high sensitivity and Stockton clay very high sensitivity for the potential to possess buried cultural material given the time period in which they were deposited (Rosenthal and Meyer 2004).

The southwestern portion of the project area is transected by French Camp Slough. French Camp Slough flows northwest from the project area about three and one-half miles until it joins Walker Slough and then reaches the San Joaquin River about one-mile further west. The topographic profile of French Camp Slough within, and west of, the project area shows a gradual decline in elevation of roughly five feet every mile to mile and one-half. There are no elevated areas of higher terrain located within the project area adjacent to, or near, French Camp Slough.

Both soil series present within the project area were deposited during a period when there was human activity so both have the potential to possess buried deposits of cultural material. With French Camp Slough located in the far southwestern portion of the project area, surface water was present that would have enabled some form of temporary or more permanent encampment by prehistoric peoples. As Meyer and Rosenthal (2008:159), in examining the sensitivity for the potential of buried resources in this region state, “Ideally, predictions about where buried archaeological sites are located would take into account a number of characteristics related to the past distribution of important subsistence resources (i.e., distance to water) and other environmental factors (e.g., aspect, ecotone, slope) that may have made a specific location more favorable for occupation than another.”

The section of French Camp Slough within the project area does not however have any other salient feature such as raised topography and is located over four miles inland from the San Joaquin River. While there is a potential for encountering buried prehistoric period resources given the age of the sediment and presence of French Camp Slough within the southwestern portion of the project area, the likelihood is probably only moderate for that portion bordering or within about 500 feet from French Camp and low to moderate for the reaming portion of the project area given the overall setting.

CULTURAL SETTING

Prehistory

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation studies were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California. The Windmiller Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some cremations present. There are a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis* sp. rather than red *Haliotis* sp. Other characteristic artifacts include perforated and canid teeth; asymmetrical and “fishtail” charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked clay.

Hotchkiss Culture (Late Horizon) -- The burial pattern retains the use of the flexed mode, and there is wide spread evidence of cremation, lesser use of red ocher, heavy sue of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clam shell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnesite (Moratto 1984:181-183). The characteristics noted are not all-inclusive, but cover the more important traits.

Schulz (1981), in an extensive examination of the central California evidence for the use of acorns, used the terms Early, Middle and Late Complexes, but the traits attributed to them remain generally the same. While it is not altogether clear, Schulz seemingly uses the term "Complex" to refer to the particular archeological entities (above called "Horizons") as defined in this region. Ragir's (1972) cultures are the same as Schulz's complexes.

Bennyhoff and Hughes (1984) have presented alternative dating schemes for the Central California Archeological Sequence. The primary emphasis is a more elaborate division of the horizons to reflect what is seen as cultural/temporal changes within the three horizons and a compression of the temporal span.

There have been other chronologies proposed, including Fredrickson (1973), and since it is correlated with Bennyhoff's (1977) work, it does merit discussion. The particular archeological cultural entities Fredrickson has defined, based upon the work of Bennyhoff, are patterns, phases and aspects. Bennyhoff's (1977) work in the Plains Miwok area is the best definition of the Cosumnes District, which likely conforms to Fredrickson's pattern. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities. It corresponds with Willey and Phillips' (1958) earlier "tradition", although it is tied more specifically to the archeological record in California.

Ethnography

The Project Area lies within the northern portion of the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Latta 1949). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Yokuts held portions of the San Joaquin Valley from the Tehachapis in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, and on the west by the Saclan or Bay Miwok and Costonoan peoples. Although neighbors were often from distinct language families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus, the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from 3 meters to 18 meters (Wallace 1978:470).

Historical Background

Mexican Period

The Project Area lies on a portion of the Rancho Campo de los Franceses, the ranch named for the early camp first occupied by French-Canadian trappers employed by the Hudson's Bay Company in 1832. The site of the present-day location of French Camp was the terminus of the Oregon Trail used by the trappers between 1832 and 1845. Charles M. Weber stopped at French Camp in 1841 as part of the Bidwell-Bartelson party, the first of many American wagon trains to enter California. Weber was impressed with the fertility of the land near the San Joaquin River. Moving on to Pueblo de San Jose, Weber became partners with William Gulnac, a French-Canadian (possibly one of the Hudsons Bay Company trappers) who had married a Mexican woman and become a naturalized Mexican citizen. In 1843, Gulnac with Charles Weber, later founder of Stockton, organized a company of 12 men for the purpose of forming an agricultural colony at French Camp. Gulnac filed for a land grant, and was awarded a large tract of land including French Camp and the later site of Stockton by the Mexican government.

Disease, primitive living conditions and less than anticipated agricultural return also discouraged the settlers and Gulnac, who sold his interest in the Rancho to Weber for $60, the amount of an outstanding grocery bill. Weber, in turn, gave away almost all of the Rancho land in order to attract more settlers (Hoover, Rensch and Rensch 1970:369).

In 1847, with California under American control, Weber laid out the town of Tuleburg, the forerunner of Stockton. This was another step in Weber's dream of establishing a rich agricultural district in the lower San Joaquin Valley. Tuleburg was to be the commercial and shipping center for this region. This eventually came to pass with the establishment and success of Stockton, but in 1847 there was precious little reason to think that any such venture would succeed.

Gold Rush and Early Agriculture

Immediately after the Marshall gold discovery in 1848, Weber organized the Stockton Mining and Trading Company and conducted extensive mining on Weber Creek, south of Placerville. Before the Gold Rush fully started, Weber saw that Tuleburg was well situated to be the gateway to the southern mining district. He returned to the town and in the spring of 1849 had it resurveyed and renamed it Stockton. A year later the once isolated village had a population of over a thousand, not counting transient miners, and was the County seat of the newly created San Joaquin County.

As the population of the mines continued to grow, Stockton became a staging and freighting center and a shipping point for agricultural produce and cattle. French Camp became an important staging and freighting station in the early 1850s. Boats landed at the terminus of French Camp Slough, and goods destined for the mining camps were unloaded and freighted up the French Camp Road. In 1850, Major Hammond laid out a town on the site of the camp for Weber, calling it Castoria ("place of beavers"). Noble and Stevinson built an adobe hotel at the site, and sold lots (Hoover, Rensch and Rensch 1970).

The decline of mining after the Gold Rush was accompanied by a realization of the rich agricultural potential of the Central Valley. In a short time, ranchers and farmers had drained the lakes and marshes, channelized the sloughs and established controlled irrigation systems to replace the annual flooding that formerly supported the rich valley vegetation. The valley floor of today bears little resemblance, for the most part, to its pre-contact condition. The oak groves are gone and the lakes are dry. The vast marshes, once the refuge for enormous flocks of water fowl, no longer exist. The grazing lands of the elk and the antelope have become cultivated fields, producing a wide variety of crops. The native faunal community, with the exception of burrowing animals, has been replaced by domestic livestock.

Railroads

Lathrop first was a station on the Central Pacific, established in 1869 when the last stretch of the transcontinental railroad was built from Sacramento through this region, and crossing the San Joaquin River at Mossdale to reach the Bay Area.

The site of Lathrop was first known as Wilson's Station, and included a store and a schoolhouse on land belonging to Thomas A. Wilson. Due to conflicts in the City of Stockton that infuriated Leland Stanford, the Central Pacific Railroad switched many operations to Wilson's Station, later re-named for Charles Lathrop, brother-in-law of Leland Stanford. The town drew significant commerce away for the City of Stockton. The railroad's machine shops and roundhouse were built here, and the town became an important division point and major stop on the railroad line beginning in 1871. The Visalia Division of the Stockton of the Southern Pacific Railroad was completed at that time, serving the San Joaquin Valley. Lathrop became an important shipping point for agricultural products.

The Tidewater Southern Railway Company began with the consolidation of the Tidewater & southern Railroad Company, building a line from Stockton southward to Modesto beginning in 1910, and the Tidewater & Southern Transit Company, building in Merced in 1912. John A. Mehling was the promoter and trustee for the early years of the railroad, and worked on land acquisition. In 1912, the electric interurban line opened between Stockton and Modesto, a total of 32 miles. The electric service was abandoned the same year, but retained through the streets of Modesto. An extension was built to Turlock in July 1916. The section was operated with both electric and steam power, with the first steam power in 1917. The last interurban train ran on this route in May, 1932 (Fickewirth 1992: 152).

Early Ownership of the Project Area

The land of the Project Area included portions of holdings of three individuals in 1895: P.G. Sharp to the north in sections 26 and 38, J.T. Salmon in sections 27 and 39, and the estate of Cutler Salmon on the east side of the property. In 1890, Cutler Salmon had a holding of 1,006 acres, and he was noted for being the first to discover gas in 1883 under his property while drilling for water (1890).

In 1914, the USGS topographic map indicates no buildings, and the only structure a north-south ditch.

Sharpe Army Depot

In 1942, the Lathrop Holding and Reconsignment Point was established in the project vicinity on what had been a sheep ranch, holding supplies for shipment through Bay Area ports. As many as 450 railroad cars would be loaded and unloaded each day.

The facility has gone through many changes with the changing needs of the military during times of conflict. After the end of World War II, the depot went through administrative and supply mission changes, a new name applied in 1948: Sharpe General Depot. The conflict in Korea brought a demand for increased services as the staffing, shipments and missions doubled to during the three years of the war. The Army curtailed supply operations, and the Sharpe site began providing medical supplies and subsistence items on a larger scale. In 1962, the facility became the Sharpe Army Depot.

In 1965, with the escalation of the war in Vietnam, Sharpe became the major conduit for supplies moving to Southeast Asia. The Sharpe facility has continued to operate with a large part of the staffing switched to the Tracy facility beginning in 1999.

Stockton Airport

The area now occupied by Stockton Metropolitan Airport was a typical agricultural area prior to World War I, but the interest in aviation generated by the war soon had an effect on this rural area. By 1925, the area was part of a large agricultural and stock raising operation, the Wilber Salmon Ranch. In that year Bill Gregg landed in a Curtiss Jenny, tied down at the fence of Mr.

Salmon's pig run and became the first pilot to land at the site (Bastian 1975:2). Since the Salmon Ranch was a large operation with many employees, there was usually sleeping space available and the cook supplied three meals a day. The ranch quickly became a popular landing spot for barnstormers and other pilots. The ability of Mr. Salmon's cook appears to have been the main reason that Stockton Airport came to be located where it is now located.

In 1926 the City of Stockton was looking for a site for a municipal air field. The Salmon Ranch site was chosen because it was already popular with pilots, it was near the Tidewater and Southern Railroad and the land was relatively cheap due to the rural location (Stockton Record, July 11, 1964). The City took over Salmon's lease on 23 acres owned by Fred P. Clark and purchased the land two years later. The City graded the runway, built a shed hanger and an office and Stockton Municipal Airport was born. The dedication ceremony on May 7, 1927, included a large aerobatics show.

The first commercial operation at the airport was the Allen-Lane Flying Service, run by Bert Lane and C. C. Allen. They sold rides around Stockton, charter flights to other cities, ran a flight school and organized air shows. The partners went on to other pursuits in 1929, but a successor company, Pathfinder Flying Service, was formed by former pilots of Allen-Lane. This company, owned first by Edward Nightingale and John Knox, then by Edward Wagner, then by Wagner and Henry von Berg, continued to operate out of Stockton Municipal until it was taken over by the military (Bastian 1975:3-5).

With the purchase of the original 23 acres of airport land in 1928, the City built a fifty-foot beacon tower and another hanger. Shortly after that, the City bought two more parcels from Fred Clark to accommodate the hoped-for expansion of commercial ventures at the airport. The Great Depression ended any hope for rapid development of private industry at the airport. Nevertheless, the City continued to look to the future and took advantage of lower prices to purchase an additional 147 acres in 1936, more than doubling the area of the airport. The runway was extended and oiled, sewers and storm drains were installed and a large adobe hanger was built through initiation of a project under the Work Projects Administration (Bastian 1975:5).

The City's plans for a major municipal airport at the site were temporarily shelved in 1940, when the Army Air Corps took over the airport and began construction of an advanced pilot training school. Plates 1 and 2 show the site of the airport in 1940 before military construction began at the site. Pathfinder Flying Service, still the only major commercial aviation venture located at the airport, moved to Oranges Field, north of town.

The Army required more land for its planned facility. The City was not financially capable of the purchase, so the County took a half interest in the existing property and helped purchase the additional land in a joint venture with the City. This was an investment in the future since the Army never purchased the property, rather, they leased about 1, 125 acres through 1965. At the termination of the lease the property was to revert to the City/County partnership. The Army immediately razed all of the existing buildings on the property except for the adobe hanger and

the Salmon House. The latter was moved off of the property, and the hanger was used by the military (Bastian 1975:8).

The Army Air Corps built three runways in a triangular shape, one of them later widened to 800 feet to allow multiple landings. By 1943, the Stockton Field facility included a road system, about twenty of earthen revetments for protecting the aircraft, and 368 buildings and structures. The base was completely mapped by the Office of the Post Engineer. Exhibits 1, 2 and 3, are the key from the Layout Map of Stockton Field dating to 1943. Plates 3 to 13 show the Stockton Field during the World War Il Il) period.

Through most of the war this was the largest advanced pilot training school in the west. Stockton Field was associated with the wartime careers of a large number of pilots, many with distinguished records. Among these are eleven of the thirty-six pilots that participated in the Doolittle Raid on Tokyo and Thomas Lanphier, the pilot who shot down Admiral Yamamoto's plane in the Pacific (Bastian 1975:9). The school trained pilots in both single and multi-engine aircraft. An average of 200 cadets graduated from the school every eight weeks. The last class of pilots graduated on March 2, 1945 and the Air Transport Command took over the base. The necessity for freight movement became more important than the training of pilots at that point in the war effort.

In August of 1946, a portion of the base was returned to the City and County. By 1948, the Air Transport Command vacated the base entirely. Sharpe Army Depot had executed a lease for use of Stockton Field facilities in 1943 and continued to lease buildings on the property from the City and County until 1973 (Bastian 1975:10). The armory for the California Air National Guard opened in 1952 and continues the military presence at the airport down to the present day.

After the war, civilian use of the airport grew quickly. In fact, United Airlines began scheduled service from Stockton to Los Angeles a month before the field was formally turned back to City-County control. Two of the military runways were abandoned, and the main runway was lengthened in phases to its present 8,650 feet. The joint ownership of the field was too cumbersome, so the County took sole ownership in 1956 as part of a plan to improve the airport. Other aspects of the plan included construction of new buildings (including the present terminal building), razing of unused buildings, improvements in technical facilities and the lengthening of the main runway.

In 1964, when the new tower and terminal were completed and the last addition was made to the runway, there was a ceremony officially renaming the airport as Stockton Metropolitan Airport.

RESEARCH

A record search was conducted for the current APE and a 0.125-mile radius at the Central California Information Center of the California Historical Resources Information System on June 16, 2020 (Record Search File No.: 11422L; Appendix 2).

The Project Area had been surveyed in the past by Peter Jensen in 2000 (SJ-4029). Jensen found no evidence of prehistoric period resources in the Project Area, but recorded P-39-000015, a section of the Tidewater and Southern Railroad. This railroad line will not be impacted by the project.

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission (NAHC) was requested to check the Sacred Lands files and provide a list of suitable contacts for further information. Their reply indicated that there are no properties listed in the Sacred Lands files. The NAHC provided a list of individuals and groups to contact regarding the property. Letters were sent to the groups and individuals listed below on August 21, 2020.

The contacts identified for the project are: Kathy Perez, North Valley Yokuts Tribe, Timothy Perez, North Valley Yokuts Tribe, and Corrina Gould, The Confederated Tribes of Lisjan. On August 24, 2020, we received two email replies from Kathy Perez, representing the Nototomne Cultural Preservation corporation, saying the area was sensitive and she recommended monitoring. The second response on August 24, 2020 from their corporation, included numerous pages of recommendations. All recommendations are attached in Appendix 3.

Copies of all communication may be found in Appendix 3. Any responses received after the completion of the report will be submitted to the client for transmittal to the appropriate agencies.

FIELD ASSESSMENT

Michael Lawson (resume, Appendix 1) completed a field survey of the APE in July and August 2020 (Figure 4). Survey of portions of the property were limited by the active agricultural use for an orchard and alfalfa crops.

At time of survey, the Project Area alfalfa fields and a walnut orchard, and small areas of fallow field and natural landscape. The alfalfa fields were planted in rotation, allowing recently mowed sections to be available for survey at regular intervals. The single walnut orchard was flood-irrigated regularly but allowed to dry thoroughly between floods, making survey possible.

Landform is flat and likely leveled, with low berms on both sides of French Camp Slough, which runs through the parcel from the southeast boundary at South Airport Way to the southwest boundary. Several dirt and gravel roads cross the parcel or run along the boundaries.

Soil types noted are mostly silty loam, but some areas are a finer clay-loam, mostly within fifty meters of the slough. This soil is uniform in a medium-dark brown color and shade. Occasional alluvial deposit pebbles were observed in the fields, but angular and rounded stones used as ballast

for the railroad line have been spread widely on both sides of the track. Most of the ballast is of basalt, which can often mimic worked tool-stone. Careful inspection of all rock encountered took place in order to abate misinterpretation. Also used as ballast was a greenish crypto-crystalline silicate, which also was manufactured by a crushing method, resulting in a product which resembles tool-stone. Careful inspection resulted in no observed artifacts.

Survey visibility was good for all areas of the parcel. Mowing and grooming of the fields and orchard, as well as disking of the non-planted areas along the slough provided a clear view of the soil. Soil disturbance was moderate, with few or no rodent dens observed, but plowing and road maintenance allowed for some subsurface inspection. Aside from crops, vegetation includes a sparse riparian zone tight against the slough consisting of tule sedges, occasional oak trees, and other bushes and grasses and trees.

Lawson used three-meter-wide transects to achieve complete coverage along French Camp Slough, and the southern portion of the Project Area. The remainder of the Project Area was covered with transects varying in width from 10 to 30 meters.

SURVEY RESULTS

There is no evidence of prehistoric period cultural resources within the Project Area. One historic site is present: a section of the Tidewater Southern Railroad, recorded as P-39-000015/CA-SJO-256H.

The resource is a standard gauge railroad now operated by Union Pacific Railway Company. It is located on a corridor established in 1912 for the Tidewater Southern, part of a 39-mile-long interurban railway linking the cities of Modesto and Stockton. The railway was converted into a freight carrying system in the 1930s with the modern track and trestle crossing built during the 1960s and 1970s. The line is still in use.

Approximately 2800 feet of the railroad line is within the current South Stockton Commerce Center Project Area. This segment was recorded by Jensen and Associates in 2000, who prepared a site form describing the various elements present in this section of the rail line, with several other sections of the system previously recorded. Because the original components of the rail system have been changed, this segment of the rail line is not considered eligible for the NRHP.

The railroad line will not be impacted by the proposed project.

RECOMMENDATIONS

A cultural awareness training session will be held for team workers by an archeologist before initiation of the project field work.

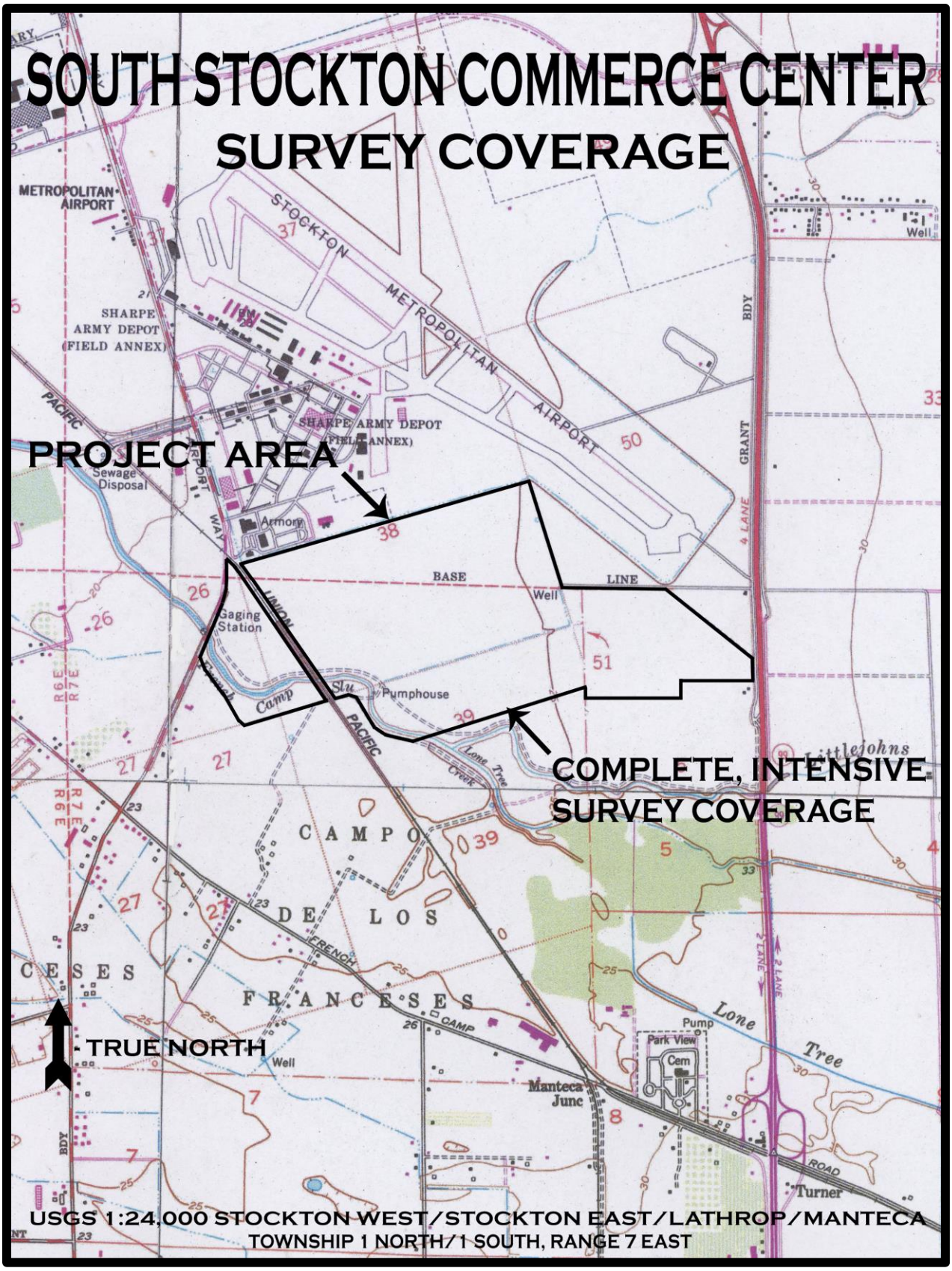

SOUTH STOCKTON COMMERCE CENTER
SURVEY COVERAGE
PROJECT AREA
COMPLETE, INTENSIVE SURVEY COVERAGE
TRUE NORTH
METROPOLITAN AIRPORT
SHARPE ARMY DEPOT (FIELD ANNEX)
SHARPE ARMY DEPOT (FIELD ANNEX)
Sewage Disposal
Armory
Saging Station
Pumphouse
BASE LINE
Well
Camp Stu
Lone Tree Creek
PACIFIC
UNION
GRANT
4 LANE
2 LANE
CAMPO DE LOS FRANCESES
FRENCH
CAMP
Park View Cem
Manteca Junc
Pump
Lone Tree
ROAD
Turner
Littlejohns
USGS 1:24,000 STOCKTON WEST/STOCKTON EAST/LATHROP/MANTECA
TOWNSHIP 1 NORTH/1 SOUTH, RANGE 7 EAST

Figure 4

The area within 500 feet of French Camp Slough is potentially sensitive for the presence of a buried site. An archeological monitor should be retained for subsurface work in that portion of the Project Area.

For the remainder of the property, although no prehistoric sites were found during the survey, there is a slight possibility that a site may exist and be totally obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for on-the-spot evaluation of the finding.

Discovery of Human Remains

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area suspected to overlie adjacent remains until the San Joaquin County Coroner has determined that the remains are not subject to any provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

If the San Joaquin County Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC).

After notification, the NAHC will follow the procedures outlined in Public Resources Code Section 5097.98, that include notification of most likely descendants (MLDs), and recommendations for treatment of the remains. The MLDs will have 24 hours after notification by the NAHC to make their recommendations (PRC Section 5097.98).

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APPENDIX 1

Resumes

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK **January 2020**
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

RECENT PROJECTS

Ms. Peak completed the cultural resource research and contributed to the text prepared for the DeSabla-Centerville PAD for the initial stage of the FERC relicensing. She also served cultural resource project manager for the FERC relicensing of the Beardsley-Donnells Project. For the South Feather Power Project and the Woodleaf-Palermo and Sly Creek Transmission Lines, her team completing the technical work for the project.

In recent months, Ms. Peak has completed several determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places. She has also completed historical research projects on a wide variety of topics for a number of projects including the development of navigation and landings on the Napa River, wineries, farmhouses dating to the 1860s, bridges, an early roadhouse, Folsom Dam and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites. She is currently involved as the principal investigator for the Teichert Quarry project adjacent to Twelve Bridges in the City of Rocklin, coordinating contacts with Native Americans, the Corps of Engineers and the Office of Historic Preservation.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project. She also served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Legacy*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the Land of Liberty series.

PEAK & ASSOCIATES, INC.
RESUME

MICHAEL LAWSON **January 2020**
Archeological Specialist
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95672
(916) 939-2405

PROFESSIONAL EXPERIENCE

Mr. Lawson has compiled an excellent record of supervision of excavation and survey projects for both the public and private sectors over the past twenty-two years. He has conducted a number of surveys throughout northern and central California, as well as serving as an archeological technician and crew chief for a number of excavation projects.

EDUCATION

B.A. - Anthropology - California State University, Sacramento

Special Course: Comparative Osteology. University of Tennessee, Knoxville. Forensic Anthropology Center. January 2018.

Intensive lab and outdoor study with human example from outdoor research facility, including typical and non-metric examples, compared with fifty non-human species most commonly confused with human remains. Outdoor research facility "The Body Farm" study included survey, photography, collection and identification of faunal and human bone fragments, with a Power Point presentation discussing finds.

EXPERIENCE

- Extensive monitoring of open space, streets and project development areas for prehistoric period and historic period resources. Areas monitored include Sutter Street in Folsom; Mud Creek Archeological District in Chico; Camp Roberts, San Luis Obispo County; Avila Beach, San Luis Obispo County; Edgewood Golf Course, South Lake Tahoe; Davis Water Project, Davis; Star Bend levee section, Sutter County; Feather River levees, Sutter County; Bodega Bay, Sonoma County; San Jose BART line extension, Santa Clara County; and numerous sites for PG&E in San Francisco.
- Over twenty years of experience working in CRM, volunteer, and academic settings in California historic, proto-historic, and prehistoric archaeology.
- Expertise in pedestrian survey, excavation, feature (including burial) exposure, laboratory techniques, research. Field positions include crew chief and lead technician.

APPENDIX 2

Record Search

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System
Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

Date: 6/16/2020

Records Search File No.: 11422L
Access Agreement: #137
Project: South Stockton Commerce Center

Robert Gerry
Peak & Associates, Inc.
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95762
916-939-2405

Invoice email: peakinc@surewest.net

peakinc@sbcglobal.net

Dear Mr. Gerry:

The Central California Information Center received your record search request for the project area referenced above, located on the Stockton East 7.5' quadrangle in San Joaquin County. The following reflects the results of the records search for the project study area and radius:

As per data currently available at the CCaIC, the locations of resources/reports are provided in the following format: ☒ custom GIS maps ☐ shape files ☐ hand-drawn maps

Summary Data:

Resources within the project area:	1: P-39-000015
Resources within the 1/8-mile radius:	2: P-004318, 5201
Reports within the project area:	5: SJ-04029, 6355, 6723, 6724, 7987
Reports within the 1/8-mile radius:	8: SJ-02543, 3145, 3360, 4596, 6626, 6994, 7221, 7823

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	☒ not requested	☐ nothing listed
OHP Historic Properties Directory: New Excel File: Built Environment Resource Directory (BERD) Dated 12/17/2019	☐ enclosed	☐ not requested	☒ nothing listed

Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☒ not available at CCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp		
Soil Survey Maps:	☒ not available at CCIC; please go to http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx		

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Note: Billing will be transmitted separately via email by our Financial Services office *($384.75), payable within 60 days of receipt of the invoice.

If you wish to include payment by Credit Card, you must wait to receive the official invoice

from Financial Services so that you can reference the CMP # (Invoice Number), and then contact the link below:

https://commerce.cashnet.com/ANTHROPOLOGY

Sincerely,

E. A. Greathouse

E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System

* Invoice Request sent to: Laurie Marroquin CSU Stanislaus Financial Services
lamarroquin@csustan.edu

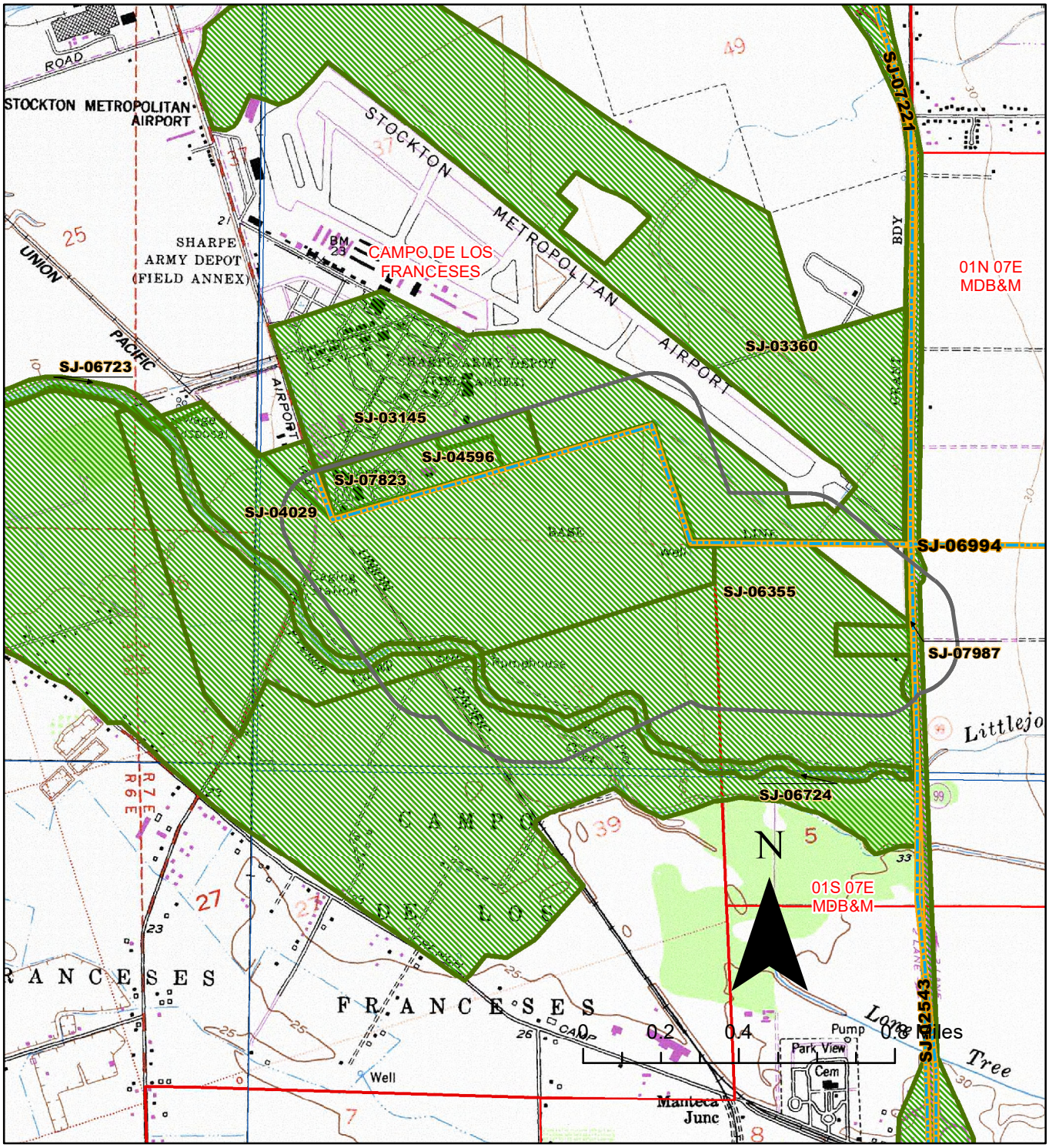
Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SJ-02543	NADB-R - 1362070	1992	Page, Susan E.	Department of Transportation Negative Archaeological Survey Report, District 10, San Joaquin County Route 99, Post Mile 10.0/14.1	Caltrans District 10	
SJ-03145	NADB-R - 1363573	1997	Peak & Associates, Inc.	Cultural Resources Inventory and Evaluation for the Stockton Metropolitan Airport Expansion Project, City of Stockton, San Joaquin County, California.	Peak & Associates, Inc.; for Reinard Brandley, Consulting Airport Engineer	39-000373, 39-000374, 39-000375, 39-000376, 39-000377, 39-000378, 39-000379, 39-000380, 39-000381, 39-000382, 39-000383, 39-000384, 39-000385, 39-000386, 39-000387, 39-000388, 39-000389, 39-000390, 39-000391, 39-000392
SJ-03360	NADB-R - 1363572	1996	Peak & Associates, Inc.	Cultural Resources Assessment of the Stockton Metropolitan Airport Expansion Project, City of Stockton, San Joaquin County, California.	Peak & Associates, Inc., for Reinard Bradley, Consulting Airport Engineer	39-000275, 39-000277, 39-000373, 39-000374, 39-000375, 39-000376, 39-000377, 39-000378, 39-000379, 39-000380, 39-000381, 39-000382, 39-000383, 39-000384, 39-000385, 39-000386, 39-000387, 39-000388, 39-000389, 39-000390, 39-000391, 39-000392, 39-000448, 39-000449, 39-000450
SJ-04029	NADB-R - 1363848	2000	Jensen, P. M.	Archaeological Inventory Survey: Proposed 450 ac Neilsen Industrial Park Project Area, Stockton, San Joaquin County, California.	Jensen and Associates, for Insite Environmental	39-000015
SJ-04596	NADB-R - 1364503	2000	Jones & Stokes Associates	Draft: Inventory and Evaluation of NRHP Eligibility of California Army National Guard Armories.	Jones & Stokes Associates	39-004317, 39-004318
SJ-06355	NADB-R - 1366583	2007	Kaptain, N., C. Gerike, and B. Matzen	A Cultural and Paleontological Resources Study for the Tidewater Crossing Project, Stockton, San Joaquin County, California.	LSA Associates, Inc., for H.D. Arnaiz Corp.	39-000098, 39-000266, 39-000340, 39-000459, 39-004591
SJ-06626	NADB-R - 1366829	2005	Nicholson, D.	Prehistoric Archaeological Surveys of Three California National Guard Facilities: Santa Cruz, Stockton, and Fresno	Archaeological Research Center, CSU Sacramento, for Military Dept., CA Army National Guard, Sacramento	39-004318
SJ-06723	NADB-R - 1367019	2008	URS Corporation	Technical Report, Final: Cultural Resources Survey Report for the Urban Levee Project.	URS Corporation; for Department of Water Resources	
SJ-06724	NADB-R - 1367026	2008	URS Corporation	Technical Report, Final: Cultural Resources Baseline Literature Review for the Urban Levee Project.	URS Corporation; for Department of Water Resources	39-002513

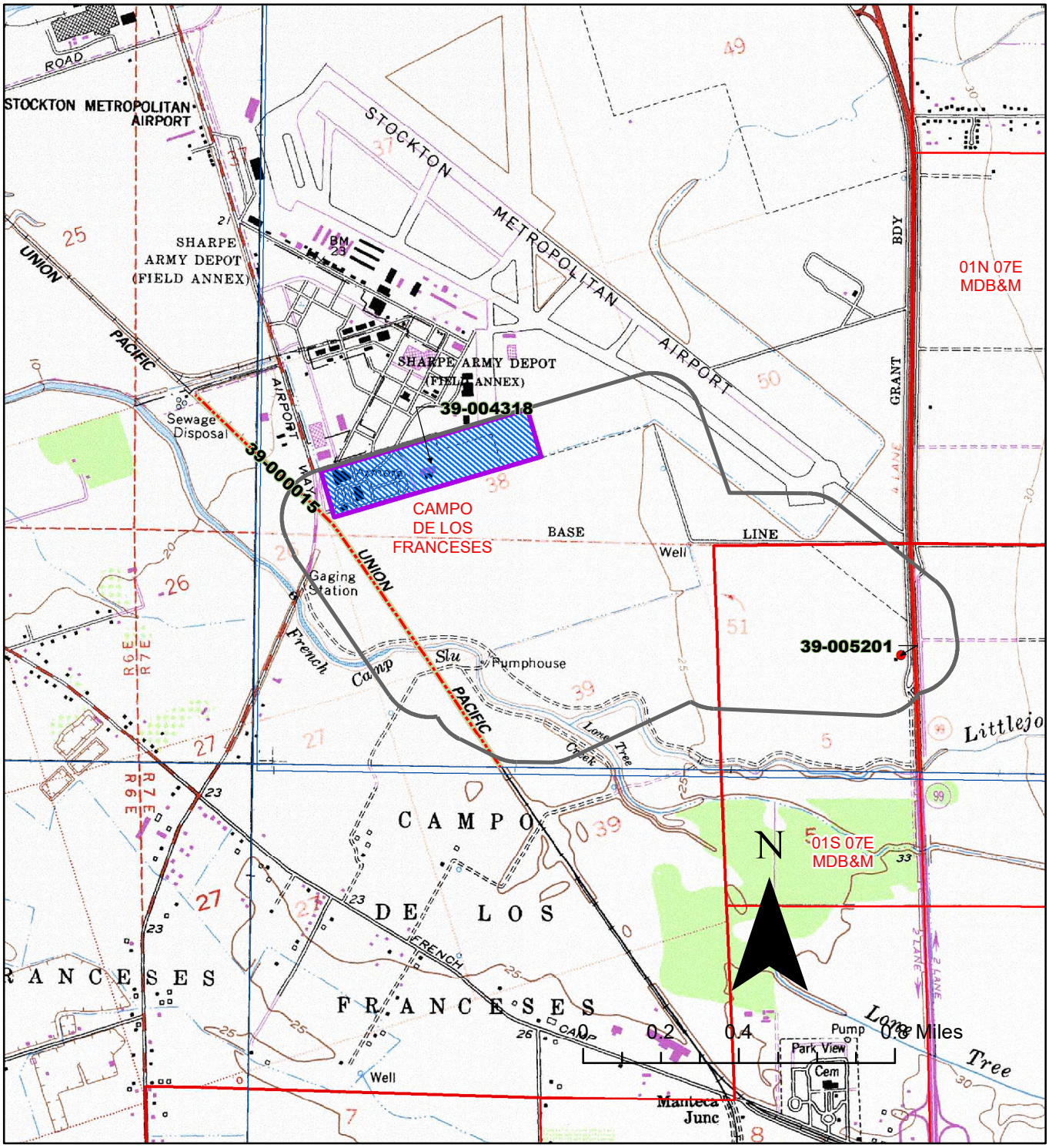
Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SJ-06994	NADB-R - 1367292	2008	Jensen, S.	Archaeological Inventory Survey, Newcastle Road Water Main Pipeline Project, c. 4-Mile Linear Corridor, San Joaquin County, California.	Genesis Society, for Insite Environmental	39-000015, 39-004318
SJ-07221	NADB-R - 1367560	2010	U.S. Department of Transportation, FHA, Caltrans	State Route 99 Manteca Widening Project on State Route 99 from the Austin Road Interchange to the Arch Road Interchange 10-SJ-99-PM 4.9/15.0, 10-0E6100 SCH#2009112045 Initial Study with Mitigated Negative Declaration/Environ. Assessment	U.S. Dept. Transportation, FHA, State of CA Dept. of Transportation (Caltrans)	
SJ-07823		2013	Bryceson, M.	Letter to OHP: Stockton Army Aviation Support Facility (AASF) Pavement Repairs (Stockton Armory)	Department of the Army to SHPO	39-004318
SJ-07987	Caltrans - PM 5.1/15.0 (KP 8.2/24.1) E.A. 10-0E6100	2009	Hunt, K., and N. Sikes	Historic Property Survey Report for the State Route 99 Manteca 6-Lane Widening Project San Joaquin, California PM 5.1/15.0 (KP 8.2/24.1) E.A. 10-0E6100.	SWCA Environmental Consultants, for Caltrans District 10	39-000394, 39-004273, 39-004646, 39-005201, 39-005202, 39-005203, 39-005204, 39-005205, 39-005206, 39-005207, 39-005208, 39-005209, 39-005210, 39-005211, 39-005212, 39-005213, 39-005214, 39-005215, 39-005216, 39-005217, 39-005218, 39-005219, 39-005220, 39-005221, 39-005222
SJ-07987		2009	Hunt. K., P. Daly, and N. Sikes	Historical Resources Evaluation Report For The State Route 99 Manteca 6-Lane Widening Project, San Joaquin County, California Pm 5.1/15.0 (KP 8.2/24.1) E.A. 10-0E6100	SWCA, for Caltrans Caltrans District 10	
SJ-07987		2009	Hunt, K., N. Sikes, C. Arrington, and A. Martinez	Archaeological Survey Report For The State Route 99 Manteca 6-Lane Widening Project, San Joaquin County, California Pm 5.1/15.0 (KP 8.2/24.1) E.A. 10-0E6100	SWCA, for Caltrans District 10	

CCaIC 11422 L South Stockton Commerce Center
Reports 1/8-mile radius
Stockton East USGS 7.5' Quadrangle



CCalC 11422 L South Stockton Commerce Center Resources1/8-mile radius
Stockton East USGS 7.5' Quadrangle



Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-39-000015	CA-SJO-000256H	Resource Name - Tidewater Southern Railway	Structure	Historic	AH07	1994 (Napton, L.K., California State University Stanislaus, Institute for Archaeological Research); 1994 (JRP Historical Consulting, for Woodward-Clyde); 1996 (Corbett et al., Corbett & Minor); 2000 (Fisher, Caltrans); 2000 (Lindquist, Office of Historic Preservation); 2000 (Jensen and Jensen, Jensen & Associates); 2002 (David S. Byrd, Jones & Stokes)	SJ-02262, SJ-02759, SJ-03358, SJ-03362, SJ-04029, SJ-04203, SJ-04204, SJ-04786, SJ-05309, SJ-05746, SJ-06994, SJ-07171, SJ-07310, SJ-08542, ST-07171
P-39-004318		Resource Name - Stockton National Guard Armory (complex)	Building, Other	Historic	HP34	2000 (D. Bryceson, Assoc. Environmental Planner, CA State Military Department, Office of Adjutant General)	SJ-04596, SJ-06626, SJ-06994, SJ-07823
P-39-005201		Caltrans - MR#1; Resource Name - 8899 South Highway 99	Building, Structure, Object	Historic	HP02; HP03; HP04; HP39	2008 (Daly and Hanes, SWCA Environmental Consultants)	SJ-07987

APPENDIX 3

Native American Consultation

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 20, 2020

Neal Neuenschwander
Peak & Associates, Inc.

Via Email to: peakinc@yahoo.com
Cc: canutes@verizon.net

Re: South Stockton Commerce Center Project, San Joaquin County

Dear Mr. Neuenschwander:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the North Valley Yokuts Tribe on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Joaquin County
8/20/2020

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717
Linden, CA, 95236
Phone: (209) 887 - 3415
canutes@verizon.net

Costanoan
Northern Valley
Yokut

North Valley Yokuts Tribe
Timothy Perez, MLD Contact
P.O. Box 717
Linden, CA, 95236
Phone: (209) 662 - 2788
huskanam@gmail.com

Costanoan
Northern Valley
Yokut

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue
Oakland, CA, 94603
Phone: (510) 575 - 8408
cvltribe@gmail.com

Bay Miwok
Ohlone
Delta Yokut

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed South Stockton Commerce Center Project, San Joaquin County.

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

August 21, 2020

Katherine Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linda, CA 95236

Subject: South Stockton Commerce Center Project, City of Stockton, San Joaquin County, California

Dear Honorable Chairperson Perez,

The South Stockton Commerce Center Project is a 423-acre area with proposed development of: 11 acres commercial; 298 acres industrial; 54 acres open space; 41 acres storm basins/outfall/pump stations; and, 19 acres road-right-of-way. The 423-acre area is located south of, and adjacent to, the Stockton Airport, west of State Route 99, and east of Airport Way (please see attached topographic map quadrangle).

A record search was conducted by the Central California Information Center, CHRIS with negative results (no recorded sites within or adjacent to the project area). The 423-acre area has been inspected two times by archeologists with negative results (no prehistoric cultural resources identified).

If you have any information concerning cultural resources within the project area, or wish to comment on the proposed South Stockton Commerce Center Project, please don't hesitate to contact me, Neal Neuenschwander, Staff Archeologist, Peak & Associates, Inc., 3161 Godman Avenue, Chico, CA 95973, (530) 342-2800, peakinc@yahoo.com Thank you for your time reviewing this letter and attached map of the project area.

Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

August 21, 2020

Timothy Perez, MLD Contact
North Valley Yokuts Tribe
P.O. Box 717
Linda, CA 95236

Subject: South Stockton Commerce Center Project, City of Stockton, San Joaquin County, California

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Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

August 21, 2020

Corrina Gould, Chairperson
The Confederated Villages of Lisjan
10926 Edes Avenue
Oakland, CA 94603

Subject: South Stockton Commerce Center Project, City of Stockton, San Joaquin County, California

Dear Honorable Chairperson Gould,

The South Stockton Commerce Center Project is a 423-acre area with proposed development of: 11 acres commercial; 298 acres industrial; 54 acres open space; 41 acres storm basins/outfall/pump stations; and, 19 acres road-right-of-way. The 423-acre area is located south of, and adjacent to, the Stockton Airport, west of State Route 99, and east of Airport Way (please see attached topographic map quadrangle).

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Sincerely,

Neal Neuenschwander

Neal Neuenschwander
Staff Archeologist

Enc. USGS topographic map

On Monday, August 24, 2020, 09:25:03 AM PDT, Katherine Perez <canutes@verizon.net> wrote:

Hello Neal,

We received your letter regarding the South Stockton Center Project. The proposed project is in a sensitive area. It is the recommendation of the Tribe to have Native American Monitoring.

Nototomne Cultural Preservation
Northern Valley Yokuts/Bay Miwuk/ Ohlone/ Patwin
Katherine Perez
P. O Box 717
Linden, CA 95236
Cell: 209.649.8972
Email: canutes@verizon.net

Sent from my iPhone

From: Katherine Perez <canutes@verizon.net>
To: peakinc@yahoo.com <peakinc@yahoo.com>
Sent: Monday, August 24, 2020, 07:39:17 PM PDT
Subject: Re: South Stockton Center Project

Hello Neal,

We would like to submit in addition to our concerns some Mitigation Measures from the perspective of Native American to assist and minimize the impact to inadvertent discoveries during ground disturbance.

Please see the attachments above.

Nototomne Cultural Preservation
Northern Valley Yokut/Ohlone/Bay Miwuk/Patwin
Katherine Perez
P.O Box 717
Linden, CA 95236
Cell: 209649.8972
Email: canutes@verizon.net

Inadvertent Discoveries Mitigation Measures

Develop a standard operating procedure, points of contact, timeline and schedule for the project so all possible damages can be avoided or alternatives and cumulative impacts properly accessed.

If potential tribal cultural resources, archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other Project personnel during construction activities, work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American Mmonitor from an interested Native American Tribe is present. A qualified cultural resources specialist and Native American Rrepresentatives and Monitors from culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations will be documented in the project record. For any recommendations made by interested Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with Northern Valley Yokuts Tribe and Nototomne Cultural Preservation regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.

Tribal Cultural Resource Avoidance Mitigation Measure

Avoidance and preservation in place is the preferred manner of mitigating impacts to tribal cultural resources and will be accomplished by several means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/ or other resources; incorporating sites within parks, green-space or other open space; covering archaeological sites; deeding a site to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity. Recommendations for avoidance of cultural resources will be reviewed by the CEQA lead agency representative, interested Native American Tribes and the appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project area to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or modification or realignment to avoid highly significant features within a cultural resource. Native American Representatives from interested Native American Tribes will be allowed to review and comment on these analyses and shall have the opportunity to meet with the CEQA lead agency representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.

- If the resource can be avoided, the construction contractor(s), with paid Native American monitors from culturally affiliated Native American Tribes present, will install protective fencing outside the site boundary, including a buffer area, before construction restarts. The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area". Native American representatives from interested Native American Tribes and the CEQA lead agency representative will also consult to develop measures for long term management of the resource and routine operation and maintenance within culturally sensitive areas that retain resource integrity, including tribal cultural integrity, and including archaeological material, Traditional Cultural Properties and cultural landscapes, in accordance with state and federal guidance including National Register Bulletin 30 (*Guidelines for Evaluating* and *Documenting Rural Historic Landscapes*), Bulletin 36 (*Guidelines for Evaluating and Registering Archaeological Properties*), and Bulletin 38 (*Guidelines for Evaluating and Documenting Traditional Cultural Properties*); National Park Service Preservation Brief 36 (*Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*) and using the Advisory Council on Historic Preservation (ACHP) *Native American Traditional Cultural Landscapes Action Plan* for further guidance. Use of temporary and

permanent forms of protective fencing will be determined in consultation with Native American rrepresentatives from interested Native American Tribes.

Tribal Cultural Resource – Awareness Training - Mitigation Measure

A consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in project implementation will be developed in coordination with interested Native American Tribes. The brochure will be distributed and the training will be conducted in coordination with qualified cultural resources specialists and Native American Representatives and Monitors from culturally affiliated Native American Tribes before any stages of project implementation and construction activities begin on the project site. The program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally-appropriate treatment of any find of significance to Native Americans and behaviors, consistent with Native American Tribal values.

Post-Ground Disturbance Site Visit Mitigation Measure

A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the applicant shall notify the CEQA lead agency representative of the proposed earthwork start-date, in order to provide the CEQA lead agency representative with time to contact the Northern Valley Yokut / Ohlone / Bay Miwuk tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of ground-breaking activity. During this inspection, a site meeting of construction personnel shall also be held in order to afford the tribal representative the opportunity to provide tribal cultural resources awareness information. If any tribal cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the project applicant shall immediately notify the CEQA lead agency representative. The project applicant shall coordinate any necessary investigation of the site with a Northern Valley Yokut / Ohlone / Bay Miwuk tribal representative, a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the Northern Valley Yokut / Ohlone / Bay Miwuk and provide proper management recommendations should potential impacts to the resources be found by the CEQA lead agency representative to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the CEQA lead agency representative by the qualified archaeologist. Possible management recommendations for tribal cultural resources, historical, or unique archaeological resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by CEQA lead agency representative staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources, including the use of a Native American Monitor whenever work is occurring within 100 feet of the find.

Native American Monitoring Mitigation Measure

To minimize the potential for destruction of or damage to existing or previously undiscovered archaeological and cultural resources and to identify any such resources at the earliest possible time during project-related earthmoving activities, THE PROJECT PROPONENT and its construction contractor(s) will implement the following measures:

- Paid Native American monitors from culturally affiliated Native American Tribes will be invited to monitor the vegetation grubbing, stripping, grading or other ground-disturbing activities in the project area to determine the presence or absence of any cultural resources. Native American representatives from cultural affiliated Native American Tribes act as a representative of their Tribal government and shall be consulted before any cultural studies or ground-disturbing activities begin.

- Native American representatives and Native American monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted or slowed if such sites or objects are identified within the direct impact area. Only a Native American representative can recommend appropriate treatment of such sites or objects.

- If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone, are discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a archaeologist who meets the Secretary of the Interior's qualification standards can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Caltrans, the SHPO, and other appropriate agencies. Appropriate treatment measures may include development of avoidance or protection methods, archaeological excavations to recover important information about the resource, research, or other actions determined during consultation.

- In accordance with the California Health and Safety Code, if human remains are uncovered during ground disturbing activities, the construction contractor or the County, or both, shall immediately halt potentially damaging excavation in the area of the burial and notify the County coroner and a qualified professional archaeologist to determine the nature of the remains. The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands, in accordance with Section 7050(b) of the Health and Safety Code. If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). After the coroner's findings are presented, the County, the archaeologist, and the NAHC-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed.

APPENDIX D

Hydrologic and Hydraulic Assessment

KJELDSEN SINNOCK NEUDECK
CIVIL ENGINEERS & LAND SURVEYORS

Stephen K. Sinnock, P.E.
Christopher H. Neudeck, P.E.
Neal T. Colwell, P.E.
Barry O'Regan, P.E.

2415-0010
08-300

FILE MEMORANDUM

December 31, 2020

To: Ryan Van Groningen, Trevor Smith

Subject: **DRAFT** Proposed Project Conditions Hydrologic and Hydraulic Assessment

Project: South Stockton Commerce Center

From: KSN

Background & Floodplain Regulations

The Five Corners Group, LLC (Owner) has requested Kjeldsen, Sinnock, & Neudeck, Inc. (KSN) assist in assessing flood plain issues associated with a 450± acre property for future develop for industrial/warehousing use (South Stockton Commerce Center Project). The South Stockton Commerce Center Project is situated along the banks of French Camp Slough near the Stockton Metropolitan Airport, in Stockton, California. Figure 1 shows the project location and extents. It falls under two floodplain regulatory frameworks: the National Flood Insurance Program (NFIP); and since the project location is within the City of Stockton, a designated "Urban Area", it also must comply with the California Central Valley Flood Protection Act of 2008 (Urban Level of Flood Protection). The influence of these two regulatory structures is discussed further below.

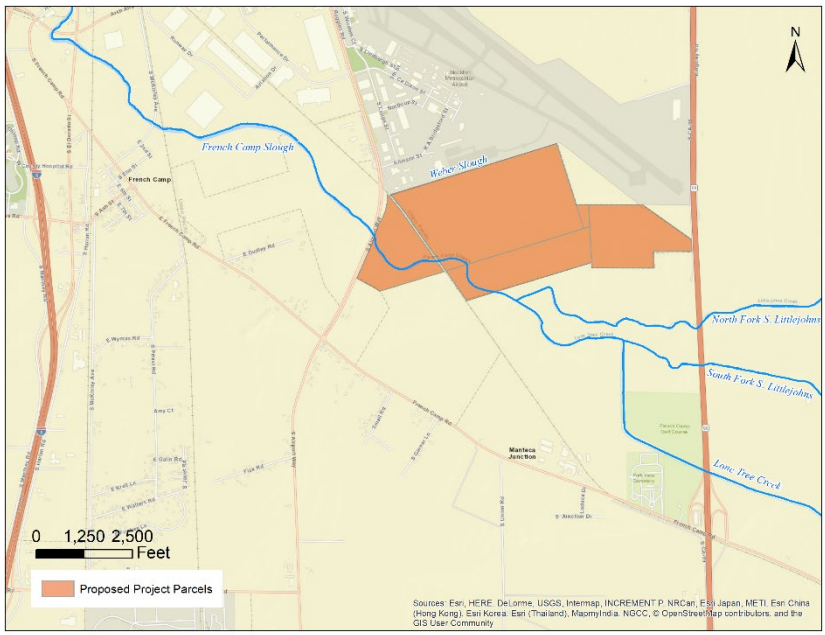


Figure 1 - South Stockton Commerce Center Project Location

National Flood Insurance Program

The NFIP is a federal program aimed at reducing the impacts of flooding on private and public structures. It does this primarily through two different mechanisms: flood insurance, and by requiring local communities to adopt floodplain ordinances which regulate the development of floodplains. The NFIP is administered by the Federal Emergency Management Agency (FEMA) at the national level, and by cities and counties at the local level. FEMA conducts periodic studies to identify and update maps of flood prone areas (flood zones). These maps, known as Flood Insurance Rate Maps (FIRMs) are used by the NFIP to identify areas where flood insurance is required for structures with federally backed mortgages, and where floodplain ordinance regulations must be applied. These flood prone areas are referred to as Special Flood Hazard Areas (SFHA) on the FEMA FIRMs. In order for structure owners to be able to purchase flood insurance, their communities (city or county) must adopt a minimum set of floodplain ordinances which regulate development within the FEMA identified floodplains.

A review of the FEMA FIRMs covering the South Stockton Commerce Center Project area was conducted to determine the potential FEMA floodplain regulatory impacts on the proposed project. The FIRMs which were reviewed are shown in Table 1 while Figure 2 shows this FIRM data overlain with the project footprint.

Table 1 - FEMA FIRM Maps Reviewed

Map Number	Effective Date
06077C0470F	October 16, 2009
06077C0490F	October 16, 2009
06077C0610F	October 16, 2009
06077C0630F	October 16, 2009

Figure 2 shows the National Flood Hazard Layer (NFHL) for the project site and it shows that the project site is located within several flood zones. The NFHL is the underlying data which is shown on the FEMA FIRMs. On these FIRMs, the Zone X designation is used by FEMA to indicate areas with a 0.2 percent annual chance of flooding (also known as the 500-year flood). The 1 percent annual chance of flooding (or 100-year flood) is shown with the Zone AO (Depth 1 Foot) area. Zone AO's are typically used to indicate shallow flooding of a given depth.

For the unshaded (or area with no designated zones), there are no special FEMA related restrictions on development. The Zone X would likewise poses no FEMA prohibitions for this project. However, the Zone AO is considered a Special Flood Hazard Area (SFHA) and would require that the development be elevated above the base flood elevation (BFE). The City of Stockton's Municipal Code states that in a Zone AO, the lowest finished floor be: "elevated above the highest adjacent grade to a height two (2) feet above the depth number specified in feet on the FIRM, or elevated at least four (4) feet above the highest adjacent grade if no depth number is specified." As there is a depth (1 foot) published for the applicable Zone AO for this project, the building footpads should be elevated three feet (1-foot depth plus 2 feet freeboard) above the highest adjacent grade to the building.

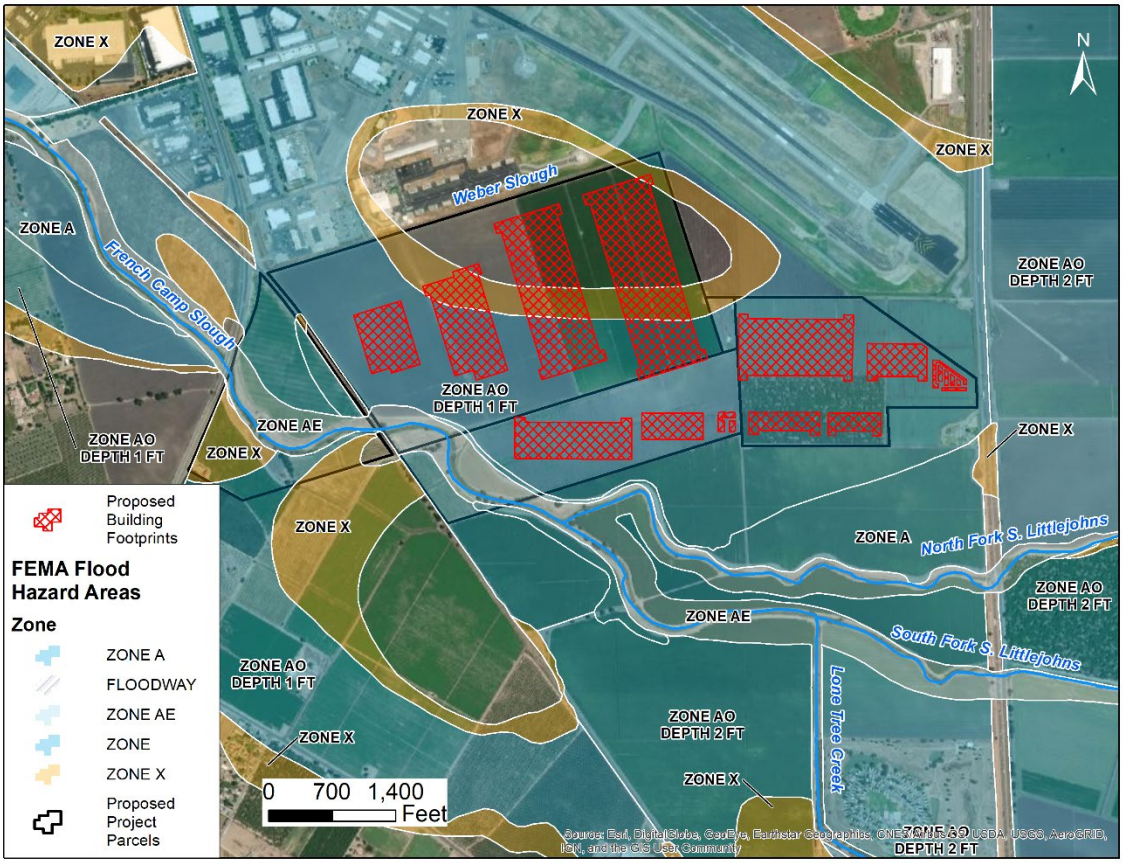


Figure 2 - NFHL & Project Site

The typical way to elevate larger developments is to build the development upon fill placed to bring the finished floor elevation to two feet above the BFE. When using this approach, the typical method for obtaining FEMA approval is to file a Conditional Letter of Map Revision based on Fill (CLOMR-F). This requires the local NFIP administrating community's approval before it can be submitted to FEMA for review and approval. The CLOMR-F provides the developer assurances that once the stated finished floor elevation is achieved, the structure will be removed from the SFHA. Once the project is constructed and 'as-built' information is provided to FEMA, a final Letter of Map Revision based on Fill (LOMR-F) can be obtained through a similar process.

As Figure 2 indicates, a portion of the project site is located with an SFHA. Therefore, an analysis was conducted to determine potential impacts to the floodplain from placing fill to bring the finished floor elevation to three feet above highest adjacent grade. This analysis is discussed in detail below.

California Central Valley Flood Protection Act of 2008

The California Central Valley Flood Protection Act of 2008, also known as SB 5 adds additional flood risk considerations for development within urban or urbanizing areas in the California Central Valley. Stockton is considered under the law to be an urban area and thus falls under the purview of SB 5's Urban Level of Flood Protection (ULOP) requirement. ULOP requires development within urban areas

to meet certain standards related to a 200-year level of flood protection. The '200-year flood' is a flood that has a 0.5 percent chance of occurring in any given year.

In order to determine if the project site would be subject to ULOP regulations, the San Joaquin County Public Works 200-year Flood Map website[1] was reviewed for 200-year flood depths. According to Stockton Municipal Code Title 16.90, new developments may be permitted in areas "of potential flooding of three feet or less from a storm event that has a 1-in-200 chance of occurring in any given year, from sources other than local drainage, in urban or urbanizing areas…" Figure 3 shows the potential flooding from the San Joaquin County Public Works Webpage for the project area.

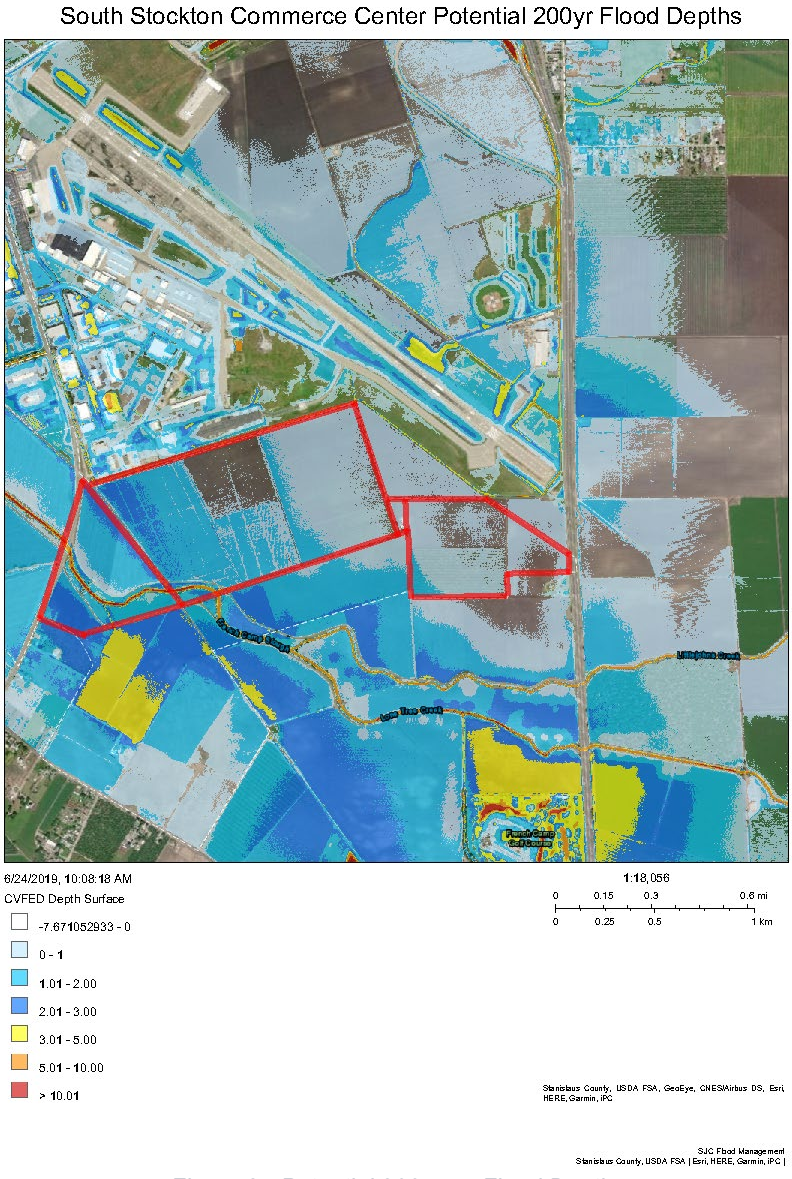


Figure 3 - Potential 200-year Flood Depths

[1] http://sjc-gis.maps.arcgis.com/apps/webappviewer/index.html?id=3b352a92c2c142ccbf07266fd69fe1fb

As can be seen in Figure 3, there are no areas within the project area of three feet or more in potential flood depths and thus the project complies with SB 5. The City of Stockton will need to make an SB 5 compliance finding when issuing discretionary approvals for the project.

South Stockton Commerce Center Flood Assessment Analysis

Previous Studies

A review of previous studies was performed to determine potential starting points for analyzing potential impacts to the floodplain. In total, three previous studies were found for this project area and are discussed in further detail below.

Federal Emergency Management Agency

In October 2016, FEMA updated its Flood Insurance Study (FIS) for San Joaquin County and Incorporated Areas which includes the South Stockton Commerce Center Project site. While the FIS reports on the methods and techniques used in its analyses of French Camp Slough, North Littlejohns Creek, South Fork North Littlejohns Creek, and Lone Tree Creek it does not state when the analyses were performed, the methodologies used, or who developed these models. While FIS's typically report this information, for older studies it is usually reported as not available as was found to be the case for this area. This typically means the actual hydrologic and hydraulic analyses are many years old if not decades old. Older studies do not necessarily correlate to inaccurate studies, it does however, limit the amount of data that may be leveraged for future studies.

California Department of Water Resources

In 2013, the California Department of Water Resources (DWR) completed the Central Valley Floodplain and Evaluation Program (CVFED). CVFED was developed to support the ULOP required from the Central Valley Flood Protection Act of 2008. The products from this program were:

- LiDAR for the California Central Valley
- 200-year flood hydrology for select streams and rivers
- 200-year flood hydraulic models for select streams and rivers
- 200-year floodplain maps for urban areas

The program was focused on analyzing the State Plan of Flood Control Levees. However for the purposes of the South Stockton Commerce Center Project, the major sources of flooding for the project area were all studied under the CVFED Program. The CVFED hydraulic models were acquired from DWR and an initial comparison of the peak CVFED flood flows for French Camp Slough indicates that they are relatively close to the published FEMA flow rates.

Tidewater Crossings Project California Environmental Quality Act

In 2006, a study was conducted for a potential development called Tidewater Crossing along French Camp Slough in conjunction with a CEQA process. This study's hydrologic and hydraulic analyses analyzed the Littlejohns Creek Watershed, the Lone Tree Creek Watershed, the Weber Slough Watershed, and the French Camp Slough Watershed. The analysis consisted of a detailed hydrologic and hydraulic analyses of both the pre- and post-project conditions. The proposed project has not been constructed. The data developed to prepare the study's report are unavailable at the time of the drafting of this memorandum, but the general findings of the report have proven helpful even if out of date.

The above-mentioned studies were reviewed with the intent of leveraging existing data for use in determining the flood impacts and flood control needs for the proposed project. While no previous study captured everything needed to analyze the impacts of the proposed development upon the floodplain at the project site, there are still useful data to be leveraged from each. The following sections detail the engineering study to analysis the flood control aspects of the proposed project.

Existing Conditions – Hydrologic & Hydraulic Assessment

Hydrologic Data

The hydrologic data used in establishing the existing conditions were obtained from DWR's updated CVFED model. Selected 100-year flood event peak discharges, in cubic feet per second (cfs) used are presented below:

Table 2 - Selected 100-year Peak Discharges

Flooding Source	Peak Discharge (cfs)
North Littlejohns Creek	462
North Fork South Littlejohns Creek	1,390
South Fork South Littlejohns Creek	2,092
Weber Slough	301
Walker Slough	1,570

Hydraulic Model Source

The CVFED HEC-RAS model obtained from DWR was used to model the existing conditions of the project location. This model covered the project area and was already converted to the latest version of HEC-RAS which allowed needed modifications for the modeling of both pre- and post-project conditions. A significant assumption made for this model is that all levees hold. Overtopping of the levees is permitted in the model, but no seepage, breaching, or eroding of the levees is simulated.

Modifications made

In order to accurately simulate the conditions present at the project location, KSN made two primary modifications to the CVFED HEC-RAS model received from DWR: the addition to the model of Weber Slough and the conversion of several areas modeled as flood storage areas to two-dimensional model areas.

Weber Slough Modifications

The first modification made to the CVFED HEC-RAS model was to add Weber Slough to the hydraulic model. The model as provided by DWR did not have Weber Slough as part of the hydraulic stream network; rather it was included in a storage area and the flows coming from and through Weber Slough were aggregated with shallow surface flows modeled by the storage areas. While the previous approach sufficed for the CVFED modeling goals, the proposed project would be changing hydraulic conditions within one of the storage areas and the methods used in the CVFED program to model the project area were not detailed enough to capture the changes proposed.

The Weber Slough channel was added into the model using bridge and culvert data collected by NorthStar Engineering. Cross Section data was obtained from the CVFED LiDAR. A review of the LiDAR was performed to ensure that the Weber Slough Channel was sufficiently captured during the LiDAR acquisition. Once the channel, cross sections, and structures were added to the hydraulic

model, channel 'n' values were determined through a combination of aerial imagery, survey photographs, and publicly available data. The upstream flow conditions were obtained from the DWR hydraulic model. The HEC-RAS model had hydrograph data which described the storm water discharges into Weber Slough from the outfalls located near the National Guard Armory and the flows upstream of that location. The flows from the outfall pipes were introduced into Weber Slough via a lateral inflow boundary condition at the appropriate location, while the remaining flow was input at the upstream limit of the Weber Slough channel (at the downstream face of Weber Slough's crossing of California State Highway 99).

Storage Area Conversions

The second modification made to the DWR HEC-RAS model was to convert two storage areas to four two-dimensional flow domains (see Table 3). While the project is physically located only in one of the storage areas, the other storage area was included in the conversion to ensure that areas adjacent to the project location were modeled in sufficient detail to accurate determine the project impacts (or lack thereof) both on and off the project site. The north-south dividing line between the areas was Weber Slough. The east-west dividing line is Airport Way. The areas can be seen in Figure 6.

Table 3 - Storage Areas Converted to Two-dimensional Areas (Existing Conditions)

Storage Area Name	2D Area Name	Area (square miles)	Nominal Cell Size (feet by feet)	Total Cells
3FCS30	3FCS30 North	0.73	50 x 50	7,959
	3FCS30 South	0.14	25 x 25	6,635
3FCS40	3FCS40 North	0.90	25 x 25	107,119
	3FCS40 South	2.27	25 x 25	44,457

Topographic Data Source

KSN acquired LiDAR data for the project area from the California Department of Water Resources. The bare earth LiDAR data was used to develop an existing conditions terrain surface for Weber Slough and the newly added two-dimensional flow areas. The specific LiDAR tiles used are presented below in Table 4.

Table 4 - CVFED Bare Earth LiDAR Tiles Used

0786n0374e5k	0786n0376e5k	0786n0378e5k	0786n0380e5k
0784n0374e5k	0784n0376e5k	0784n0378e5k	0784n0380e5k
0782n0374e5k	0782n0376e5k	0782n0378e5k	0782n0380e5k

The LiDAR data was provided by DWR in several formats. The bare earth digital elevation model (DEM) was input into HEC-RAS's RAS Mapper processing software to develop a digital surface model usable by HEC-RAS. The cell sizes used in the digital surface model were five feet by five feet.
The results of the hydraulic modeling to use to set "existing conditions" can be found in the Figure 4.

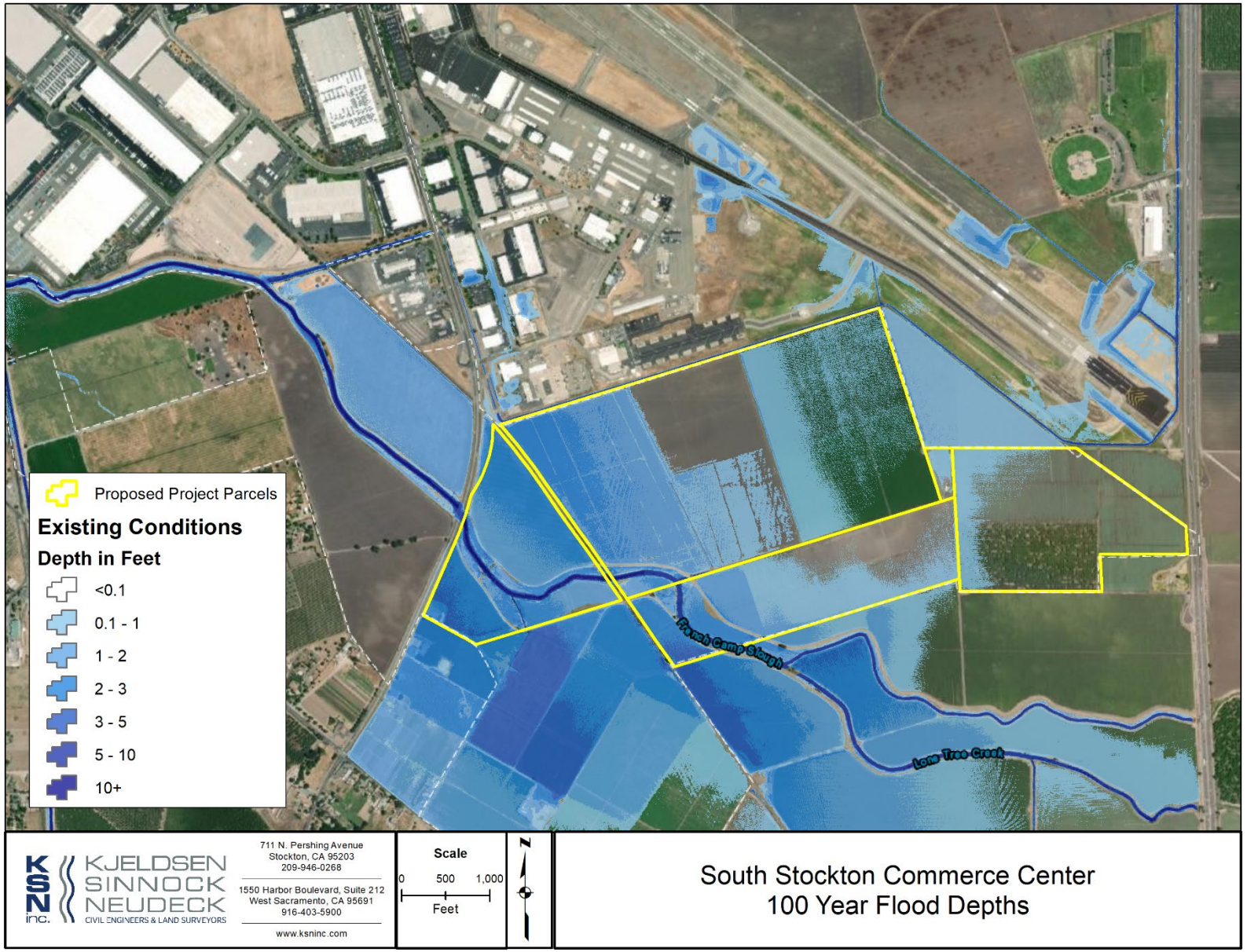


Figure 4 - Existing Conditions 100-year Flood Depths

Proposed Conditions – Description

Proposed Site Configuration

KSN received a post project site plan from NorthStar Engineering on October 21, 2020. This plan information included rough grading surfaces, proposed building layouts, flood control basin locations and flood control channel alignments. KSN used these proposed terrain modifications to build the proposed conditions model. A significant assumption made for this model is that all levees hold. Overtopping of the levees is permitted in the model, but no seepage, breaching, or eroding of the levees is simulated.

Flood Control Channel

In order to route floodwaters away from the proposed buildings and other infrastructure, a flood control channel was placed along the northern edge of the project. The total length is approximately 5,500 feet. Its layout is presented in Figure 7. The flood control channel slope is approximately 0.02%. The flood channel collects water leaving Weber Slough towards the south and routes it towards the west eventually discharging the Weber Slough overflow into the northern flood control basin (described below). The flood control channel widens at the northern edge of the project. A typical cross section is shown below in Figure 5.

Flood Control Basins

A pair of flood control basins are proposed as part of the project's flood control system. They are depicted in Figure 7 below. The northern flood control basin is fed directly by the flood control channel and is approximately ± 450 acre-feet (ac-ft) in capacity. The southern flood control basin (± 132 ac-ft capacity) is filled primarily by overflows from the French Camp Slough levee system to the south with some minor collection of Weber Slough overflows between Airport Way and the Union Pacific Railroad.

The Union Pacific Railroad provides a hydraulic break between the project areas contributing to the northern flood control basin and the southern flood control basin as it does not overtop during a 100-year flood event. The flood control basins are drained via pump systems which are not included in this analysis. The assumption is that the draining of both flood control basins will occur post flood event.

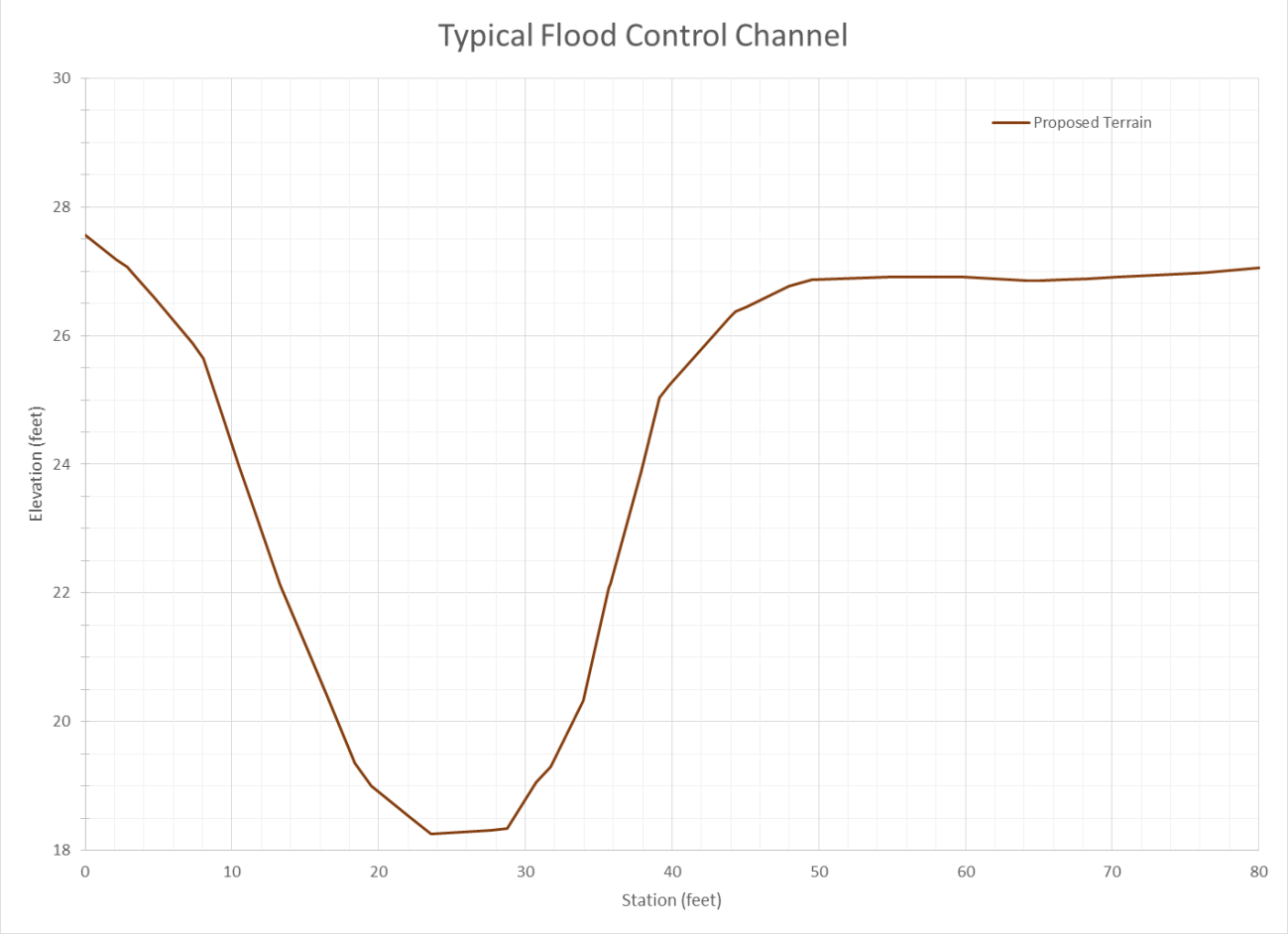


Figure 5 - Typical Proposed Flood Control Channel (Downstream)

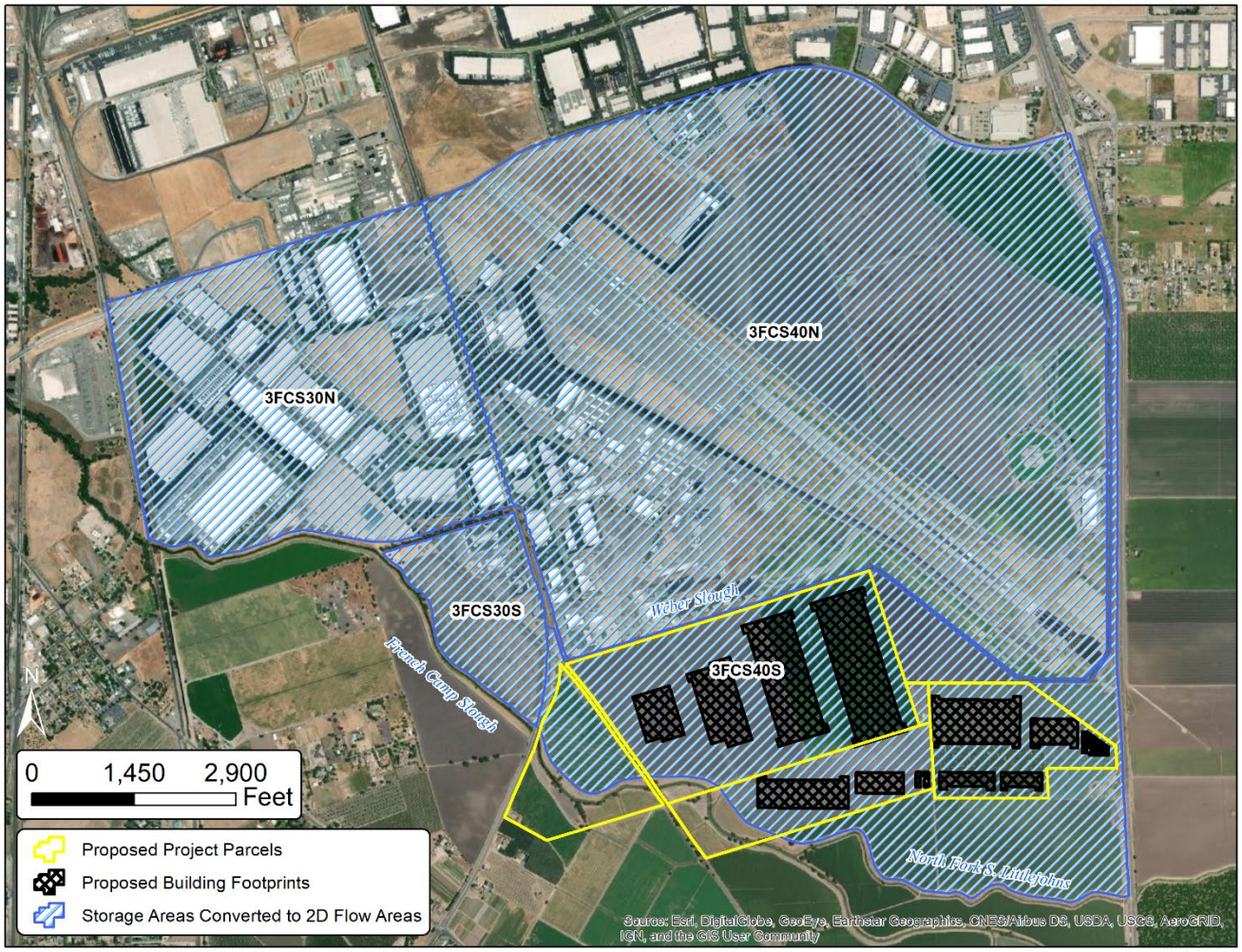


Figure 6 - Storage areas converted to 2d flow areas

Proposed Conditions – Hydrologic & Hydraulic Assessment

Hydrologic data

The proposed conditions do not involve any changes to the hydrologic boundary conditions of the hydraulic model. Therefore, no changes were made to the flow coming into the model or the downstream boundary conditions.

Flood Control Basins

Both the north and south proposed flood control basins were entered into the Existing Conditions terrain to account for the increased floodplain storage. The north basin was analyzed under two different assumptions: a) empty at the beginning of the flood event and b) with 10-year project site runoff in the north basin. The second assumption (with on-site stormwater) is unlikely to occur but was analyzed to determine the robustness of the flood control system. NorthStar Engineering calculated the 10-year post-project storm runoff to be 126 ac-ft. The inclusion of the 10-year event's project site runoff in the north flood control basin is a conservative assumption as a 10-year storm event followed very quickly by a 100-year storm event is not likely. The joint-probability analyses to determine the actual recurrence interval of this assumption is beyond the scope of this study.

Due to the size of the flood control basins, the nominal cell sizes were not reduced as the grid cells provided adequate resolution to simulate the capacity and drainage characteristics of the basins.

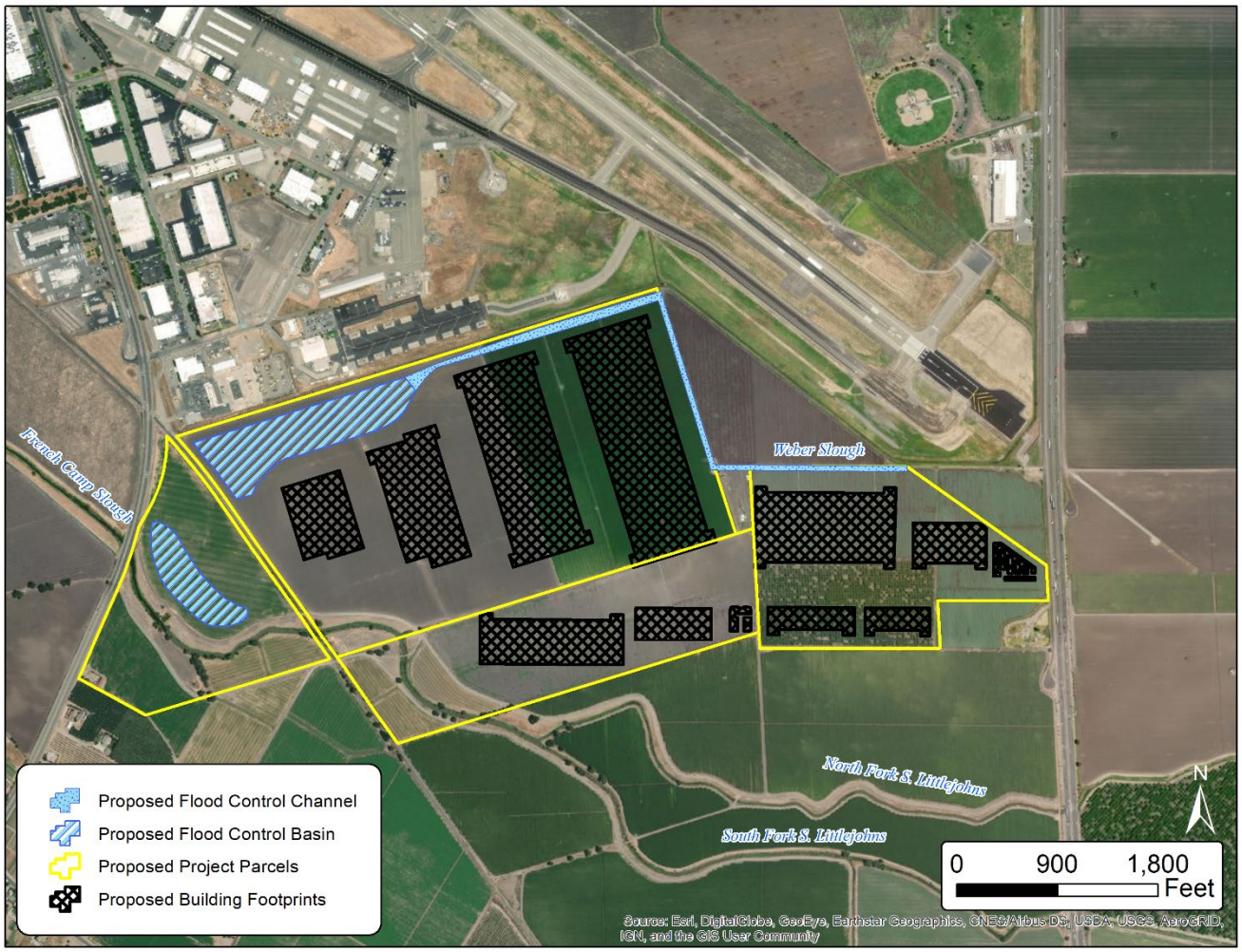


Figure 7 - Proposed Conditions

Flood control channel

The proposed South Stockton Commerce Center Flood Control Channel was modeled using HEC-RAS 2D methods. The geometry of the channel was entered into the existing conditions digital surface model and cell alignments modified to ensure that the channel was sufficiently captured in the two-dimensional mesh. Cell sizes in the vicinity of the flood control channel were reduced from the nominal cell size of 25 feet by 25 feet to approximately 10 feet by 10 feet to ensure adequate representation of the channel topography and adjacent grade. During the peak of the event, the flood control channels were conveying approximately 63 cfs to the north flood control basin. A total volume of 50.25 ac-ft was conveyed to the north flood control basin through the flood control channel during the simulation (See Figure 9).

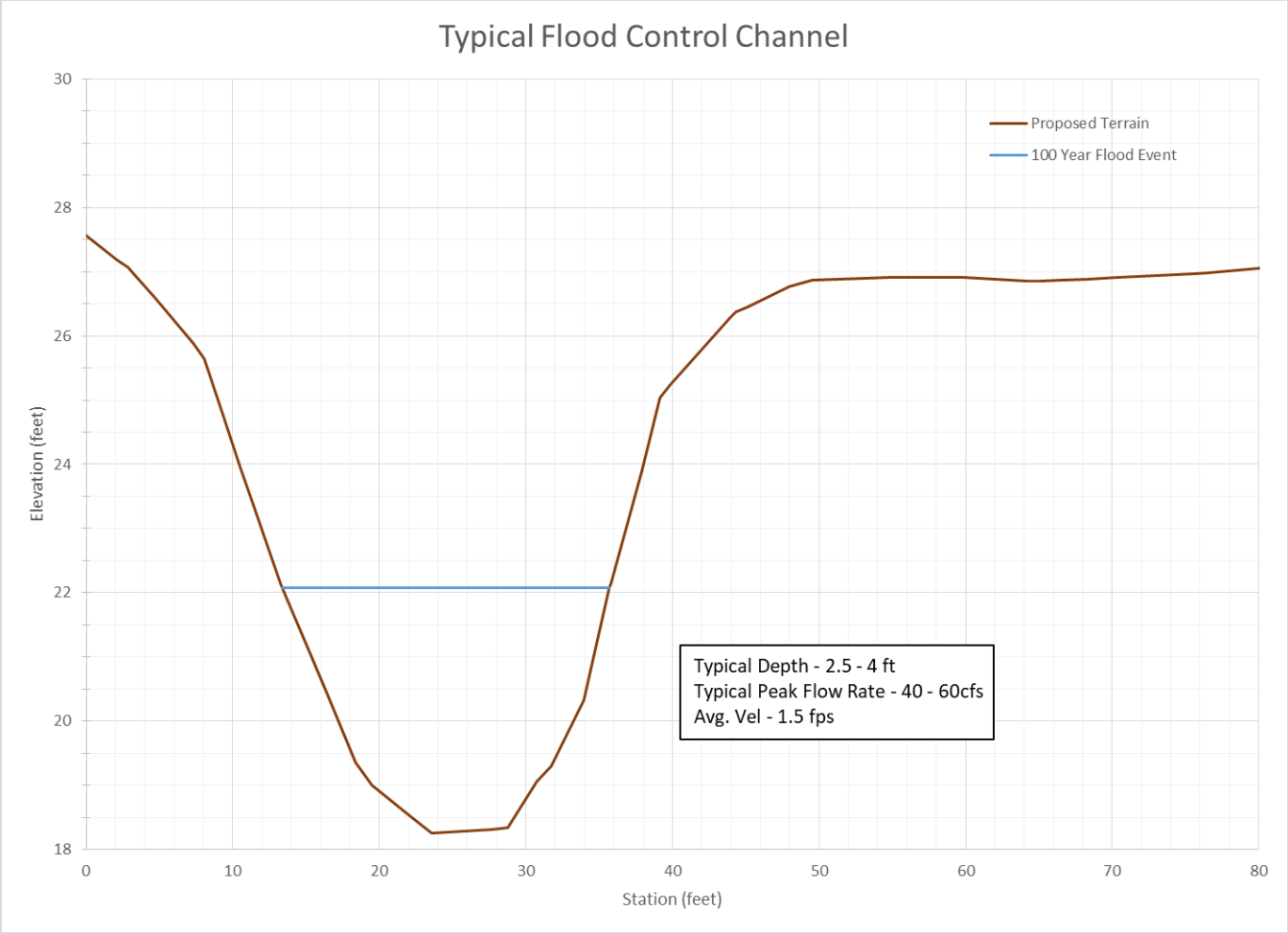


Figure 8 - Typical Flood Control Channel 100-year Results

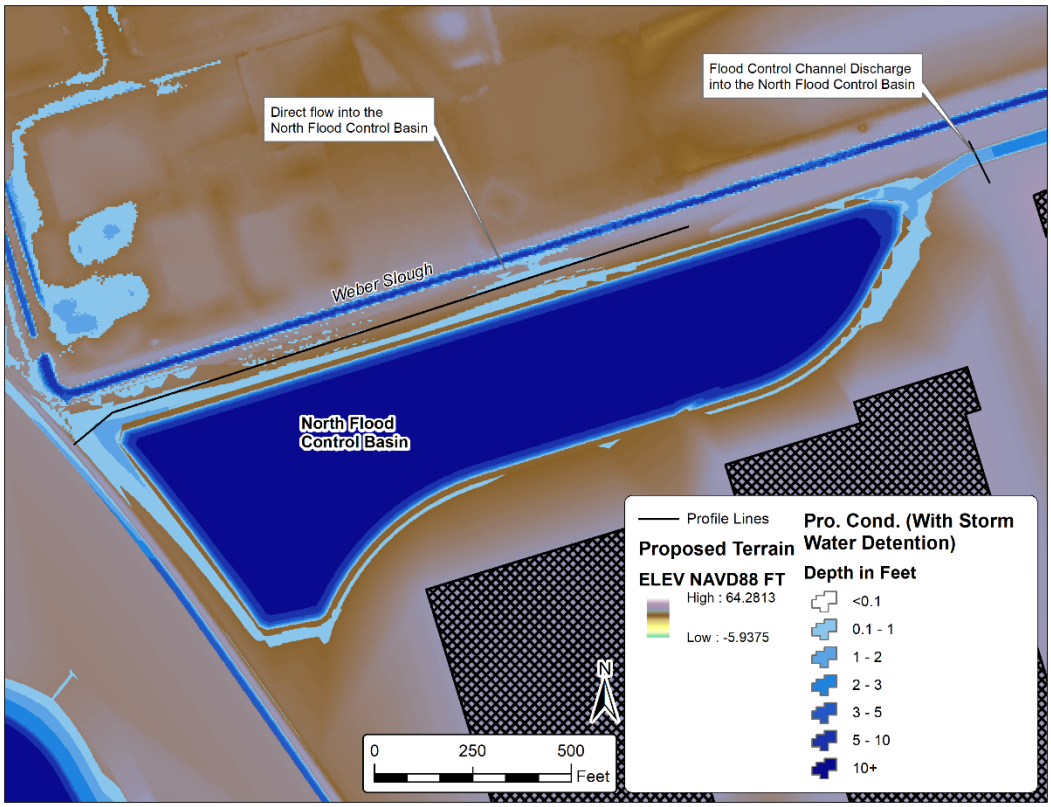


Figure 9 - North Flood Control Basin 100-year Results (with stormwater storage)

The results from the flood control channel were inspected to determine the appropriate sizing. Typical cross sections were analyzed with the peak water surface elevations and flow rates.

North Flood Control Basin

The majority of the floodwaters entering the north flood control basin are directly flowing from Weber Slough. Adjacent to the north basin's north western side, the Weber Slough channel capacity is insufficient to convey the 100-year flood within its banks. The lower bank is to the south and thus overflows occur on that bank. Approximately 138.1 ac-ft originating directly from Weber Slough in this area are intercepted by the north flood control basin and stored within the basin. At peak, approximately 87 cfs are flowing from Weber Slough in this area into the north flood control basin. The profile lines shown in Figure 9 are the lines across these flow rates and volumes are measured. Figure 10 shows the cross section of the north flood control basin for the maximum water surface elevation under the 100-year flood.

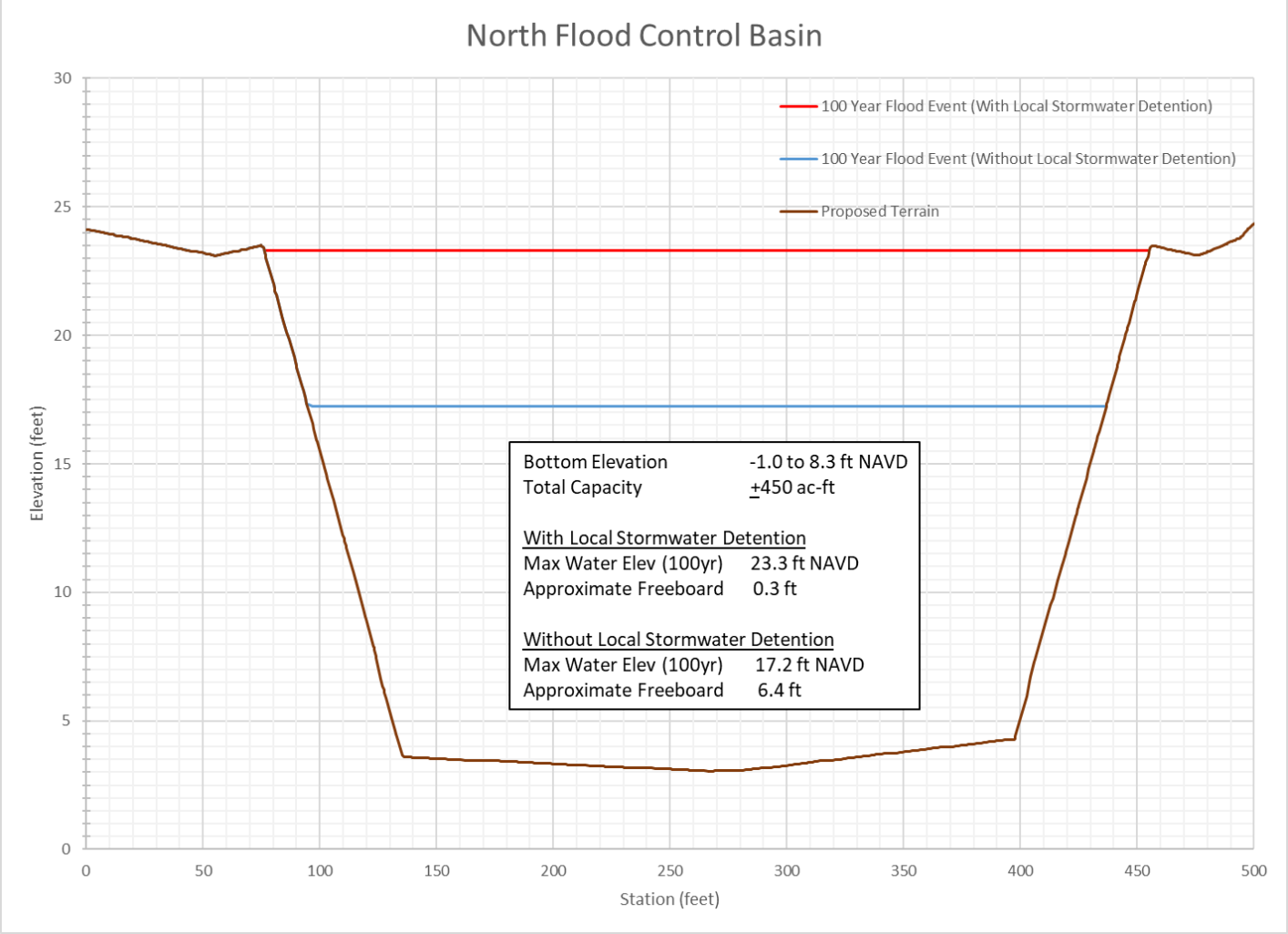


Figure 10 - North Flood Control Basin Maximum Water Surface Elevations

South Flood Control Basin

The majority of the floodwaters entering the south flood control basin originate from French Camp Slough. The basin was sized to offset lost storage from a proposed building pad opposite on the west side of the railroad bisecting the project. The proposed invert of the flood control basin is 6.0 ft NAVD. The proposed project roadway would be between the building pad and the proposed flood control basin. A typical cross section of the south flood control basin can be seen below in Figure 12. Figure 11 shows the maximum post project water surface depths around the south flood control basin.

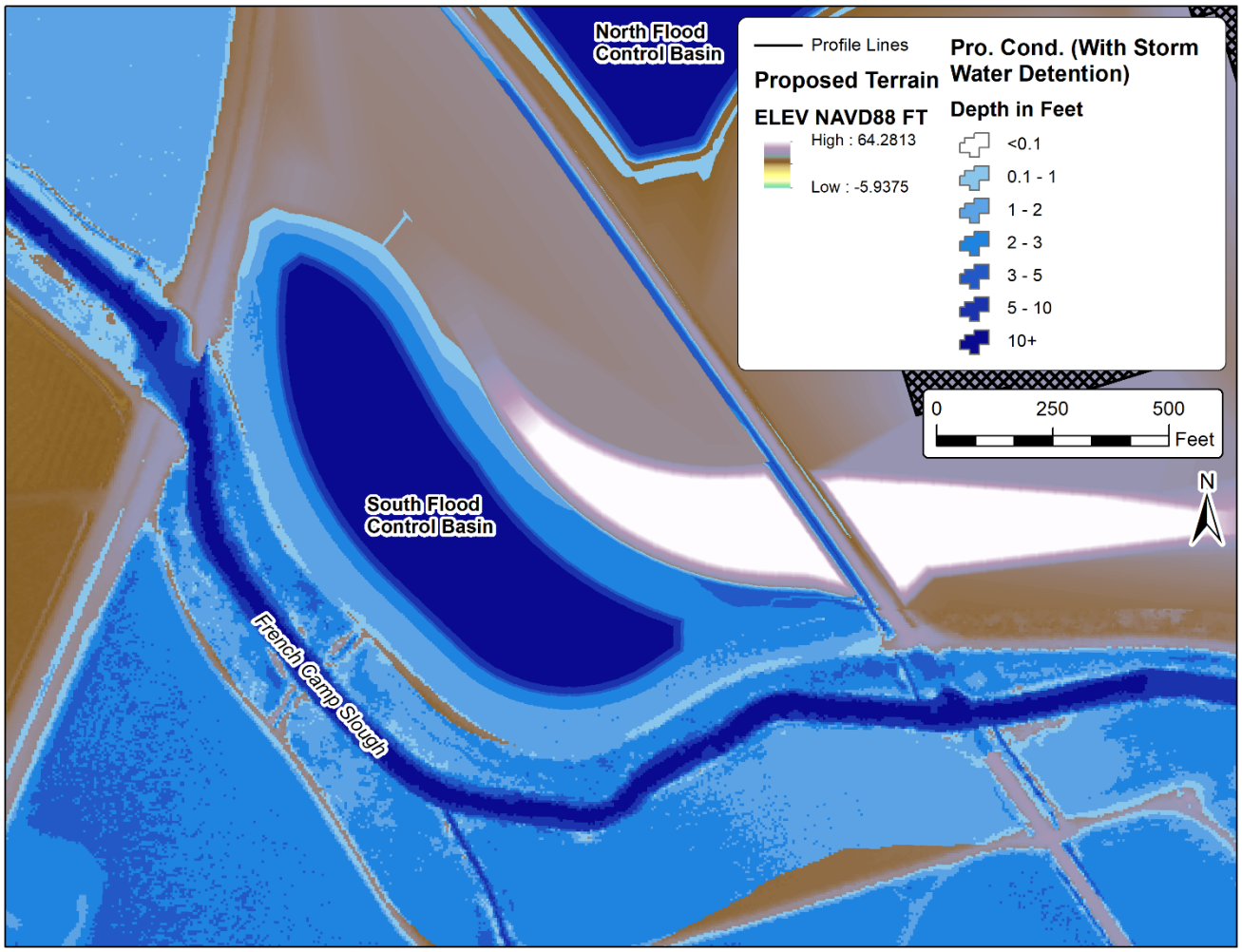


Figure 11 - South Flood Control Basin 100-year Results

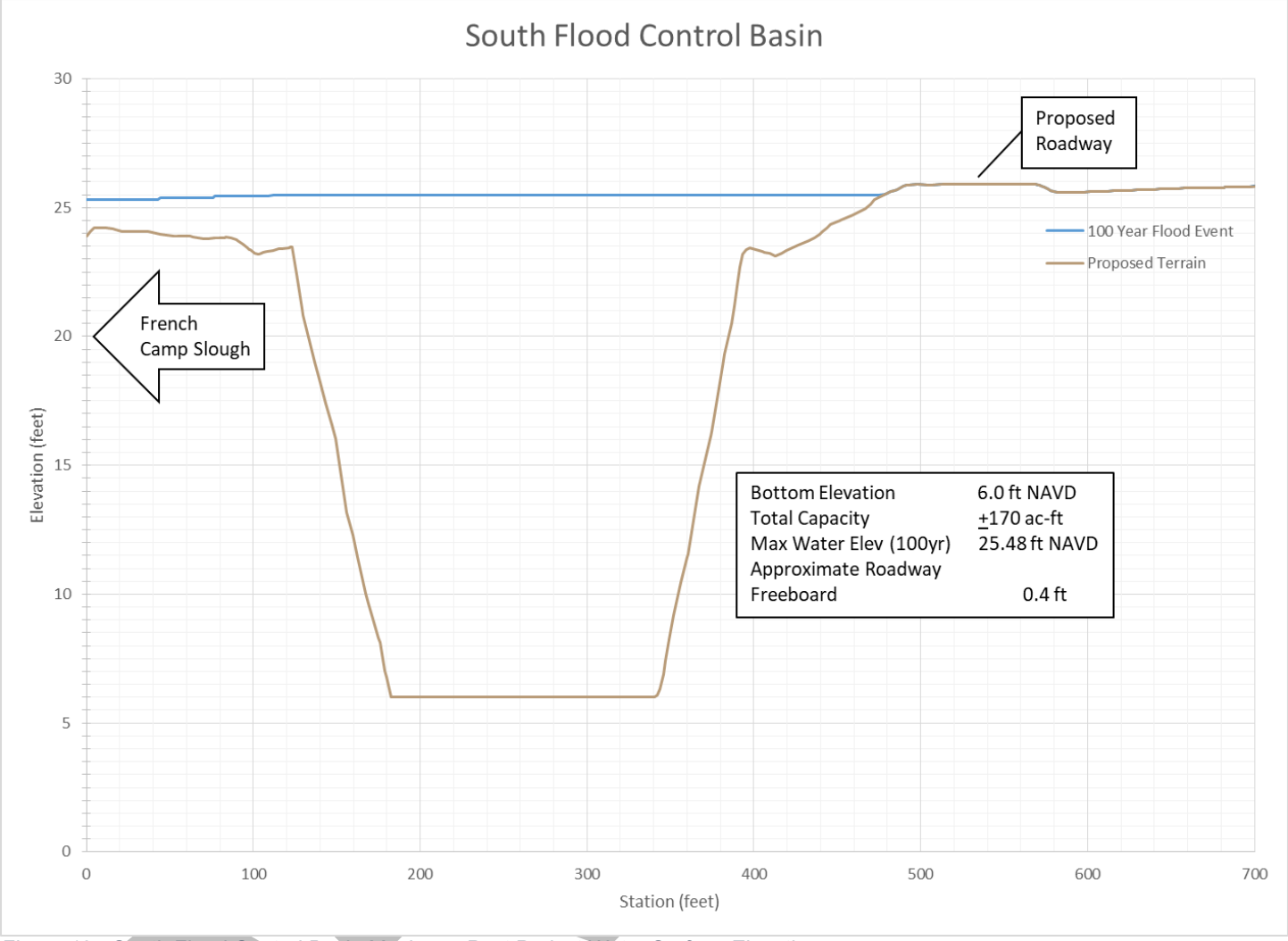


Figure 12 - South Flood Control Basin Maximum Post Project Water Surface Elevation

Land Use

The existing conditions land use for the two-dimensional flow areas was updated to represent proposed conditions. This was accomplished by adjusting the existing roughness coefficients on project parcels from pasture/field roughness to those more appropriate to a light industrial environment.

The results from the hydraulic modeling of the proposed conditions can be found below in Figure 13.

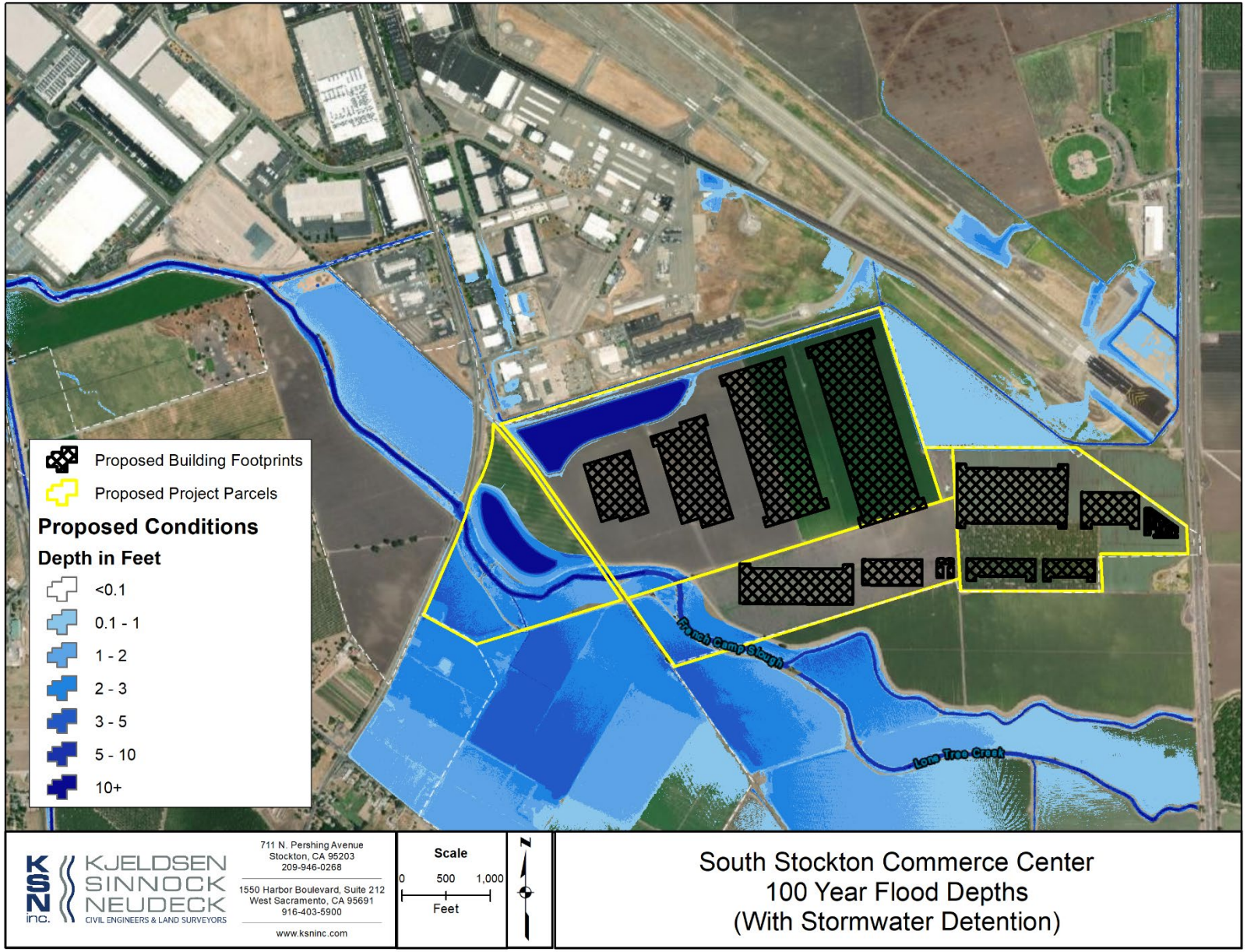


Figure 13 - Proposed Conditions 100-year Flood Depths

Comparison between Existing Conditions & Proposed Conditions

Cross Sections

For a full listing of the modeled hydraulic cross sections and the comparison against base conditions, please refer to the digital appendices (Cross Section Results).

2D Floodplain comparison

For the areas not modeled using cross sections, the maximum water surface elevations from the proposed conditions for the 100-year flood event and the maximum water surface elevations from the existing conditions were exported from HEC-RAS and then the differences in elevations were compared on a grid cell by grid cell basis using automated GIS routines to calculate the differences. There are no offsite impacts which would cause an increase in water surface greater than 0.05 feet.

North Flood Control Basin

In addition to the analyses described above, the proposed flood control system for this project was evaluated to determine if flood control system has sufficient capacity to both hold onsite run off and prevent offsite impacts from the 100-year flood event. Specifically, the storage available in the north flood control basin was reduced by 126 ac-ft at the beginning of the analysis. Again, these analyses were conducted under the assumption that the flood control basins would not be drained during the actual flood event. The results of this analysis indicate that there are no offsite impacts and that the 100-year flood can be contained on site with runoff from the 10-year storm event being held in the north flood control basin.

For the southern control basin, commercial properties which are west of the Union Pacific Railroad would be responsible for providing storm drain improvements including any required conveyance pipes, volume storage, pumps, force mains, etc needed to handle runoff from their development and will additionally be responsible for analyzing any potential offsite impacts caused by it's proposed storm drain improvements.

Project Next Steps

The next steps would be to apply for a CLOMR-F based upon the effective FEMA floodplains.

Appendix 1 – Tabular Cross Section Result

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	18,875	Existing Conditions	297	25.7	31.4		1.8
Weber Slough	18,875	Proposed Conditions without onsite stormwater detention	297	25.7	31.4	0	1.8
Weber Slough	18,875	Proposed Conditions with onsite stormwater detention	297	25.7	31.4	0	1.8
Weber Slough	18,830	Existing Conditions	297	25.8	31.4		1.9
Weber Slough	18,830	Proposed Conditions without onsite stormwater detention	297	25.8	31.4	0	1.9
Weber Slough	18,830	Proposed Conditions with onsite stormwater detention	297	25.8	31.4	0	1.9
Weber Slough	18,725	Existing Conditions	295	25.5	31.3		1.9
Weber Slough	18,725	Proposed Conditions without onsite stormwater detention	295	25.5	31.3	0	1.9
Weber Slough	18,725	Proposed Conditions with onsite stormwater detention	295	25.5	31.3	0	1.9
Weber Slough	18,503	Existing Conditions	290	25.3	31.3		1.6
Weber Slough	18,503	Proposed Conditions without onsite stormwater detention	290	25.3	31.3	0	1.6
Weber Slough	18,503	Proposed Conditions with onsite stormwater detention	290	25.3	31.3	0	1.6
Weber Slough	18,176	Existing Conditions	287	25.2	31.2		1.5
Weber Slough	18,176	Proposed Conditions without onsite stormwater detention	287	25.2	31.2	0	1.5
Weber Slough	18,176	Proposed Conditions with onsite stormwater detention	287	25.2	31.2	0	1.5
Weber Slough	17,783	Existing Conditions	283	25.3	31.1		1.6
Weber Slough	17,783	Proposed Conditions without onsite stormwater detention	283	25.3	31.1	0	1.6
Weber Slough	17,783	Proposed Conditions with onsite stormwater detention	283	25.3	31.1	0	1.6
Weber Slough	17,607	Existing Conditions	282	24.9	31		1.6
Weber Slough	17,607	Proposed Conditions without onsite stormwater detention	282	24.9	31	0	1.6
Weber Slough	17,607	Proposed Conditions with onsite stormwater detention	282	24.9	31	0	1.6

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	17,340	Existing Conditions	281	24.8	30.9		1.4
Weber Slough	17,340	Proposed Conditions without onsite stormwater detention	281	24.8	30.9	0	1.4
Weber Slough	17,340	Proposed Conditions with onsite stormwater detention	281	24.8	30.9	0	1.4
Weber Slough	17,046	Existing Conditions	281	24.6	30.9		1.5
Weber Slough	17,046	Proposed Conditions without onsite stormwater detention	281	24.6	30.9	0	1.5
Weber Slough	17,046	Proposed Conditions with onsite stormwater detention	281	24.6	30.9	0	1.5
Weber Slough	16,741	Existing Conditions	280	24.5	30.8		1.4
Weber Slough	16,741	Proposed Conditions without onsite stormwater detention	280	24.5	30.8	0	1.4
Weber Slough	16,741	Proposed Conditions with onsite stormwater detention	280	24.5	30.8	0	1.4
Weber Slough	16,380	Existing Conditions	280	24.6	30.7		1.4
Weber Slough	16,380	Proposed Conditions without onsite stormwater detention	280	24.6	30.7	0	1.4
Weber Slough	16,380	Proposed Conditions with onsite stormwater detention	280	24.6	30.7	0	1.4
Weber Slough	15,876	Existing Conditions	278	24.1	30.6		1.7
Weber Slough	15,876	Proposed Conditions without onsite stormwater detention	278	24.1	30.6	0	1.7
Weber Slough	15,876	Proposed Conditions with onsite stormwater detention	278	24.1	30.6	0	1.7
Weber Slough	15,748	Existing Conditions	278	24.4	30.5		1.8
Weber Slough	15,748	Proposed Conditions without onsite stormwater detention	278	24.4	30.5	0	1.8
Weber Slough	15,748	Proposed Conditions with onsite stormwater detention	278	24.4	30.5	0	1.8
Weber Slough	15,682	Existing Conditions	277	24.4	30.4		1.8
Weber Slough	15,682	Proposed Conditions without onsite stormwater detention	277	24.4	30.4	0	1.8
Weber Slough	15,682	Proposed Conditions with onsite stormwater detention	277	24.4	30.4	0	1.8

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	15,567	Existing Conditions	277	24.1	30.4		1.6
Weber Slough	15,567	Proposed Conditions without onsite stormwater detention	277	24.1	30.4	0	1.6
Weber Slough	15,567	Proposed Conditions with onsite stormwater detention	277	24.1	30.4	0	1.6
Weber Slough	15,505	Existing Conditions	276	24.2	30.2		1.8
Weber Slough	15,505	Proposed Conditions without onsite stormwater detention	276	24.2	30.2	0	1.8
Weber Slough	15,505	Proposed Conditions with onsite stormwater detention	276	24.2	30.2	0	1.8
Weber Slough	15,247	Existing Conditions	275	24.1	30.1		1.7
Weber Slough	15,247	Proposed Conditions without onsite stormwater detention	275	24.1	30.1	0	1.7
Weber Slough	15,247	Proposed Conditions with onsite stormwater detention	275	24.1	30.1	0	1.7
Weber Slough	14,869	Existing Conditions	273	23.8	30		1.8
Weber Slough	14,869	Proposed Conditions without onsite stormwater detention	273	23.8	30	0	1.8
Weber Slough	14,869	Proposed Conditions with onsite stormwater detention	273	23.8	30	0	1.8
Weber Slough	14,492	Existing Conditions	270	23.8	29.9		1.7
Weber Slough	14,492	Proposed Conditions without onsite stormwater detention	270	23.8	29.9	0	1.7
Weber Slough	14,492	Proposed Conditions with onsite stormwater detention	270	23.8	29.9	0	1.7
Weber Slough	14,182	Existing Conditions	265	23.4	29.8		1.5
Weber Slough	14,182	Proposed Conditions without onsite stormwater detention	265	23.4	29.8	0	1.5
Weber Slough	14,182	Proposed Conditions with onsite stormwater detention	265	23.4	29.8	0	1.5
Weber Slough	13,824	Existing Conditions	230	23.8	29.7		1.4
Weber Slough	13,824	Proposed Conditions without onsite stormwater detention	230	23.8	29.7	0	1.4
Weber Slough	13,824	Proposed Conditions with onsite stormwater detention	230	23.8	29.7	0	1.4

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	13,720	Existing Conditions	226	23.5	29.7		1.5
Weber Slough	13,720	Proposed Conditions without onsite stormwater detention	226	23.5	29.7	0	1.5
Weber Slough	13,720	Proposed Conditions with onsite stormwater detention	226	23.5	29.7	0	1.5
Weber Slough	13,444	Existing Conditions	226	23.3	29.6		1.5
Weber Slough	13,444	Proposed Conditions without onsite stormwater detention	226	23.3	29.6	0	1.5
Weber Slough	13,444	Proposed Conditions with onsite stormwater detention	226	23.3	29.6	0	1.5
Weber Slough	13,110	Existing Conditions	226	23.7	29.5		1.7
Weber Slough	13,110	Proposed Conditions without onsite stormwater detention	226	23.7	29.5	0	1.7
Weber Slough	13,110	Proposed Conditions with onsite stormwater detention	226	23.7	29.5	0	1.7
Weber Slough	13,006	Existing Conditions	230	23.2	29.4		1.7
Weber Slough	13,006	Proposed Conditions without onsite stormwater detention	230	23.2	29.4	0	1.7
Weber Slough	13,006	Proposed Conditions with onsite stormwater detention	230	23.2	29.4	0	1.7
Weber Slough	12,906	Existing Conditions	230	22.9	29.4		1.4
Weber Slough	12,906	Proposed Conditions without onsite stormwater detention	230	22.9	29.4	0	1.4
Weber Slough	12,906	Proposed Conditions with onsite stormwater detention	230	22.9	29.4	0	1.4
Weber Slough	12,569	Existing Conditions	228	23.1	29.3		1.6
Weber Slough	12,569	Proposed Conditions without onsite stormwater detention	228	23.1	29.3	0	1.6
Weber Slough	12,569	Proposed Conditions with onsite stormwater detention	228	23.1	29.3	0	1.6
Weber Slough	12,517	Existing Conditions	223	23.7	29.3		1.3
Weber Slough	12,517	Proposed Conditions without onsite stormwater detention	223	23.7	29.3	0	1.3
Weber Slough	12,517	Proposed Conditions with onsite stormwater detention	223	23.7	29.3	0	1.3

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	12,434	Existing Conditions	219	23.1	29.2		1.6
Weber Slough	12,434	Proposed Conditions without onsite stormwater detention	220	23.1	29.2	0	1.6
Weber Slough	12,434	Proposed Conditions with onsite stormwater detention	220	23.1	29.2	0	1.6
Weber Slough	11,796	Existing Conditions	219	23	29.1		1.4
Weber Slough	11,796	Proposed Conditions without onsite stormwater detention	219	23	29.1	0	1.4
Weber Slough	11,796	Proposed Conditions with onsite stormwater detention	219	23	29.1	0	1.4
Weber Slough	11,504	Existing Conditions	213	23.1	29		1.8
Weber Slough	11,504	Proposed Conditions without onsite stormwater detention	213	23.1	29	0	1.8
Weber Slough	11,504	Proposed Conditions with onsite stormwater detention	213	23.1	29	0	1.8
Weber Slough	11,036	Existing Conditions	172	23	28.8		1.6
Weber Slough	11,036	Proposed Conditions without onsite stormwater detention	172	23	28.8	0	1.6
Weber Slough	11,036	Proposed Conditions with onsite stormwater detention	172	23	28.8	0	1.6
Weber Slough	10,612	Existing Conditions	184	23.1	28.6		1.8
Weber Slough	10,612	Proposed Conditions without onsite stormwater detention	185	23.1	28.6	0	1.8
Weber Slough	10,612	Proposed Conditions with onsite stormwater detention	185	23.1	28.6	0	1.8
Weber Slough	10,142	Existing Conditions	178	23.4	28.3		1.8
Weber Slough	10,142	Proposed Conditions without onsite stormwater detention	180	23.4	28.3	0	1.8
Weber Slough	10,142	Proposed Conditions with onsite stormwater detention	180	23.4	28.3	0	1.8
Weber Slough	9,642	Existing Conditions	166	23.2	28		1.8
Weber Slough	9,642	Proposed Conditions without onsite stormwater detention	170	23.2	28	0	1.9
Weber Slough	9,642	Proposed Conditions with onsite stormwater detention	170	23.2	28	0	1.9

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	9,252	Existing Conditions	146	23.1	27.7		1.9
Weber Slough	9,252	Proposed Conditions without onsite stormwater detention	146	23.1	27.7	0	2
Weber Slough	9,252	Proposed Conditions with onsite stormwater detention	146	23.1	27.7	0	2
Weber Slough	8,930	Existing Conditions	151	22.6	27.6		1.1
Weber Slough	8,930	Proposed Conditions without onsite stormwater detention	142	22.6	27.5	-0.1	1
Weber Slough	8,930	Proposed Conditions with onsite stormwater detention	142	22.6	27.5	0	1
Weber Slough	8,877	Existing Conditions	142	21.2	27.6		1.2
Weber Slough	8,877	Proposed Conditions without onsite stormwater detention	136	21.2	27.5	-0.1	1.1
Weber Slough	8,877	Proposed Conditions with onsite stormwater detention	136	21.2	27.5	0	1.1
Weber Slough	8,835	Existing Conditions	142	21.2	27.6		1.2
Weber Slough	8,835	Proposed Conditions without onsite stormwater detention	136	21.2	27.5	-0.1	1.1
Weber Slough	8,835	Proposed Conditions with onsite stormwater detention	136	21.2	27.5	0	1.1
Weber Slough	8,505	Existing Conditions	142	21.7	27.5		1.3
Weber Slough	8,505	Proposed Conditions without onsite stormwater detention	136	21.7	27.4	-0.1	1.3
Weber Slough	8,505	Proposed Conditions with onsite stormwater detention	136	21.7	27.4	0	1.3
Weber Slough	7,896	Existing Conditions	142	20.8	27.4		1
Weber Slough	7,896	Proposed Conditions without onsite stormwater detention	136	20.8	27.3	-0.1	1
Weber Slough	7,896	Proposed Conditions with onsite stormwater detention	136	20.8	27.3	0	1
Weber Slough	7,404	Existing Conditions	142	21.5	27.2		1.6
Weber Slough	7,404	Proposed Conditions without onsite stormwater detention	136	21.5	27.1	-0.1	1.5
Weber Slough	7,404	Proposed Conditions with onsite stormwater detention	136	21.5	27.1	0	1.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	6,915	Existing Conditions	142	20.9	27		1.4
Weber Slough	6,915	Proposed Conditions without onsite stormwater detention	136	20.9	26.9	-0.1	1.4
Weber Slough	6,915	Proposed Conditions with onsite stormwater detention	136	20.9	26.9	0	1.4
Weber Slough	6,465	Existing Conditions	142	21.9	26.8		1.5
Weber Slough	6,465	Proposed Conditions without onsite stormwater detention	136	21.9	26.7	-0.1	1.5
Weber Slough	6,465	Proposed Conditions with onsite stormwater detention	136	21.9	26.7	0	1.5
Weber Slough	5,961	Existing Conditions	142	21.1	26.5		1.5
Weber Slough	5,961	Proposed Conditions without onsite stormwater detention	136	21.1	26.5	0	1.5
Weber Slough	5,961	Proposed Conditions with onsite stormwater detention	136	21.1	26.5	0	1.5
Weber Slough	5,514	Existing Conditions	121	20.5	26.4		1.2
Weber Slough	5,514	Proposed Conditions without onsite stormwater detention	118	20.5	26.3	-0.1	1.2
Weber Slough	5,514	Proposed Conditions with onsite stormwater detention	118	20.5	26.3	0	1.2
Weber Slough	5,086	Existing Conditions	64	20.4	26.2		0.7
Weber Slough	5,086	Proposed Conditions without onsite stormwater detention	117	20.4	26.2	0	1.2
Weber Slough	5,086	Proposed Conditions with onsite stormwater detention	117	20.4	26.2	0	1.2
Weber Slough	4,840	Existing Conditions	56	20.1	26.2		0.5
Weber Slough	4,840	Proposed Conditions without onsite stormwater detention	112	20.1	26.2	0	1.1
Weber Slough	4,840	Proposed Conditions with onsite stormwater detention	112	20.1	26.2	0	1.1
Weber Slough	4,602	Existing Conditions	56	19.8	26.2		0.5
Weber Slough	4,602	Proposed Conditions without onsite stormwater detention	103	19.8	26.1	-0.1	1
Weber Slough	4,602	Proposed Conditions with onsite stormwater detention	103	19.8	26.1	0	1

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	4,395	Existing Conditions	63	19.7	26.2		0.4
Weber Slough	4,395	Proposed Conditions without onsite stormwater detention	63	19.7	26.1	-0.1	0.4
Weber Slough	4,395	Proposed Conditions with onsite stormwater detention	63	19.7	26.1	0	0.4
Weber Slough	4,301	Existing Conditions	55	19.7	26.2		0.4
Weber Slough	4,301	Proposed Conditions without onsite stormwater detention	51	19.7	26.1	-0.1	0.3
Weber Slough	4,301	Proposed Conditions with onsite stormwater detention	51	19.7	26.1	0	0.3
Weber Slough	4,234	Existing Conditions	55	19.6	23.8		0.9
Weber Slough	4,234	Proposed Conditions without onsite stormwater detention	51	19.6	23.6	-0.2	0.9
Weber Slough	4,234	Proposed Conditions with onsite stormwater detention	51	19.6	23.6	0	0.9
Weber Slough	4,122	Existing Conditions	55	19.2	23.8		0.8
Weber Slough	4,122	Proposed Conditions without onsite stormwater detention	51	19.2	23.6	-0.2	0.8
Weber Slough	4,122	Proposed Conditions with onsite stormwater detention	51	19.2	23.6	0	0.8
Weber Slough	4,000	Existing Conditions	59	19.3	23.8		0.9
Weber Slough	4,000	Proposed Conditions without onsite stormwater detention	53	19.3	23.6	-0.2	0.9
Weber Slough	4,000	Proposed Conditions with onsite stormwater detention	53	19.3	23.6	0	0.9
Weber Slough	3,895	Existing Conditions	62	19.5	23.8		0.6
Weber Slough	3,895	Proposed Conditions without onsite stormwater detention	54	19.5	23.6	-0.2	0.5
Weber Slough	3,895	Proposed Conditions with onsite stormwater detention	54	19.5	23.6	0	0.5
Weber Slough	3,815	Existing Conditions	62	20	23.7		0.7
Weber Slough	3,815	Proposed Conditions without onsite stormwater detention	54	20	23.5	-0.2	0.6
Weber Slough	3,815	Proposed Conditions with onsite stormwater detention	54	20	23.5	0	0.6

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	3,769	Existing Conditions	62	19.6	23.7		1.3
Weber Slough	3,769	Proposed Conditions without onsite stormwater detention	54	19.6	23.5	-0.2	1.3
Weber Slough	3,769	Proposed Conditions with onsite stormwater detention	54	19.6	23.5	0	1.3
Weber Slough	3,710	Existing Conditions	62	20	23.7		1.1
Weber Slough	3,710	Proposed Conditions without onsite stormwater detention	54	20	23.5	-0.2	1.1
Weber Slough	3,710	Proposed Conditions with onsite stormwater detention	54	20	23.5	0	1.1
Weber Slough	3,634	Existing Conditions	62	19.7	23.6		0.9
Weber Slough	3,634	Proposed Conditions without onsite stormwater detention	54	19.7	23.4	-0.2	0.8
Weber Slough	3,634	Proposed Conditions with onsite stormwater detention	54	19.7	23.4	0	0.8
Weber Slough	3,484	Existing Conditions	62	19.5	23.5		1.2
Weber Slough	3,484	Proposed Conditions without onsite stormwater detention	54	19.5	23.4	-0.1	1.2
Weber Slough	3,484	Proposed Conditions with onsite stormwater detention	54	19.5	23.4	0	1.2
Weber Slough	3,263	Existing Conditions	62	19.5	23.4		1.2
Weber Slough	3,263	Proposed Conditions without onsite stormwater detention	54	19.5	23.3	-0.1	1.1
Weber Slough	3,263	Proposed Conditions with onsite stormwater detention	54	19.5	23.3	0	1.1
Weber Slough	3,032	Existing Conditions	62	19.5	23.2		1.5
Weber Slough	3,032	Proposed Conditions without onsite stormwater detention	54	19.5	23.1	-0.1	1.4
Weber Slough	3,032	Proposed Conditions with onsite stormwater detention	54	19.5	23.1	0	1.4
Weber Slough	2,787	Existing Conditions	62	19.6	22.9		1.7
Weber Slough	2,787	Proposed Conditions without onsite stormwater detention	54	19.6	22.8	-0.1	1.5
Weber Slough	2,787	Proposed Conditions with onsite stormwater detention	54	19.6	22.8	0	1.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	2,580	Existing Conditions	62	19.5	22.5		2
Weber Slough	2,580	Proposed Conditions without onsite stormwater detention	54	19.5	22.4	-0.1	1.8
Weber Slough	2,580	Proposed Conditions with onsite stormwater detention	54	19.5	22.4	0	1.8
Weber Slough	2,449	Existing Conditions	55	18.4	22.3		1.1
Weber Slough	2,449	Proposed Conditions without onsite stormwater detention	54	18.4	22.3	0	1
Weber Slough	2,449	Proposed Conditions with onsite stormwater detention	54	18.4	22.3	0	1
Weber Slough	2,258	Existing Conditions	55	18.9	22		2
Weber Slough	2,258	Proposed Conditions without onsite stormwater detention	54	18.9	22	0	2
Weber Slough	2,258	Proposed Conditions with onsite stormwater detention	54	18.9	22	0	2
Weber Slough	2,114	Existing Conditions	105	16	21.8		0.8
Weber Slough	2,114	Proposed Conditions without onsite stormwater detention	104	16	21.8	0	0.8
Weber Slough	2,114	Proposed Conditions with onsite stormwater detention	104	16	21.8	0	0.8
Weber Slough	2,011	Existing Conditions	105	17.2	21.8		1
Weber Slough	2,011	Proposed Conditions without onsite stormwater detention	104	17.2	21.8	0	1
Weber Slough	2,011	Proposed Conditions with onsite stormwater detention	104	17.2	21.8	0	1
Weber Slough	1,592	Existing Conditions	53	16	21.7		0.3
Weber Slough	1,592	Proposed Conditions without onsite stormwater detention	40	16	21.7	0	0.2
Weber Slough	1,592	Proposed Conditions with onsite stormwater detention	40	16	21.7	0	0.2
Weber Slough	1,262	Existing Conditions	53	14.9	21.7		0.2
Weber Slough	1,262	Proposed Conditions without onsite stormwater detention	40	14.9	21.7	0	0.2
Weber Slough	1,262	Proposed Conditions with onsite stormwater detention	40	14.9	21.7	0	0.2

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
Weber Slough	792	Existing Conditions	53	14.9	21.7		0.2
Weber Slough	792	Proposed Conditions without onsite stormwater detention	40	14.9	21.7	0	0.1
Weber Slough	792	Proposed Conditions with onsite stormwater detention	40	14.9	21.7	0	0.1
Weber Slough	724	Existing Conditions	53	15.1	21.7		0.2
Weber Slough	724	Proposed Conditions without onsite stormwater detention	40	15.1	21.7	0	0.1
Weber Slough	724	Proposed Conditions with onsite stormwater detention	40	15.1	21.7	0	0.1
Weber Slough	471	Existing Conditions	65	12.3	21.7		0.2
Weber Slough	471	Proposed Conditions without onsite stormwater detention	52	12.3	21.7	0	0.2
Weber Slough	471	Proposed Conditions with onsite stormwater detention	52	12.3	21.7	0	0.2
Weber Slough	124	Existing Conditions	82	11.2	21.7		0.2
Weber Slough	124	Proposed Conditions without onsite stormwater detention	70	11.2	21.7	0	0.1
Weber Slough	124	Proposed Conditions with onsite stormwater detention	70	11.2	21.7	0	0.1
Weber Slough	84	Existing Conditions	84	10.6	21.7		0.2
Weber Slough	84	Proposed Conditions without onsite stormwater detention	71	10.6	21.7	0	0.1
Weber Slough	84	Proposed Conditions with onsite stormwater detention	71	10.6	21.7	0	0.1
Weber Slough	18	Existing Conditions	84	9.4	21.7		0.1
Weber Slough	18	Proposed Conditions without onsite stormwater detention	71	9.4	21.7	0	0.1
Weber Slough	18	Proposed Conditions with onsite stormwater detention	71	9.4	21.7	0	0.1
Weber Slough	8	Existing Conditions	84	8.4	21.7		0
Weber Slough	8	Proposed Conditions without onsite stormwater detention	71	8.4	21.7	0	0
Weber Slough	8	Proposed Conditions with onsite stormwater detention	71	8.4	21.7	0	0

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
North Fork South Littlejohns Creek	5,445	Existing Conditions	1390	20.7	30.5		4.9
North Fork South Littlejohns Creek	5,445	Proposed Conditions without onsite stormwater detention	1390	20.7	30.5	0	4.9
North Fork South Littlejohns Creek	5,445	Proposed Conditions with onsite stormwater detention	1390	20.7	30.5	0	4.9
North Fork South Littlejohns Creek	5,440	Existing Conditions	1390	20.7	30.5		4.9
North Fork South Littlejohns Creek	5,440	Proposed Conditions without onsite stormwater detention	1390	20.7	30.5	0	4.9
North Fork South Littlejohns Creek	5,440	Proposed Conditions with onsite stormwater detention	1390	20.7	30.5	0	4.9
North Fork South Littlejohns Creek	4,984	Existing Conditions	1319	20.2	30.1		4.7
North Fork South Littlejohns Creek	4,984	Proposed Conditions without onsite stormwater detention	1319	20.2	30.1	0	4.7
North Fork South Littlejohns Creek	4,984	Proposed Conditions with onsite stormwater detention	1319	20.2	30.1	0	4.7
North Fork South Littlejohns Creek	4,247	Existing Conditions	1122	19.5	29.4		4.1
North Fork South Littlejohns Creek	4,247	Proposed Conditions without onsite stormwater detention	1122	19.5	29.4	0	4.1
North Fork South Littlejohns Creek	4,247	Proposed Conditions with onsite stormwater detention	1122	19.5	29.4	0	4.1
North Fork South Littlejohns Creek	3,556	Existing Conditions	972	18.1	29		3.4
North Fork South Littlejohns Creek	3,556	Proposed Conditions without onsite stormwater detention	973	18.1	29	0	3.4
North Fork South Littlejohns Creek	3,556	Proposed Conditions with onsite stormwater detention	973	18.1	29	0	3.4
North Fork South Littlejohns Creek	2,738	Existing Conditions	904	17.7	28.5		3.5
North Fork South Littlejohns Creek	2,738	Proposed Conditions without onsite stormwater detention	905	17.7	28.5	0	3.6
North Fork South Littlejohns Creek	2,738	Proposed Conditions with onsite stormwater detention	906	17.7	28.5	0	3.6
North Fork South Littlejohns Creek	2,392	Existing Conditions	866	17.2	28.4		2.6
North Fork South Littlejohns Creek	2,392	Proposed Conditions without onsite stormwater detention	869	17.2	28.4	0	2.6
North Fork South Littlejohns Creek	2,392	Proposed Conditions with onsite stormwater detention	869	17.2	28.4	0	2.6

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
North Fork South Littlejohns Creek	2,370	Existing Conditions	866	16.8	28.4		2.6
North Fork South Littlejohns Creek	2,370	Proposed Conditions without onsite stormwater detention	869	16.8	28.4	0	2.6
North Fork South Littlejohns Creek	2,370	Proposed Conditions with onsite stormwater detention	869	16.8	28.4	0	2.6
North Fork South Littlejohns Creek	1,624	Existing Conditions	610	17.6	28.3		1.8
North Fork South Littlejohns Creek	1,624	Proposed Conditions without onsite stormwater detention	612	17.6	28.3	0	1.8
North Fork South Littlejohns Creek	1,624	Proposed Conditions with onsite stormwater detention	612	17.6	28.3	0	1.8
North Fork South Littlejohns Creek	998	Existing Conditions	1109	16.9	27.9		2.8
North Fork South Littlejohns Creek	998	Proposed Conditions without onsite stormwater detention	1114	16.9	27.9	0	2.9
North Fork South Littlejohns Creek	998	Proposed Conditions with onsite stormwater detention	1114	16.9	27.9	0	2.9
North Fork South Littlejohns Creek	581	Existing Conditions	1567	16.7	27.2		4.9
North Fork South Littlejohns Creek	581	Proposed Conditions without onsite stormwater detention	1568	16.7	27.2	0	4.9
North Fork South Littlejohns Creek	581	Proposed Conditions with onsite stormwater detention	1568	16.7	27.2	0	4.9
French Camp Slough	34,129	Existing Conditions	3268	14.6	27.2		3.6
French Camp Slough	34,129	Proposed Conditions without onsite stormwater detention	3273	14.6	27.2	0	3.6
French Camp Slough	34,129	Proposed Conditions with onsite stormwater detention	3273	14.6	27.2	0	3.6
French Camp Slough	34,128	Existing Conditions	3268	14.8	27.2		3.6
French Camp Slough	34,128	Proposed Conditions without onsite stormwater detention	3273	14.8	27.2	0	3.7
French Camp Slough	34,128	Proposed Conditions with onsite stormwater detention	3273	14.8	27.2	0	3.7
French Camp Slough	33,683	Existing Conditions	3268	14.7	27		2.9
French Camp Slough	33,683	Proposed Conditions without onsite stormwater detention	3273	14.7	27	0	2.9
French Camp Slough	33,683	Proposed Conditions with onsite stormwater detention	3273	14.7	27	0	2.9

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	32,896	Existing Conditions	3268	14.1	26.6		2.5
French Camp Slough	32,896	Proposed Conditions without onsite stormwater detention	3273	14.1	26.6	0	2.6
French Camp Slough	32,896	Proposed Conditions with onsite stormwater detention	3273	14.1	26.6	0	2.6
French Camp Slough	32,869	Existing Conditions	3268	12.8	26.6		2.3
French Camp Slough	32,869	Proposed Conditions without onsite stormwater detention	3273	12.8	26.6	0	2.3
French Camp Slough	32,869	Proposed Conditions with onsite stormwater detention	3273	12.8	26.6	0	2.3
French Camp Slough	32,584	Existing Conditions	3268	15.1	26.4		2.7
French Camp Slough	32,584	Proposed Conditions without onsite stormwater detention	3273	15.1	26.4	0	2.7
French Camp Slough	32,584	Proposed Conditions with onsite stormwater detention	3273	15.1	26.4	0	2.7
French Camp Slough	32,317	Existing Conditions	3268	15.1	26.3		2.9
French Camp Slough	32,317	Proposed Conditions without onsite stormwater detention	3272	15.1	26.2	-0.1	3
French Camp Slough	32,317	Proposed Conditions with onsite stormwater detention	3272	15.1	26.2	0	3
French Camp Slough	32,127	Existing Conditions	3275	14.9	26.1		3
French Camp Slough	32,127	Proposed Conditions without onsite stormwater detention	3280	14.9	26.1	0	3.1
French Camp Slough	32,127	Proposed Conditions with onsite stormwater detention	3280	14.9	26.1	0	3.1
French Camp Slough	31,944	Existing Conditions	3282	14.5	26		3.4
French Camp Slough	31,944	Proposed Conditions without onsite stormwater detention	3287	14.5	25.9	-0.1	3.5
French Camp Slough	31,944	Proposed Conditions with onsite stormwater detention	3287	14.5	25.9	0	3.5
French Camp Slough	31,902	Existing Conditions	3282	14.5	26.1		2.6
French Camp Slough	31,902	Proposed Conditions without onsite stormwater detention	3287	14.5	26	-0.1	2.6
French Camp Slough	31,902	Proposed Conditions with onsite stormwater detention	3287	14.5	26	0	2.6

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	31,873	Existing Conditions	3282	14.5	26		2.5
French Camp Slough	31,873	Proposed Conditions without onsite stormwater detention	3287	14.5	26	0	2.5
French Camp Slough	31,873	Proposed Conditions with onsite stormwater detention	3287	14.5	26	0	2.5
French Camp Slough	31,782	Existing Conditions	3278	14.5	26		2.2
French Camp Slough	31,782	Proposed Conditions without onsite stormwater detention	3284	14.5	26	0	2.2
French Camp Slough	31,782	Proposed Conditions with onsite stormwater detention	3284	14.5	26	0	2.2
French Camp Slough	30,856	Existing Conditions	2653	14.2	25.8		1.5
French Camp Slough	30,856	Proposed Conditions without onsite stormwater detention	2555	14.2	25.8	0	1.5
French Camp Slough	30,856	Proposed Conditions with onsite stormwater detention	2555	14.2	25.8	0	1.5
French Camp Slough	30,330	Existing Conditions	2832	14	25.4		3.6
French Camp Slough	30,330	Proposed Conditions without onsite stormwater detention	2625	14	25.4	0	3.3
French Camp Slough	30,330	Proposed Conditions with onsite stormwater detention	2625	14	25.4	0	3.3
French Camp Slough	30,270	Existing Conditions	2859	14	25.5		2.6
French Camp Slough	30,270	Proposed Conditions without onsite stormwater detention	2660	14	25.5	0	2.4
French Camp Slough	30,270	Proposed Conditions with onsite stormwater detention	2660	14	25.5	0	2.4
French Camp Slough	30,002	Existing Conditions	3169	13.9	25.2		3.2
French Camp Slough	30,002	Proposed Conditions without onsite stormwater detention	3044	13.9	25.2	0	3.1
French Camp Slough	30,002	Proposed Conditions with onsite stormwater detention	3044	13.9	25.2	0	3.1
French Camp Slough	29,637	Existing Conditions	3652	13.8	25.1		2.5
French Camp Slough	29,637	Proposed Conditions without onsite stormwater detention	3656	13.8	25.1	0	2.5
French Camp Slough	29,637	Proposed Conditions with onsite stormwater detention	3656	13.8	25.1	0	2.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	29,473	Existing Conditions	3652	13.5	24.7		3.6
French Camp Slough	29,473	Proposed Conditions without onsite stormwater detention	3656	13.5	24.7	0	3.6
French Camp Slough	29,473	Proposed Conditions with onsite stormwater detention	3656	13.5	24.7	0	3.6
French Camp Slough	28,680	Existing Conditions	3195	11.3	24.1		4.3
French Camp Slough	28,680	Proposed Conditions without onsite stormwater detention	3198	11.3	24.1	0	4.3
French Camp Slough	28,680	Proposed Conditions with onsite stormwater detention	3198	11.3	24.1	0	4.3
French Camp Slough	27,495	Existing Conditions	3079	10.2	23.3		4.5
French Camp Slough	27,495	Proposed Conditions without onsite stormwater detention	3082	10.2	23.3	0	4.5
French Camp Slough	27,495	Proposed Conditions with onsite stormwater detention	3082	10.2	23.3	0	4.5
French Camp Slough	26,393	Existing Conditions	3602	8.8	21.7		6.1
French Camp Slough	26,393	Proposed Conditions without onsite stormwater detention	3607	8.8	21.7	0	6.1
French Camp Slough	26,393	Proposed Conditions with onsite stormwater detention	3607	8.8	21.7	0	6.1
French Camp Slough	25,508	Existing Conditions	3686	7.5	21.7		5.8
French Camp Slough	25,508	Proposed Conditions without onsite stormwater detention	3678	7.5	21.7	0	5.8
French Camp Slough	25,508	Proposed Conditions with onsite stormwater detention	3678	7.5	21.7	0	5.8
French Camp Slough	25,507	Existing Conditions	3686	7.5	21.7		5.8
French Camp Slough	25,507	Proposed Conditions without onsite stormwater detention	3678	7.5	21.7	0	5.8
French Camp Slough	25,507	Proposed Conditions with onsite stormwater detention	3678	7.5	21.7	0	5.8
French Camp Slough	25,450	Existing Conditions	3842	6.5	21.7		5.4
French Camp Slough	25,450	Proposed Conditions without onsite stormwater detention	3832	6.5	21.6	-0.1	5.4
French Camp Slough	25,450	Proposed Conditions with onsite stormwater detention	3833	6.5	21.6	0	5.4

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	24,381	Existing Conditions	3842	5.1	20.3		6.1
French Camp Slough	24,381	Proposed Conditions without onsite stormwater detention	3832	5.1	20.2	-0.1	6.1
French Camp Slough	24,381	Proposed Conditions with onsite stormwater detention	3832	5.1	20.2	0	6.1
French Camp Slough	23,219	Existing Conditions	3841	3.1	19.2		4.8
French Camp Slough	23,219	Proposed Conditions without onsite stormwater detention	3832	3.1	19.2	0	4.8
French Camp Slough	23,219	Proposed Conditions with onsite stormwater detention	3832	3.1	19.2	0	4.8
French Camp Slough	22,761	Existing Conditions	3841	4	18.7		5.8
French Camp Slough	22,761	Proposed Conditions without onsite stormwater detention	3832	4	18.7	0	5.8
French Camp Slough	22,761	Proposed Conditions with onsite stormwater detention	3832	4	18.7	0	5.8
French Camp Slough	22,697	Existing Conditions	3841	3.9	18.9		4.8
French Camp Slough	22,697	Proposed Conditions without onsite stormwater detention	3832	3.9	18.8	-0.1	4.8
French Camp Slough	22,697	Proposed Conditions with onsite stormwater detention	3832	3.9	18.8	0	4.8
French Camp Slough	22,607	Existing Conditions	3841	5.4	18.8		4.6
French Camp Slough	22,607	Proposed Conditions without onsite stormwater detention	3832	5.4	18.8	0	4.6
French Camp Slough	22,607	Proposed Conditions with onsite stormwater detention	3832	5.4	18.8	0	4.6
French Camp Slough	22,577	Existing Conditions	3841	5.6	18.4		4.4
French Camp Slough	22,577	Proposed Conditions without onsite stormwater detention	3832	5.6	18.4	0	4.4
French Camp Slough	22,577	Proposed Conditions with onsite stormwater detention	3832	5.6	18.4	0	4.4
French Camp Slough	22,420	Existing Conditions	3382	0.7	18.6		2.8
French Camp Slough	22,420	Proposed Conditions without onsite stormwater detention	3375	0.7	18.6	0	2.7
French Camp Slough	22,420	Proposed Conditions with onsite stormwater detention	3375	0.7	18.6	0	2.7

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	22,317	Existing Conditions	3357	3.2	18.5		3.3
French Camp Slough	22,317	Proposed Conditions without onsite stormwater detention	3350	3.2	18.5	0	3.3
French Camp Slough	22,317	Proposed Conditions with onsite stormwater detention	3350	3.2	18.5	0	3.3
French Camp Slough	22,261	Existing Conditions	3357	2	18.5		3.1
French Camp Slough	22,261	Proposed Conditions without onsite stormwater detention	3350	2	18.5	0	3.1
French Camp Slough	22,261	Proposed Conditions with onsite stormwater detention	3350	2	18.5	0	3.1
French Camp Slough	21,814	Existing Conditions	3289	0.8	18.1		4.7
French Camp Slough	21,814	Proposed Conditions without onsite stormwater detention	3284	0.8	18.1	0	4.7
French Camp Slough	21,814	Proposed Conditions with onsite stormwater detention	3285	0.8	18.1	0	4.7
French Camp Slough	20,945	Existing Conditions	3169	1.3	17.7		3.3
French Camp Slough	20,945	Proposed Conditions without onsite stormwater detention	3165	1.3	17.7	0	3.3
French Camp Slough	20,945	Proposed Conditions with onsite stormwater detention	3165	1.3	17.7	0	3.3
French Camp Slough	20,006	Existing Conditions	3197	-0.6	17.4		2.6
French Camp Slough	20,006	Proposed Conditions without onsite stormwater detention	3194	-0.6	17.4	0	2.6
French Camp Slough	20,006	Proposed Conditions with onsite stormwater detention	3194	-0.6	17.4	0	2.6
French Camp Slough	19,727	Existing Conditions	3398	0.9	17.3		3
French Camp Slough	19,727	Proposed Conditions without onsite stormwater detention	3394	0.9	17.3	0	3
French Camp Slough	19,727	Proposed Conditions with onsite stormwater detention	3394	0.9	17.3	0	3
French Camp Slough	19,672	Existing Conditions	3398	-0.4	17.3		2.5
French Camp Slough	19,672	Proposed Conditions without onsite stormwater detention	3394	-0.4	17.3	0	2.5
French Camp Slough	19,672	Proposed Conditions with onsite stormwater detention	3394	-0.4	17.2	-0.1	2.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	19,418	Existing Conditions	3353	-2.2	17.2		2.6
French Camp Slough	19,418	Proposed Conditions without onsite stormwater detention	3349	-2.2	17.2	0	2.6
French Camp Slough	19,418	Proposed Conditions with onsite stormwater detention	3350	-2.2	17.2	0	2.6
French Camp Slough	19,195	Existing Conditions	3354	-1.2	17.2		2.2
French Camp Slough	19,195	Proposed Conditions without onsite stormwater detention	3351	-1.2	17.2	0	2.2
French Camp Slough	19,195	Proposed Conditions with onsite stormwater detention	3352	-1.2	17.2	0	2.2
French Camp Slough	19,098	Existing Conditions	3221	0	16		5.8
French Camp Slough	19,098	Proposed Conditions without onsite stormwater detention	3215	0	16	0	5.8
French Camp Slough	19,098	Proposed Conditions with onsite stormwater detention	3215	0	16	0	5.8
French Camp Slough	18,490	Existing Conditions	3215	-0.6	15.5		1.7
French Camp Slough	18,490	Proposed Conditions without onsite stormwater detention	3205	-0.6	15.5	0	1.7
French Camp Slough	18,490	Proposed Conditions with onsite stormwater detention	3205	-0.6	15.5	0	1.7
French Camp Slough	17,465	Existing Conditions	3251	-4.4	14.9		3.5
French Camp Slough	17,465	Proposed Conditions without onsite stormwater detention	3236	-4.4	14.9	0	3.5
French Camp Slough	17,465	Proposed Conditions with onsite stormwater detention	3236	-4.4	14.9	0	3.5
French Camp Slough	17,157	Existing Conditions	3800	-3.2	14.9		2.6
French Camp Slough	17,157	Proposed Conditions without onsite stormwater detention	3776	-3.2	14.9	0	2.6
French Camp Slough	17,157	Proposed Conditions with onsite stormwater detention	3776	-3.2	14.9	0	2.6
French Camp Slough	17,156	Existing Conditions	3800	-3.2	14.9		2.6
French Camp Slough	17,156	Proposed Conditions without onsite stormwater detention	3776	-3.2	14.9	0	2.6
French Camp Slough	17,156	Proposed Conditions with onsite stormwater detention	3776	-3.2	14.9	0	2.6

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	15,807	Existing Conditions	3541	-2.1	14.5		2.6
French Camp Slough	15,807	Proposed Conditions without onsite stormwater detention	3487	-2.1	14.5	0	2.5
French Camp Slough	15,807	Proposed Conditions with onsite stormwater detention	3486	-2.1	14.5	0	2.5
French Camp Slough	14,524	Existing Conditions	3659	-3.5	14.4		1.3
French Camp Slough	14,524	Proposed Conditions without onsite stormwater detention	3621	-3.5	14.3	-0.1	1.2
French Camp Slough	14,524	Proposed Conditions with onsite stormwater detention	3621	-3.5	14.3	0	1.2
French Camp Slough	13,252	Existing Conditions	4028	-2.4	14.2		1.7
French Camp Slough	13,252	Proposed Conditions without onsite stormwater detention	3999	-2.4	14.1	-0.1	1.7
French Camp Slough	13,252	Proposed Conditions with onsite stormwater detention	3999	-2.4	14.1	0	1.7
French Camp Slough	12,503	Existing Conditions	4208	-1.4	13.9		2.9
French Camp Slough	12,503	Proposed Conditions without onsite stormwater detention	4177	-1.4	13.9	0	2.9
French Camp Slough	12,503	Proposed Conditions with onsite stormwater detention	4177	-1.4	13.9	0	2.9
French Camp Slough	12,419	Existing Conditions	4208	-2	13.8		2.8
French Camp Slough	12,419	Proposed Conditions without onsite stormwater detention	4177	-2	13.8	0	2.8
French Camp Slough	12,419	Proposed Conditions with onsite stormwater detention	4177	-2	13.8	0	2.8
French Camp Slough	12,382	Existing Conditions	4208	-1.9	13.8		2.7
French Camp Slough	12,382	Proposed Conditions without onsite stormwater detention	4177	-1.9	13.8	0	2.7
French Camp Slough	12,382	Proposed Conditions with onsite stormwater detention	4177	-1.9	13.8	0	2.7
French Camp Slough	12,272	Existing Conditions	4208	-0.7	13.8		2.5
French Camp Slough	12,272	Proposed Conditions without onsite stormwater detention	4177	-0.7	13.8	0	2.5
French Camp Slough	12,272	Proposed Conditions with onsite stormwater detention	4177	-0.7	13.8	0	2.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	11,592	Existing Conditions	4208	0	13.7		1.9
French Camp Slough	11,592	Proposed Conditions without onsite stormwater detention	4176	0	13.7	0	1.9
French Camp Slough	11,592	Proposed Conditions with onsite stormwater detention	4177	0	13.7	0	1.9
French Camp Slough	10,591	Existing Conditions	4207	-1.1	13.6		1.7
French Camp Slough	10,591	Proposed Conditions without onsite stormwater detention	4176	-1.1	13.6	0	1.7
French Camp Slough	10,591	Proposed Conditions with onsite stormwater detention	4176	-1.1	13.6	0	1.7
French Camp Slough	10,490	Existing Conditions	4211	-0.1	13.6		1.9
French Camp Slough	10,490	Proposed Conditions without onsite stormwater detention	4180	-0.1	13.5	-0.1	1.9
French Camp Slough	10,490	Proposed Conditions with onsite stormwater detention	4180	-0.1	13.5	0	1.9
French Camp Slough	10,130	Existing Conditions	4211	-1.6	13.5		1.7
French Camp Slough	10,130	Proposed Conditions without onsite stormwater detention	4179	-1.6	13.5	0	1.7
French Camp Slough	10,130	Proposed Conditions with onsite stormwater detention	4179	-1.6	13.5	0	1.7
French Camp Slough	10,030	Existing Conditions	4210	-1.8	13.5		1.7
French Camp Slough	10,030	Proposed Conditions without onsite stormwater detention	4179	-1.8	13.5	0	1.7
French Camp Slough	10,030	Proposed Conditions with onsite stormwater detention	4179	-1.8	13.5	0	1.7
French Camp Slough	9,610	Existing Conditions	4210	-2.1	13.4		1.4
French Camp Slough	9,610	Proposed Conditions without onsite stormwater detention	4179	-2.1	13.4	0	1.4
French Camp Slough	9,610	Proposed Conditions with onsite stormwater detention	4179	-2.1	13.4	0	1.4
French Camp Slough	8,732	Existing Conditions	4209	-1.7	13.3		1.5
French Camp Slough	8,732	Proposed Conditions without onsite stormwater detention	4178	-1.7	13.3	0	1.5
French Camp Slough	8,732	Proposed Conditions with onsite stormwater detention	4179	-1.7	13.3	0	1.5

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	7,055	Existing Conditions	4207	-3.3	13.1		1.9
French Camp Slough	7,055	Proposed Conditions without onsite stormwater detention	4177	-3.3	13.1	0	1.9
French Camp Slough	7,055	Proposed Conditions with onsite stormwater detention	4177	-3.3	13.1	0	1.9
French Camp Slough	6,254	Existing Conditions	4754	-1.1	13.1		1.1
French Camp Slough	6,254	Proposed Conditions without onsite stormwater detention	4680	-1.1	13.1	0	1.1
French Camp Slough	6,254	Proposed Conditions with onsite stormwater detention	4680	-1.1	13.1	0	1.1
French Camp Slough	6,253	Existing Conditions	4754	-1.1	13.1		1.1
French Camp Slough	6,253	Proposed Conditions without onsite stormwater detention	4680	-1.1	13.1	0	1.1
French Camp Slough	6,253	Proposed Conditions with onsite stormwater detention	4680	-1.1	13.1	0	1.1
French Camp Slough	5,252	Existing Conditions	4754	-1	13		1.7
French Camp Slough	5,252	Proposed Conditions without onsite stormwater detention	4680	-1	13	0	1.6
French Camp Slough	5,252	Proposed Conditions with onsite stormwater detention	4680	-1	13	0	1.6
French Camp Slough	3,981	Existing Conditions	4752	-9	13		0.4
French Camp Slough	3,981	Proposed Conditions without onsite stormwater detention	-177	-9	13	0	0
French Camp Slough	3,981	Proposed Conditions with onsite stormwater detention	-177	-9	13	0	0
French Camp Slough	2,774	Existing Conditions	4753	-5.4	13		0.3
French Camp Slough	2,774	Proposed Conditions without onsite stormwater detention	4680	-5.4	13	0	0.3
French Camp Slough	2,774	Proposed Conditions with onsite stormwater detention	4680	-5.4	13	0	0.3
French Camp Slough	1,475	Existing Conditions	-97	-13.6	12.9		0
French Camp Slough	1,475	Proposed Conditions without onsite stormwater detention	-97	-13.6	12.9	0	0
French Camp Slough	1,475	Proposed Conditions with onsite stormwater detention	-97	-13.6	12.9	0	0

River	River Station	Plan	Peak Discharge Total (cfs)	Channel Invert (FT NAVD88)	Maximum W.S. Elev (FT NAVD88)	Change in W.S. Elev (FT)	Velocity (ft/s)
French Camp Slough	350	Existing Conditions	1520	-6.6	12.9		0.1
French Camp Slough	350	Proposed Conditions without onsite stormwater detention	1520	-6.6	12.9	0	0.1
French Camp Slough	350	Proposed Conditions with onsite stormwater detention	1520	-6.6	12.9	0	0.1

APPENDIX E

Environmental Noise Assessment

Environmental Noise Assessment

South Stockton Commerce Center

City of Stockton, California

January 22, 2021

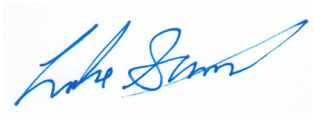
Project # 200603

Prepared for:

De Novo Planning Group
1030 Suncast Lane, Suite 106
El Dorado Hills, CA 95762

Prepared by:

Saxelby Acoustics LLC



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This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. This section is based in part on the following documents, reports and studies:

- *Envision Stockton 2040 General Plan* (City of Stockton, December 2018);
- *Envision Stockton 2040 General Plan Update Draft Environmental Impact Report* (City of Stockton, June 2018); and
- *Environmental Noise Assessment, South Stockton Commerce Center, City of Stockton, California* (Saxelby Acoustics, 2021).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.

Noise Unwanted sound.

SEL Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes a +5 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DBA)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dBA change cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Existing and Surrounding Land Uses

In the vicinity of the Project site, surrounding land uses include existing residential and industrial uses. Residential uses are located to the southwest of the Project site along South Airport Way and French Camp Road. These residential land uses are located outside the boundaries of the City of Stockton and within the boundaries of San Joaquin County. Industrial uses are located directly north of the Project site. Land to the east and south of the Project site is occupied by agricultural uses.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project vicinity, a continuous (24-hour) noise level measurement was conducted near residential receptors adjacent to the Project site on July 8, 2020. Short term noise level measurements were conducted at two locations on the eastern Project boundary on July 9, 2020. The noise measurement locations are shown on Figure 3.11-1. The noise level measurement survey results are provided in Table 3.11-2. Appendix B of Appendix E shows the complete results of the continuous noise monitoring at sites LT-1, ST-1, and ST-2.

TABLE 3.11-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

SITE	LOCATION	L_{DN}	AVERAGE MEASURED HOURLY NOISE LEVELS, dB					
			DAYTIME (7AM-10PM)			NIGHTTIME (10PM-7AM)		
			L_{EQ}	L_{50}	L_{MAX}	L_{EQ}	L_{50}	L_{MAX}
CONTINUOUS (24-HOUR) NOISE LEVEL MEASUREMENTS								
LT-1	West of site	64	59	56	72	58	52	70
SHORT-TERM NOISE LEVEL MEASUREMENTS								
ST-1	Northeast corner of site	N/A	73	71	81	N/A	N/A	N/A
ST-2	Southeast corner of site	N/A	66	65	73	N/A	N/A	N/A

SOURCE: SAXELBY ACOUSTICS, 2020.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value (L_{max}) represents the highest noise level

measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 820 and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

EXISTING ROADWAY NOISE LEVELS

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. While the newer FHWA traffic noise model (TNM 3.0) is required for use on federally funded highway projects, the FHWA RD-77-108 model is still widely used in the industry and recognized as an accurate screening tool, typically resulting in slight over-predictions in traffic noise levels at typical receptor setback distances.

Traffic volumes for existing conditions were obtained from the traffic data prepared for the Project (Fehr & Peers, 2020). Vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Table 3.11-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix C of Appendix E.

TABLE 3.11-3: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

ROADWAY	*SEGMENT*	*EXTERIOR TRAFFIC NOISE LEVEL, DB L_{DN}*
Airport Way	Commerce Dr. to French Camp Rd.	71.2
Airport Way	French Camp Rd. to Roth Rd.	73.6
Airport Way	Roth Rd. to Lathrop Rd.	69.8
Airport Way	Performance Dr. to Arch Rd.	70.5
French Camp Rd.	Airport Way to Ash St.	68.6
French Camp Rd.	Airport Way to Union St.	71.9
French Camp Rd.	Union St. and Southbound [SB] SR 99 Ramps	69.9
Roth Rd.	Airport Way to McKinley Ave.	69.0

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS, 2020.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

CITY OF STOCKTON

City of Stockton General Plan

Guidelines for the acceptability of noise have been developed by the Environmental Protection Agency and adapted by the California Office of Noise Control as planning tools for use by local government in California. These are reflected in the Office of Noise Control's "Guidelines for the Preparation and Content of Noise Elements of the General Plan" (1976). While cities, counties and other agencies are free to adopt their own standards, most general plans incorporate these standards or a modified version of them. The Office of Noise Control guidelines recognize that a more restrictive standard could be appropriate under special circumstances such as quiet suburban or rural settings. The City of Stockton has incorporated the Office of Noise Control standards in Table 5-1 of the Safety Element in the Stockton General Plan 2040.

An exterior noise environment of 50 to 60 dBA L_{dn} or CNEL is "normally acceptable" for residential uses, and noise levels of up to 70 dBA L_{dn} or CNEL are "conditionally acceptable." For other sensitive land uses such as schools, libraries, churches, hospitals and the like, an exterior noise environment of up to 70 dBA is considered "normally acceptable." Commercial, industrial and recreational uses are substantially less sensitive to noise with industrial uses being considered "normally acceptable" in environments up to 70 dBA L_{dn} and "conditionally acceptable" up to 80 dBA L_{dn}. Table 5-1 also provides specific guidance for assessing increases in ambient noise as follows: "If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA."

City of Stockton Municipal Code

The City of Stockton Municipal Code Chapter 16, Development Code, contains performance standards for non-transportation noise sources, as shown in Table 3.11-4.

TABLE 3.11-4: STOCKTON MUNICIPAL CODE NOISE STANDARDS FOR NON-TRANSPORTATION NOISE

NOISE LEVEL DESCRIPTOR	*MAXIMUM ACCEPTABLE NOISE LEVEL*	
	DAYTIME (7 A.M. – 10 P.M.)	*NIGHTTIME (10 P.M. – 7 A.M.)*
Hourly L_{eq}, dBA	55	45
Maximum Level (L_{max}), dBA	75	65

*NOTE: * EACH OF THE NOISE LEVEL STANDARDS SPECIFIED ABOVE SHALL BE REDUCED BY 5 DBA FOR SIMPLE TONE, NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC, OR RECURRING IMPULSIVE NOISES.*
SOURCE: STOCKTON MUNICIPAL CODE, CHAPTER 16.

Additionally, Section 16.60.030, Activities Deemed Violations of this Division, outlines construction noise and loading and unloading operational noise activities which violate the noise ordinance:

> 16.60.030(A) – Construction Noise. Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.
>
> 16.60.030(B) – Loading and Unloading Operations. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance.

San Joaquin County General Plan

Table PHS-2 of the San Joaquin County 2035 General Plan establishes an acceptable exterior noise level standard of 65 dBA L_{dn} and an interior noise level standard of 45 dBA L_{dn} for residential uses expected to transportation noise sources.

For non-transportation noise sources, the General Plan establishes the standards for sensitive uses. See Table 3.11-5. These standards are similar to the City's standards shown in Table 3.11-4 but are 5 dBA lower than the City's standards for daytime hours.

TABLE 3.11-5: SAN JOAQUIN COUNTY GENERAL PLAN NON-TRANSPORTATION NOISE STANDARDS

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: THESE STANDARDS APPLY TO NEW OR EXISTING RESIDENTIAL AREAS AFFECTED BY NEW OR EXISTING NON-TRANSPORTATION SOURCES.
[1]WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES,

THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.
[2] REFER TO MOUNTAIN HOUSE MASTER PLAN, TABLE 11.2, EXTERIOR NOISE STANDARDS FOR NOISE-SENSITIVE USES AFFECTED BY NON- TRANSPORTATION NOISE SOURCES, PAGE 11.12, FOR MOUNTAIN HOUSE NOISE STANDARDS.
[3] EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.
SOURCE: SAN JOAQUIN COUNTY GENERAL PLAN.

San Joaquin County Development Regulations

The San Joaquin County Development Regulations, Section 9-1025.9(b) establishes land use noise level standards for new non-transportation or "stationary" noise sources, as outlined below that would be applicable to the proposed Project.

9-1025.9(B) – STATIONARY NOISE SOURCES.

Proposed projects that will create new stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 9-1025.9(b), Part II (Table 3.11-6).

TABLE 3.11-6: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: [1]WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.
[2]EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.
(ORD. 3675; ORD. 4036 § 2(PART), 1999)
SOURCE: SAN JOAQUIN COUNTY DEVELOPMENT REGULATIONS.

VIBRATION STANDARDS

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Stockton does not have specific policies pertaining to vibration levels. However, Stockton Municipal Code Section 16.32.100 includes qualitative benchmarks for reducing vibration effects within Stockton. Land uses that generate vibrations may not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Such uses also may not generate vibrations that cause discomfort or annoyance to reasonable persons of normal sensitivity or that endangers the comfort, repose, health, or peace of residents whose property abuts the use. Vibrations from temporary construction and demolition activities are exempt from the provisions of this section, as are vehicles that leave the subject parcel (e.g., trucks, trains, and aircraft).

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.11-7 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 3.11-7: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

P.P.V.		*HUMAN REACTION*	*EFFECT ON BUILDINGS*
MM/SEC.	*IN./SEC.*		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- Generation of a 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;
- Generation of excessive groundborne vibration or groundborne noise levels; and/or
- 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.

Determination of a Significant Increase in Noise Levels

TEMPORARY CONSTRUCTION NOISE IMPACTS

With temporary noise impacts (construction), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Per the City of Stockton noise ordinance, construction activities operating between 10 p.m. and 7 a.m. which create a noise disturbance at the property boundary of a residence are prohibited and would be considered a significant impact. Per the County of San Joaquin Municipal Code, construction noise is prohibited between the hours of 9:00 p.m. and 6:00 a.m. any day and would be considered a significant impact.

OPERATIONAL IMPACTS

The noise standards applicable to the Project include the relevant portions of the City of Stockton and County of San Joaquin General Plan and Municipal Code described in the Regulatory Setting section above (Section 3.11.2), and the following standards. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

Another means of determining a potential noise impact is Table 5-1 of the Stockton General Plan 2040 Safety Element. Table 5-1 provides specific guidance for assessing increases in ambient noise as follows: "If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA." It should be noted that the California Department of Transportation assumes a 12 dBA increase is significant. Therefore, use of the 3 dBA test is considered to be conservative relative to the expected reaction from persons affected by the noise increase.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant with Mitigation)

Traffic Noise Environment at Off-Site Receptors with and without the Project

OFF-SITE TRAFFIC NOISE IMPACT ASSESSMENT METHODOLOGY

Implementation of the proposed Project would result in an increase in daily traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Tables 3.11-8 and 3.11-9 show the predicted traffic noise level increases on the local roadway network for Existing, Existing Plus Project, Cumulative No Project, and Cumulative Plus Project conditions. Appendix C of Appendix E provides the complete inputs and results of the FHWA traffic noise modeling.

TABLE 3.11-8: EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			EXISTING	*EXISTING + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Airport Wy.	Commerce Dr. to French Camp Rd.	80	71.2	75.3	**4.1**	+ 3 dB	Yes
Airport Wy.	French Camp Rd. to Roth Rd.	45	73.6	77.0	**3.4**	+ 3 dB	Yes
Airport Wy.	Roth Rd. to Lathrop Rd.	75	69.8	71.0	1.2	+ 3 dB	No
Airport Wy.	Performance Dr. to Arch Rd.	90	70.5	75.1	**4.6**	+ 3 dB	Yes
French Camp Rd.	Airport Wy. To Ash St.	45	68.6	69.5	1.0	+ 3 dB	No
French Camp Rd.	Arirport Wy. To Union St.	60	71.9	73.11	1.8	+ 3 dB	No
French Camp Rd.	Union St. and SB SR 99 Ramps	65	69.9	72.3	2.4	+ 3 dB	No
Roth Rd.	Airport Wy. To McKinley Ave.	75	69.0	71.2	2.2	+ 3 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2020.

TABLE 3.11-9: CUMULATIVE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			CUMULATIVE	*CUMULATIVE + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Airport Wy.	Commerce Dr. to French Camp Rd.	80	75.8	77.6	1.8	+ 3 dB	No
Airport Wy.	French Camp Rd. to Roth Rd.	45	79.7	80.8	1.1	+ 3 dB	No
Airport Wy.	Roth Rd. to Lathrop Rd.	75	74.9	75.4	0.5	+ 3 dB	No
Airport Wy.	Performance Dr. to Arch Rd.	90	77.0	78.6	1.6	+ 3 dB	No
French Camp Rd.	Airport Wy. To Ash St.	45	74.6	74.9	0.3	+ 3 dB	No
French Camp Rd.	Arirport Wy. To Union St.	60	77.6	78.1	0.5	+ 3 dB	No
French Camp Rd.	Union St. and SB SR 99 Ramps	65	76.2	76.8	0.6	+ 3 dB	No
Roth Rd.	Airport Wy. To McKinley Ave.	75	72.5	73.5	1.0	+ 3 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2020.

Project-Generated Non-Transportation Noise Environment at Off-Site Receptors

The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the proposed loading docks. In order to evaluate these noise sources at the nearest sensitive receptors, Saxelby Acoustics used the SoundPLAN noise prediction model to generate noise level predictions according to the assumptions outlined below.

The SoundPLAN noise prediction model was used to plot noise contours and to calculate noise levels at the sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors).

It should be noted that sound power is a measure of the total acoustic energy emitted by a noise source and is irrespective of distance from the source. Sound power is input into the SoundPLAN model as a representation of the total acoustic energy emitted by a specific noise source. Sound power levels in this report are A-weighted decibel levels, noted as "dBA, PWL" per industry standards. The model then corrects for the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) which affect sound propagation from the noise source to the receiver location.

LOADING DOCK NOISE GENERATION

To determine typical noise levels associated with the proposed loading docks, noise level measurement data from the Clearlake Wal-Mart store was used. The noise level measurements were conducted at a distance of 100 feet from the center of the two-bay loading dock and circulation area. Activities during the peak hour of loading dock activities included truck arrival/departures, truck idling, truck backing, air brake release, and operation of truck-mounted refrigeration units.

The results of the loading dock noise measurements indicate that a busy hour generated an average noise level of 61 dBA L_{eq} at a distance of 100 feet from the center of the loading dock truck maneuvering lanes. This analysis conservatively assumes that 50 percent of all proposed loading docks would operate at this level of activity in a busy hour during daytime (7:00 a.m. to 10:00 p.m.) and 25 percent of all proposed loading docks would operate at this level during nighttime (10:00 p.m. to 7:00 a.m.).

PARKING LOT CIRCULATION

Based upon the Project traffic study, the peak hour trips for the Project would be 2,301 autos and 290 tractor-trailers. Based upon noise measurements conducted of vehicle movements in parking lots, the sound exposure level (SEL) for a single passenger vehicle is 71 dBA at a distance of 50 feet while the SEL of a tractor-trailer is 85 dBA at the same distance.

Saxelby Acoustics used the SoundPLAN noise model to calculate noise levels at the nearest sensitive receptors. Input data included the loading dock and parking lot noise generation, as discussed above. Figure 3.11-2 shows the results of this analysis for the site layout in terms of the daytime (7:00 a.m. to 10:00 p.m.) peak hour average (L_{eq}). Nighttime (10:00 p.m. to 7:00 a.m.) peak hour average noise levels (L_{eq}) are shown on Figure 3.11-3.

Figure 3.11-4 shows the results of this analysis in terms of the peak hour maximum noise levels (L_{max}). Due to the nature of loading dock operation and parking lot circulation, the maximum noise levels are the same for both daytime and nighttime.

On-Site Aircraft Noise Environment

The proposed Project is located approximately 850 feet from the runway of the Stockton Metropolitan Airport. The Stockton Metropolitan Airport is a county-owned and operated joint civil-military airport. Noise contours for the Stockton Airport were published by San Joaquin County in the Airport Land Use Compatibility Plan (ALUCP). The noise contours and proposed Project boundaries are reproduced in Figure 3.11-5.

As shown in Figure 3.11-5, the proposed Project site is projected to be exposed to noise levels between 65 and 70 dBA CNEL by the year 2038.

Construction Noise Environment

During the construction of the proposed Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-10, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3.11-10: CONSTRUCTION EQUIPMENT NOISE

EQUIPMENT	*QUANTITY*
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Construction Vibration Environment

The primary vibration-generating activities would be grading, utilities placement, and parking lot construction. Table 3.11-11 shows the typical vibration levels produced by construction equipment.

TABLE 3.11-11: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	*P.P.V. AT 25 FEET (INCHES/SECOND)*	*P.P.V. AT 50 FEET (INCHES/SECOND)*	*P.P.V. AT 100 FEET (INCHES/SECOND)*
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.

INCREASED TRAFFIC NOISE LEVELS AT EXISTING RECEPTORS

As shown in Tables 3.11-8 and 3.11-9, some noise-sensitive receptors located along the Project area roadways are currently exposed to exterior traffic noise levels exceeding the City of Stockton 60 dB L_{dn} exterior noise level standard for residential uses, as well as the San Joaquin County 65 dBA L_{dn} exterior noise standard. These receptors would continue to experience elevated exterior noise levels with implementation of the proposed Project. For example, under Existing conditions, existing sensitive receptors located adjacent to the Project area roadways currently experience exterior noise level of 68.6 to 73.6 dB L_{dn}. This exceeds the City's 60 dB exterior noise standard, as well as County's 65 dB L_{dn} standard. Under Existing Plus Project conditions, exterior traffic noise levels are

predicted to be approximately 69.5 to 77.0 dB L_{dn}. This would also exceed the City and County exterior noise level standards.

Under Existing Plus Project conditions, the proposed Project's contribution ranges between 1.0 dB and 4.1 dB, with three roadway segments experiencing increases that would exceed the 3 dB increase threshold. As shown in Table 3.11-8, significant traffic noise increases under the Existing Plus Project Plus traffic conditions include the following segments:

- **Airport Way from Commerce Drive to French Camp Road** – noise levels are predicted to increase by 4.1 dB.
- **Airport Way from French Camp Road to Roth Road** – noise levels are predicted to increase by 3.4 dB.
- **Airport Way from Performance Drive to Arch Road** – noise levels are predicted to increase by 4.6 dB.

In order to reduce this impact, the use of sound walls or quiet pavement would be required. Construction of new six-foot-tall sound walls could be a potential mitigation measure. However, all of the impacted residential uses along the roadway segments listed above are accessed directly via driveways off the main roadway. As such, a sound wall would require many driveway openings, resulting in partial noise barriers. These openings in the sound wall would substantially reduce the noise barrier performance. Additionally, construction of noise barriers at off-site locations would result in encroachment into private property. Such encroachment would require private property owners to allow permission to enter their property. Therefore, noise barriers are not considered to be a practical option.

Quiet pavements are typically assumed to provide a 3 to 5 dBA reduction. Assuming a minimum reduction of 3 dBA, quiet pavement placed along sensitive receptor areas on the previously-listed roadway segments could reduce Project noise level increases to the following roadway segments:

- **Airport Way from Commerce Drive to French Camp Road** – noise levels are predicted to increase by 4.1 dB without mitigation. Use of quiet pavement would reduce this to a 1.1 dB increase. Approximately 1,000 feet (approximately 0.19 miles) of quiet pavement for four-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.
- **Airport Way from French Camp Road to Roth Road** – noise levels are predicted to increase by 3.4 dB without mitigation. Use of quiet pavement would reduce this to a 0.4 dB increase. Approximately 6,600 feet (approximately 1.25 miles) of quiet pavement for two-lanes of roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.
- **Airport Way from Performance Drive to Arch Road** – noise levels are predicted to increase by 4.6 dB without mitigation. Use of quiet pavement would reduce this to a 1.6 dB increase. Approximately 500 feet (approximately 0.09 miles) of quiet pavement for four-lanes of

roadway would be required. Approximate distance includes extension of quiet pavement a minimum of 100 feet past noise-sensitive receptors. See Figure 3.11-6 for approximate required pavement locations.

Therefore, with implementation of Mitigation Measure 3.11-1, traffic noise impacts would be ***less-than-significant***.

OPERATIONAL NOISE LEVELS AT EXISTING RECEPTORS

Operational noise levels at the existing residential receptors to the west and southwest of the site resulting from the Project are quantified and shown in Figures 3.11-2 through 3.11-4. Figure 3.11-2 shows the daytime (7:00 a.m. to 10:00 p.m.) Project noise contours, Figure 3.11-3 shows the nighttime (10:00 p.m. to 7:00 a.m.) Project noise contours, and Figure 3.11-4 shows the maximum (L_{max}) Project noise contours.

Based upon Figure 3.11-2, the Project would generate daytime (7:00 a.m. to 10:00 p.m.) peak hour noise levels of 48 dBA L_{eq}, or less, at the outdoor activity areas of adjacent residential uses. This would comply with the San Joaquin County non-transportation noise limits of 50 dBA L_{eq} during daytime hours. Existing ambient noise measurements in the vicinity of these receptors was found to be approximately 59 dBA L_{eq} during daytime hours as shown by Table 3.11-2. At this location, the increase in noise levels due to the Project is estimated to be 0.0 dBA.

As shown in Figure 3.11-3, the Project would generate nighttime (10:00 p.m. to 7:00 a.m.) noise levels of 44.8 dBA L_{eq} or less at the residential uses. This would comply with the San Joaquin County non-transportation noise limits of 45 dBA L_{eq} during nighttime hours. Existing ambient noise measurements in the vicinity of these receptors was found to be approximately 58 dBA L_{eq} during nighttime hours as shown by Table 3.11-2. At this location, the increase in noise levels due to the Project is estimated to be 0.0 dBA.

Based upon Figure 3.11-4, the proposed Project is predicted to generate maximum noise levels of approximately 52 dBA L_{max} at the residential uses to the southwest of the Project. This would comply with the San Joaquin County maximum noise level limits of 70 dBA L_{max} during daytime hours and 65 dBA L_{max} during nighttime hours.

CONSTRUCTION NOISE

During the construction phases of the Project, noise from construction activities would add to the noise environment in the immediate Project vicinity. Based upon the Table 3.11-10 data, the proposed Project is predicted to generate construction noise levels of up to 90 dBA at a distance of 50 feet. The closest sensitive receptor to the Project site is approximately 2,200 feet from the Project area. At this distance, construction noise would attenuate to approximately 57 dBA.

Compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in Mitigation Measure 3.11-2), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive

receptors. Therefore, with implementation of Mitigation Measure 3.10-2, temporary construction noise impacts would be ***less-than-significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *To reduce traffic noise increases under Existing Plus Project conditions to less than +3.0 dB, the following roadway segments shall be paved with quiet pavement:*

- *Airport Way from Commerce Drive to French Camp Road.*
- *Airport Way from French Camp Road to Roth Road.*
- *Airport Way from Performance Drive to Arch Road.*

The pavement would be required for any portion of roadway passing a noise-sensitive use, and for a distance of 100 feet on either side of the sensitive-use. This requirement shall be noted on the Project improvement plans. Approximate pavement locations are shown on Figure 3.11-6.

Mitigation Measure 3.11-2: *To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:*

- *All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, shall be selected whenever possible.*
- *All stationery noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*
- *Construction shall be limited to 7:00 a.m. to 10:00 p.m.*
- *Staging areas on the Project site shall be located in areas that maximize, to the extent feasible, the distance between staging activity and sensitive receptors.*

These requirements shall be noted on the Project improvement plans.

Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

With the exception of vibratory compactors, the Table 3.11-11 data indicate that construction vibration levels anticipated for the Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Structures which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 190 feet, or further, from the Project site. Therefore, this is a ***less-than-significant*** impact and no mitigation is required.

Impact 3.11-3: The proposed Project would not expose people residing or working in the Project area to excessive noise levels. (Less than Significant)

The Stockton Metropolitan Airport is a county-owned and operated joint civil-military airport located approximately 850 feet from the proposed Project boundary. Noise contours for the Stockton Airport were published by San Joaquin County in the Airport Land Use Compatibility Plan (ALUCP). The ALUCP was published in May of 2016 and Amended in February of 2018.

As shown in Figure 3.11-5, the Project site is predicted to be exposed to noise levels between 65 and 70 dBA CNEL at the northern boundary by the year 2038. According to the ALUCP, industrial uses may be safely operated within the 70 to 75 dBA CNEL noise contour region. Additionally, the City of Stockton applies a 70 dBA L_{dn}/CNEL standard to industrial uses. Because the project is located outside of the 70 dBA airport noise contour, this is a ***less-than-significant*** impact, and no mitigation is required.

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South Stockton Commerce Center

City of Stockton, California

Figure 3.11-1

Noise Measurement Sites

Legend

- Noise Measurement - Long Term
- Noise Measurement - Short Term

0.0 mi 1.0 mi 2.0 mi 3.0 mi 4.0 mi

Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 07/14/2020

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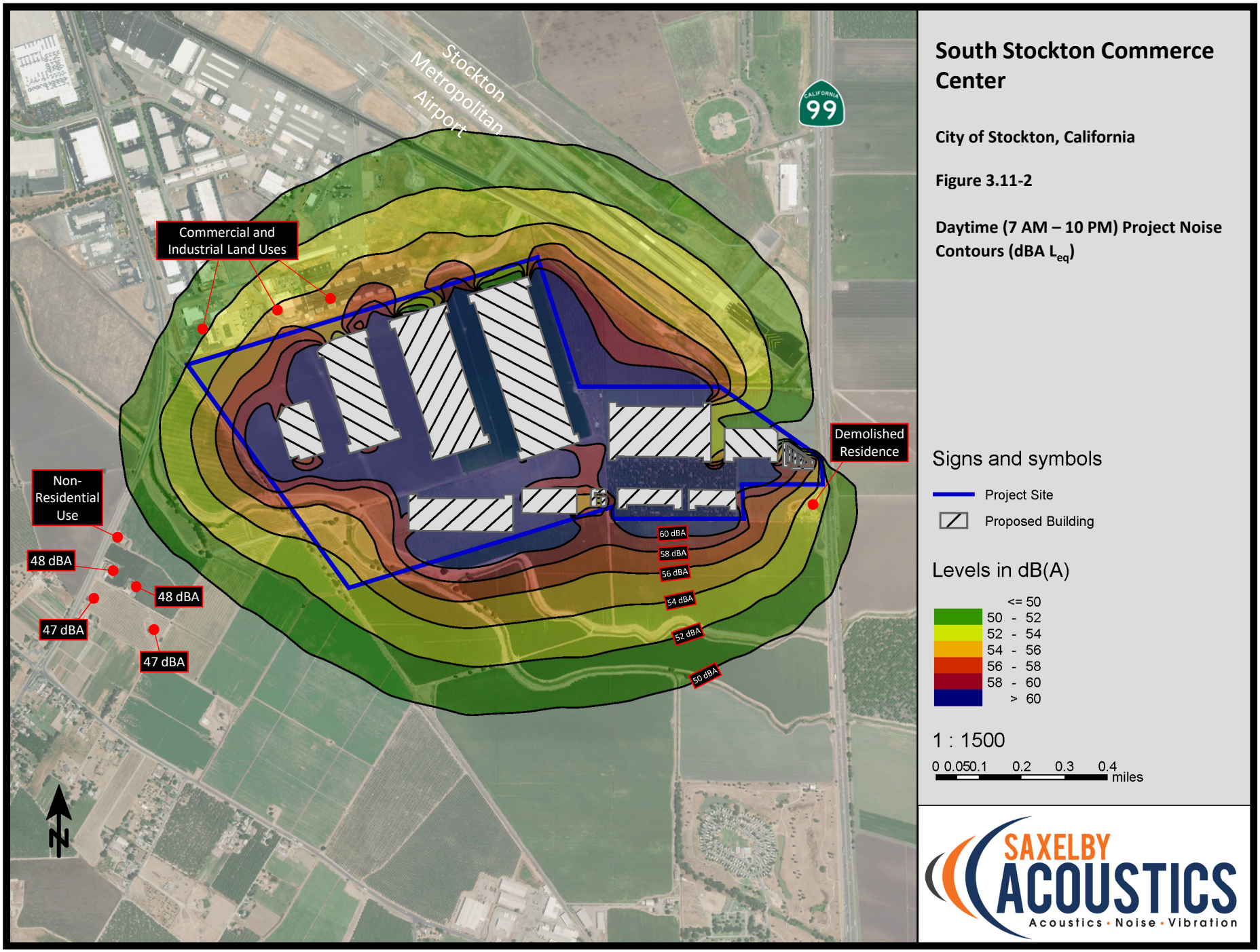

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-2

Daytime (7 AM – 10 PM) Project Noise Contours (dBA L_{eq})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

<= 50
50 - 52
52 - 54
54 - 56
56 - 58
58 - 60
> 60

1 : 1500

0 0.05 0.1 0.2 0.3 0.4 miles

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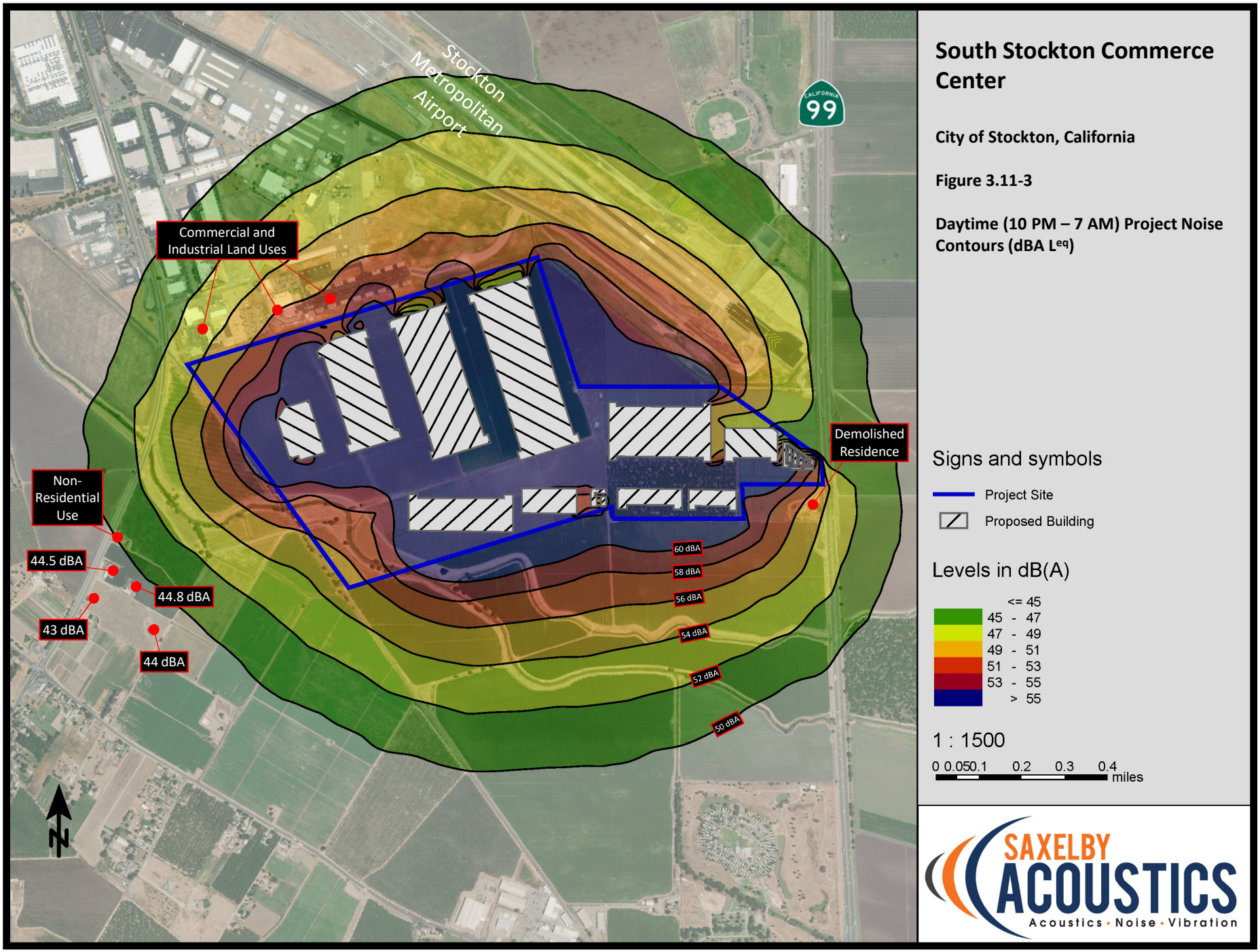
Stockton Metropolitan Airport
99
Commercial and Industrial Land Uses
Demolished Residence
Non-Residential Use
44.5 dBA
44.8 dBA
43 dBA
44 dBA
60 dBA
58 dBA
56 dBA
54 dBA
52 dBA
50 dBA
N
South Stockton Commerce Center
City of Stockton, California
Figure 3.11-3
Daytime (10 PM – 7 AM) Project Noise Contours (dBA Leq)
Signs and symbols
Project Site
Proposed Building
Levels in dB(A)
<= 45
45 - 47
47 - 49
49 - 51
51 - 53
53 - 55
> 55
1 : 1500
0 0.05 0.1 0.2 0.3 0.4 miles
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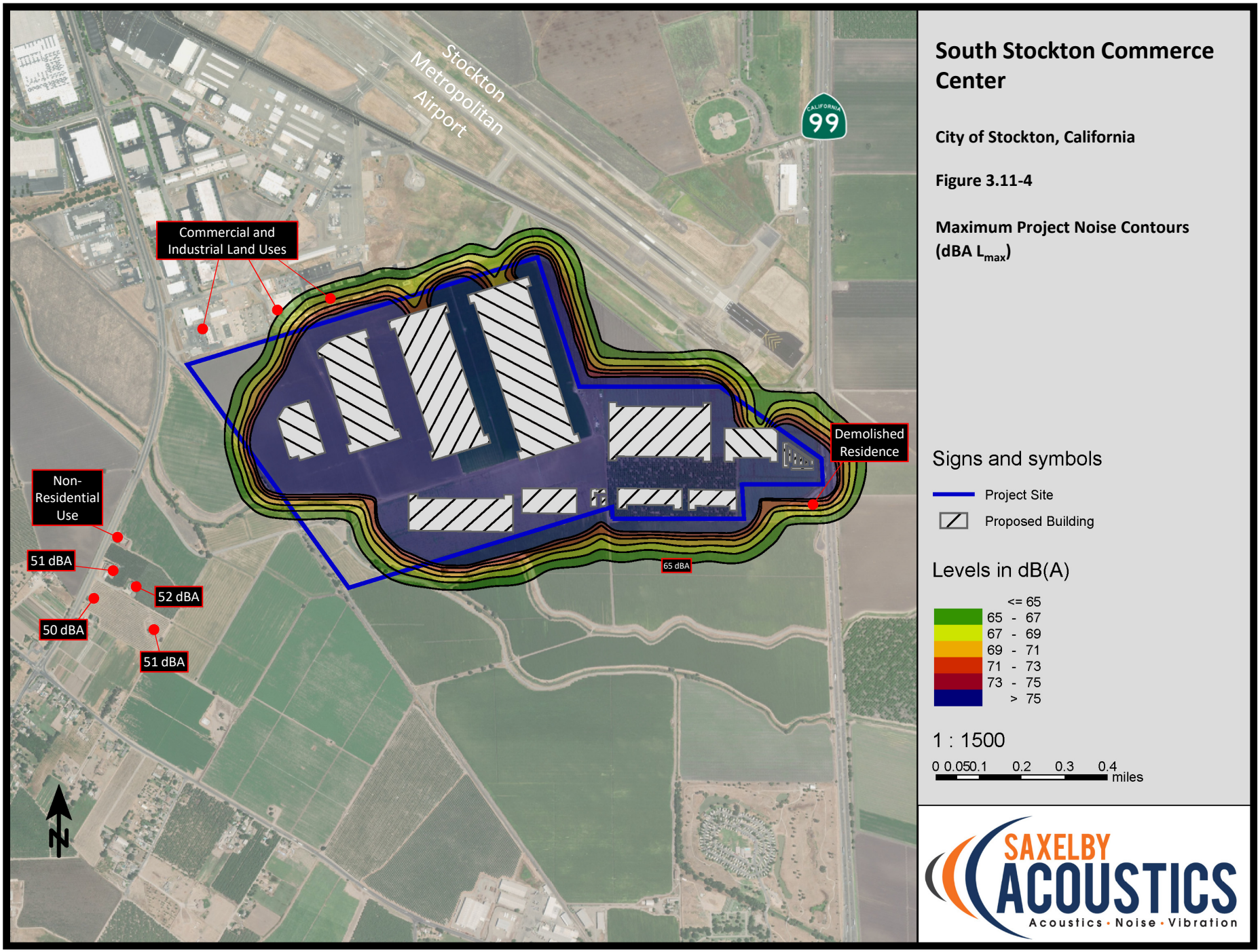

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-4

Maximum Project Noise Contours (dBA L_{max})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

- <= 65
- 65 - 67
- 67 - 69
- 69 - 71
- 71 - 73
- 73 - 75
- > 75

1 : 1500

0 0.05 0.1 0.2 0.3 0.4 miles

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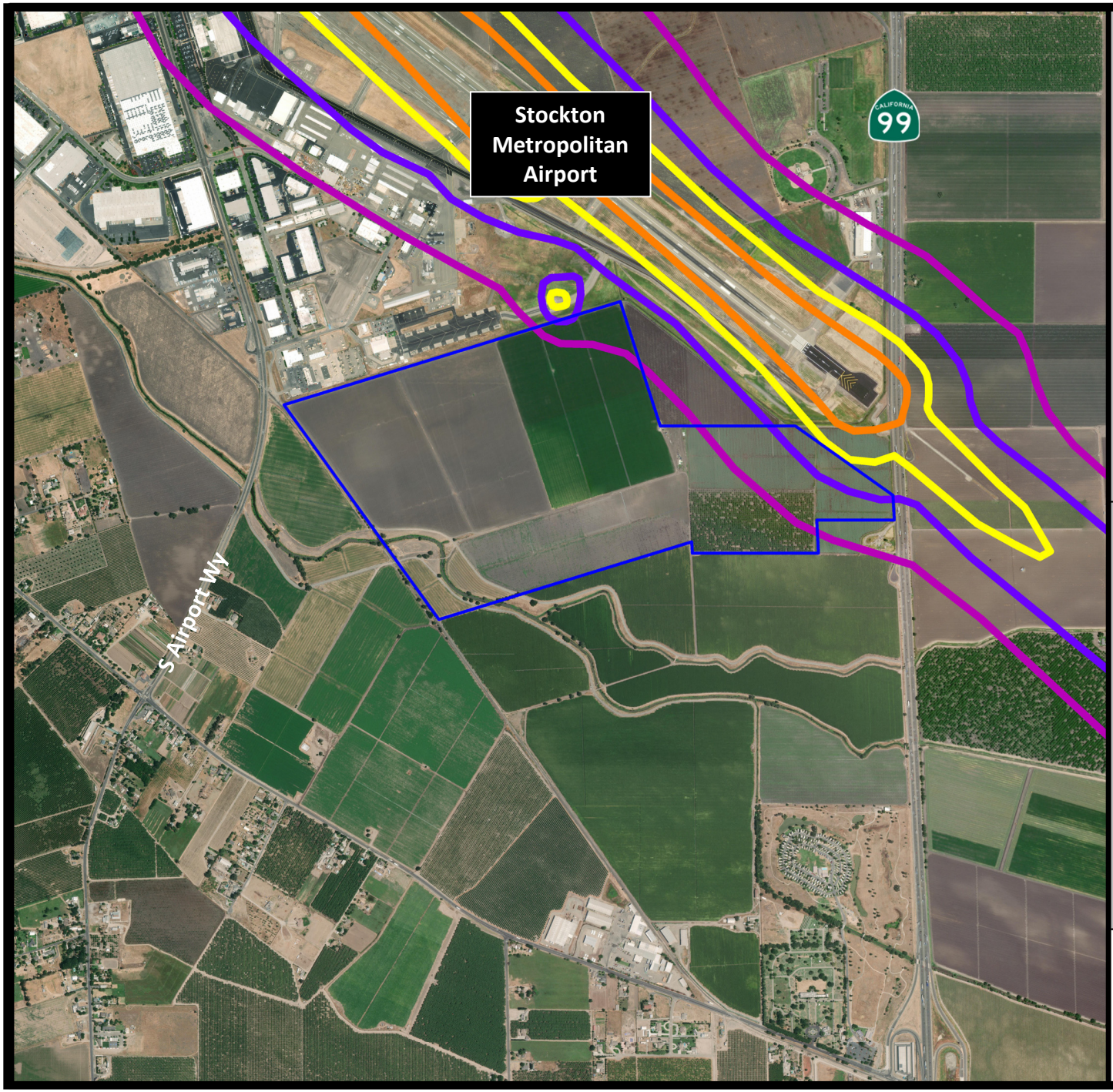

South Stockton Commerce Center

City of Stockton, California

Figure 3.11-5

Airport Noise Contours

Legend

- Project Site
- 60 dBA Contour
- 65 dBA Contour
- 70 dBA Contour
- 75 dBA Contour

0.0 mi 1.0 mi 2.0 mi 3.0 mi 4.0 mi

Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 12/21/2020

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South Stockton Commerce Center

City of Stockton, California

Figure 3.11-6

Required Quiet Pavement Locations

Legend

- Project Site
- Reccommended Quiet Pavement

0 ft 1500 ft 3000 ft 4500 ft

Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 01/22/2021

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

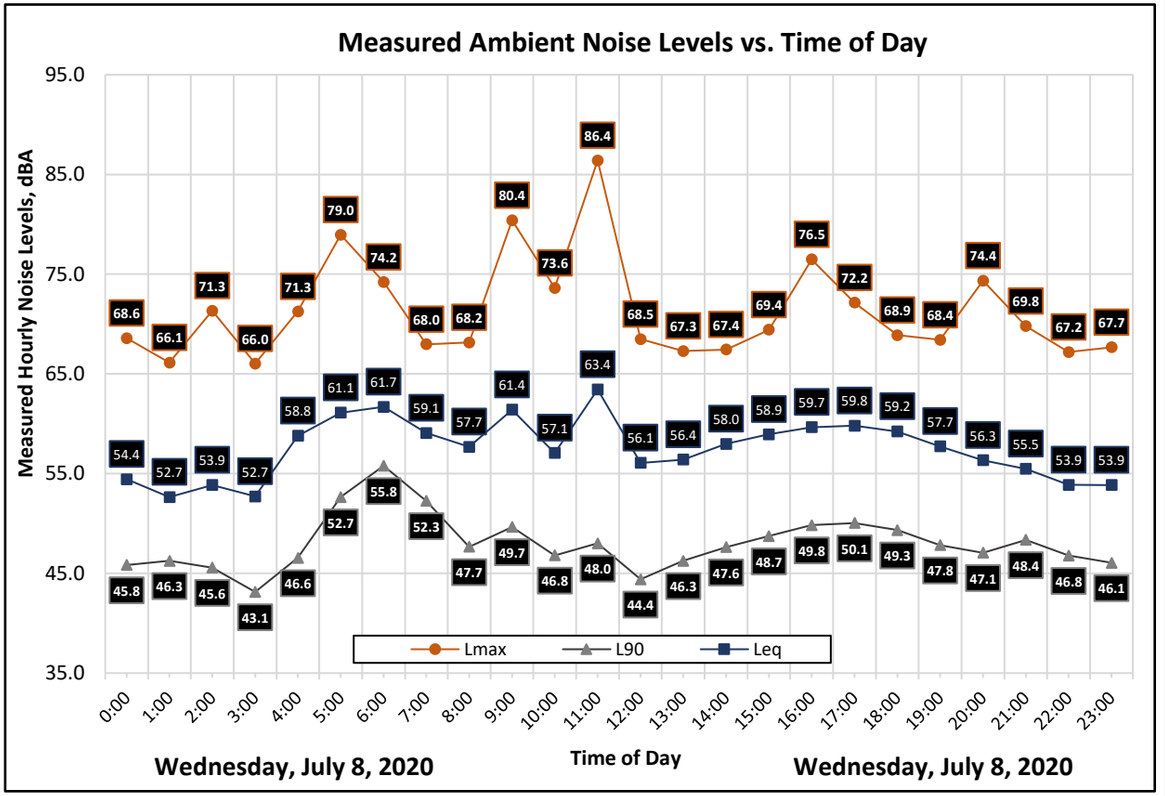
Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: South Stockton Commerce Center
Meter: 820-1
Location: Western Project Boundary
Calibrator: CAL200
Coordinates: 37.8803762°, -121.2483891°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, July 8, 2020	0:00	54.4	68.6	50.0	45.8
Wednesday, July 8, 2020	1:00	52.7	66.1	48.0	46.3
Wednesday, July 8, 2020	2:00	53.9	71.3	49.1	45.6
Wednesday, July 8, 2020	3:00	52.7	66.0	47.9	43.1
Wednesday, July 8, 2020	4:00	58.8	71.3	56.2	46.6
Wednesday, July 8, 2020	5:00	61.1	79.0	58.8	52.7
Wednesday, July 8, 2020	6:00	61.7	74.2	60.3	55.8
Wednesday, July 8, 2020	7:00	59.1	68.0	57.5	52.3
Wednesday, July 8, 2020	8:00	57.7	68.2	55.4	47.7
Wednesday, July 8, 2020	9:00	61.4	80.4	57.0	49.7
Wednesday, July 8, 2020	10:00	57.1	73.6	54.4	46.8
Wednesday, July 8, 2020	11:00	63.4	86.4	55.4	48.0
Wednesday, July 8, 2020	12:00	56.1	68.5	53.5	44.4
Wednesday, July 8, 2020	13:00	56.4	67.3	54.0	46.3
Wednesday, July 8, 2020	14:00	58.0	67.4	55.8	47.6
Wednesday, July 8, 2020	15:00	58.9	69.4	57.1	48.7
Wednesday, July 8, 2020	16:00	59.7	76.5	57.6	49.8
Wednesday, July 8, 2020	17:00	59.8	72.2	58.1	50.1
Wednesday, July 8, 2020	18:00	59.2	68.9	57.3	49.3
Wednesday, July 8, 2020	19:00	57.7	68.4	55.6	47.8
Wednesday, July 8, 2020	20:00	56.3	74.4	53.4	47.1
Wednesday, July 8, 2020	21:00	55.5	69.8	52.7	48.4
Wednesday, July 8, 2020	22:00	53.9	67.2	50.6	46.8
Wednesday, July 8, 2020	23:00	53.9	67.7	50.1	46.1

Statistics	Leq	Lmax	L50	L90
Day Average	59	72	56	48
Night Average	58	70	52	48
Day Low	55	67	53	44
Day High	63	86	58	52
Night Low	53	66	48	43
Night High	62	79	60	56
Ldn	64	Day %		72
CNEL	64	Night %		28



Appendix B2 : Short Term Noise Monitoring Results

Site: ST-1
Project: South Stockton Commercial Center
Location: Northern Project Boundary
Coordinates: 37.8830301°, -121.2205639°

Meter: LDL 831-3
Calibrator: CAL200

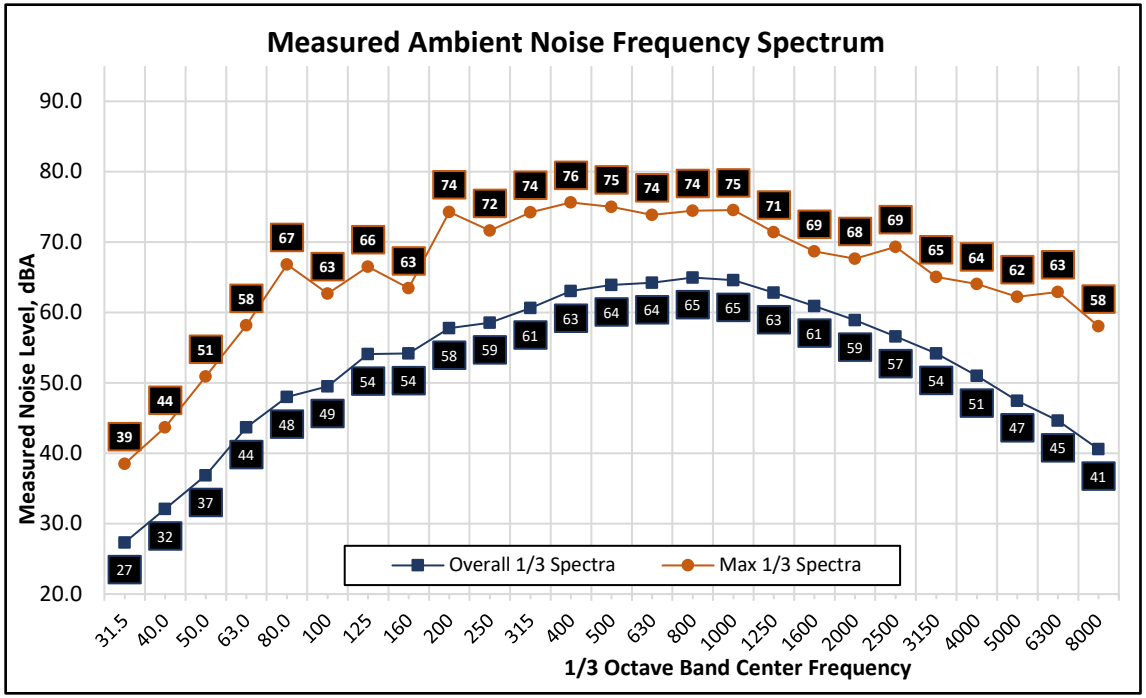
Start: 2020-07-09 14:16:58
Stop: 2020-07-09 14:26:58
SLM: Model 831
Serial: 1329

Measurement Results, dBA

Duration:	0:10
L_{eq}:	73
L_{max}:	81
L_{min}:	56
L_{50}:	71
L_{90}:	64

Notes

Primary noise source is traffic on Highway 99. Seconday noise source is air traffic arriving and departing at Stockton Metropolitan Airport.



Appendix B3 : Short Term Noise Monitoring Results

Site: ST-2
Project: South Stockton Commercial Center
Location: Southern Project Boundary
Coordinates: 37.8782805°, -121.2203728°

Meter: LDL 831-3
Calibrator: CAL200

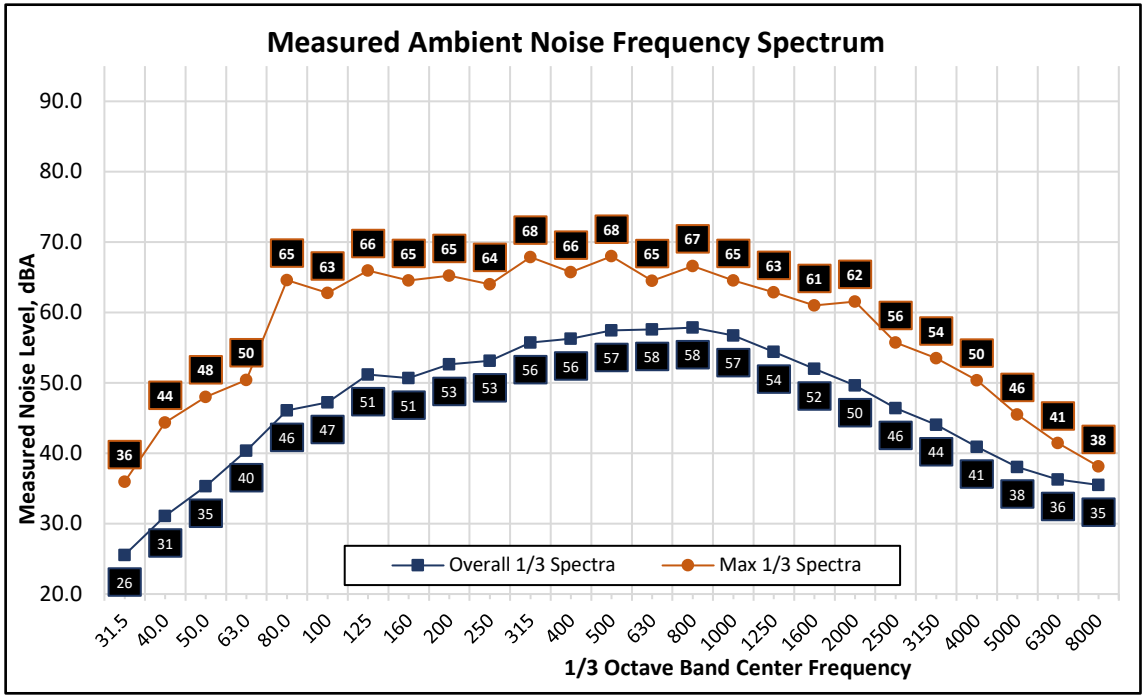
Start: 2020-07-09 14:33:02
Stop: 2020-07-09 14:43:02
SLM: Model 831
Serial: 1329

Measurement Results, dBA

Duration:	0:10
L_{eq}:	66
L_{max}:	73
L_{min}:	53
L_{50}:	65
L_{90}:	60

Notes

Primary noise source is traffic on Highway 99. Seconday noise source is air traffic arriving and departing at Stockton Metropolitan Airport.



Appendix C: Traffic Noise Calculation Inputs and Results

Appendix C-1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200603
Description: South Stockton Commerce Center
Ldn/CNEL: Ldn
Hard/Soft: Soft

Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
Airport Wy.	Commerce Dr. to French Camp Rd.	10,550	72	0	28	2.0%	10.5%	55	80	0	447	207	96	71.2
Airport Wy.	French Camp Rd. to Roth Rd.	7,250	72	0	28	2.0%	11.8%	55	45	0	362	168	78	73.6
Airport Wy.	Roth Rd. to Lathrop Rd.	6,550	72	0	28	2.0%	11.8%	55	75	0	339	157	73	69.8
Airport Wy.	Performance Dr. to Arch Rd.	8,550	72	0	28	2.0%	15.5%	55	90	0	451	209	97	70.5
French Camp Rd.	Airport Wy. To Ash St.	7,750	83	0	17	2.0%	8.5%	35	45	0	168	78	36	68.6
French Camp Rd.	Arirport Wy. To Union St.	10,700	83	0	17	2.0%	11.3%	55	60	0	371	172	80	71.9
French Camp Rd.	Union St. and SB SR 99 Ramps	7,750	83	0	17	2.0%	11.3%	55	65	0	299	139	64	69.9
Roth Rd.	Airport Wy. To McKinley Ave.	5,800	83	0	17	2.0%	25.5%	45	75	0	297	138	64	69.0

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Appendix C-2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200603
Description: South Stockton Commerce Center
Ldn/CNEL: Ldn
Hard/Soft: Soft

Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
Airport Wy.	Commerce Dr. to French Camp Rd.	20,734	72	0	28	2.0%	16.4%	55	80	0	834	387	180	75.3
Airport Wy.	French Camp Rd. to Roth Rd.	12,908	72	0	28	2.0%	16.5%	55	45	0	609	283	131	77.0
Airport Wy.	Roth Rd. to Lathrop Rd.	7,908	72	0	28	2.0%	13.6%	55	75	0	406	189	88	71.0
Airport Wy.	Performance Dr. to Arch Rd.	20,999	72	0	28	2.0%	19.7%	55	90	0	911	423	196	75.1
French Camp Rd.	Airport Wy. To Ash St.	8,656	83	0	17	2.0%	10.0%	35	45	0	194	90	42	69.5
French Camp Rd.	Arirport Wy. To Union St.	14,321	83	0	17	2.0%	14.1%	55	60	0	491	228	106	73.7
French Camp Rd.	Union St. and SB SR 99 Ramps	11,371	83	0	17	2.0%	14.8%	55	65	0	430	200	93	72.3
Roth Rd.	Airport Wy. To McKinley Ave.	10,100	83	0	17	2.0%	24.2%	45	75	0	418	194	90	71.2

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Appendix C-3

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200603
Description: South Stockton Commerce Center
Ldn/CNEL: Ldn
Hard/Soft: Soft

Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
Airport Wy.	Commerce Dr. to French Camp Rd.	30,720	72	0	28	2.0%	10.5%	55	80	0	911	423	196	75.8
Airport Wy.	French Camp Rd. to Roth Rd.	34,840	72	0	28	2.0%	8.8%	55	45	0	931	432	201	79.7
Airport Wy.	Roth Rd. to Lathrop Rd.	24,600	72	0	28	2.0%	8.8%	55	75	0	738	343	159	74.9
Airport Wy.	Performance Dr. to Arch Rd.	42,590	72	0	28	2.0%	13.0%	55	90	0	1226	569	264	77.0
French Camp Rd.	Airport Wy. To Ash St.	33,660	83	0	17	2.0%	7.5%	35	45	0	422	196	91	74.6
French Camp Rd.	Arirport Wy. To Union St.	41,600	83	0	17	2.0%	10.5%	55	60	0	894	415	193	77.6
French Camp Rd.	Union St. and SB SR 99 Ramps	37,190	83	0	17	2.0%	8.8%	55	65	0	780	362	168	76.2
Roth Rd.	Airport Wy. To McKinley Ave.	18,450	83	0	17	2.0%	16.5%	45	75	0	515	239	111	72.5

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Appendix C-4

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200603
Description: South Stockton Commerce Center
Ldn/CNEL: Ldn
Hard/Soft: Soft

Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
Airport Wy.	Commerce Dr. to French Camp Rd.	40,226	72	0	28	2.0%	13.3%	55	80	0	1192	553	257	77.6
Airport Wy.	French Camp Rd. to Roth Rd.	40,272	72	0	28	2.0%	10.6%	55	45	0	1095	508	236	80.8
Airport Wy.	Roth Rd. to Lathrop Rd.	26,410	72	0	28	2.0%	9.7%	55	75	0	801	372	173	75.4
Airport Wy.	Performance Dr. to Arch Rd.	55,717	72	0	28	2.0%	15.2%	55	90	0	1563	726	337	78.6
French Camp Rd.	Airport Wy. To Ash St.	34,792	83	0	17	2.0%	8.0%	35	45	0	444	206	96	74.9
French Camp Rd.	Arirport Wy. To Union St.	44,542	83	0	17	2.0%	11.3%	55	60	0	961	446	207	78.1
French Camp Rd.	Union St. and SB SR 99 Ramps	40,132	83	0	17	2.0%	9.8%	55	65	0	851	395	183	76.8
Roth Rd.	Airport Wy. To McKinley Ave.	22,071	83	0	17	2.0%	17.5%	45	75	0	597	277	129	73.5

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APPENDIX F

Vehicle Miles Traveled Analysis and Transportation Impact Assessment

South Stockton Commerce Center (SSCC) Project

Vehicle Miles Traveled and Transportation Impact Assessment (TIA)

Prepared for:
De Novo Planning Group
City of Stockton, CA

July 2021

RS20-3927

FEHR PEERS

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EXECUTIVE SUMMARY

This Executive Summary presents the key findings of the Transportation Impact Assessment (TIA) for the proposed South Stockton Commerce Center (SSCC) Project in Stockton, California.

PROJECT DESCRIPTION AND ANALYSIS PARAMETERS

The proposed SSCC Project include the development of 437.45 acres of land which will include: industrial, commercial, open space, public facilities, and roadway right-of-way land uses.

- Development of approximately 298 acres of industrial uses (building and parking areas);
- Development of approximately 41 acres of public facilities (storm basins and pump stations);
- Creation of approximately 54 acres of open space (park area and avoidance of French Camp Slough);
- Build up to a maximum of 6,091,551 square feet of employment-generating industrial land uses; Build up to a maximum of 140,350 square feet of employment-generating commercial / retail land uses; and
- The proposed South Stockton Commerce Center Project would add a total of 3,200 new jobs (2,880 industrial, 130 food and 190 retail) to the southern part of the City of Stockton;
- Based on the trip generation analysis, the proposed project is expected to generate 17,081 net new daily passenger car, truck and sport utility vehicle (SUV) trips, including 1,924 AM (with 1,462 inbound and 462 outbound) and 2,071 PM (with 634 inbound and 1,437 outbound) peak hour trips; and
- The SSSC Project is expected to generate 5,552 net new daily truck trips, including 210 AM (with 105 inbound and 105 outbound) and 290 PM (with 145 inbound and 145 outbound) peak hour trips.

VEHICLE MILES TRAVELED (VMT) ANALYSIS

A model-wide analysis was performed to obtain daily trips and travel distance by the Transportation Analysis Zones (TAZs) that represent the retail/commercial, food, and industrial/warehousing land uses that comprise the South Stockton Commerce Center Project. The product of daily trips and travel distance was summed up to obtain VMT estimates for home-based work trips. The total VMT was then divided by the projected number of employees and the resulting home-based work VMT per employee was determined. This average home-based work VMT per employee was then compared to Baseline Conditions (18.56 miles) and Goal developed by the City of Stockton (15.88 miles) to determine the potential impact of the proposed SSCC Project to the environments as defined by CEQA and SB 743. The key findings of the VMT analysis are:

- According to the City of Stockton Baseline (Existing) Travel Demand Model, the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker is 18.56 miles. This includes a mix of employees who both live and work in the City of Stockton and employees that travel to and from neighboring cities to work in the City of Stockton.

- The goal of the City of Stockton is to decrease the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker from 18.56 miles to 15.78 miles, a 15.0% reduction when compared to Baseline (Existing) Conditions.

- According to the Envision Stockton 2040 General Plan Travel Demand Model, the City is projected to add a mix of jobs that would increase employment opportunities for both existing and future residents. This would improve the jobs / housing balance in the City of Stockton and theoretically reduce the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker.
- On the other hand, based on the total increase in population compared to the total increase in employments, the Envision Stockton 2040 General Plan Travel Demand Model is projected to generate a Citywide average daily home-based work VMT per worker (19.73) that is greater than the City of Stockton's Baseline (existing) Citywide average daily home-based work VMT per worker (18.56), an increase of 6.3%.
- The proposed South Stockton Commerce Center Project would add a total of 3,200 new jobs (2,880 industrial, 130 food and 190 retail) to the southern part of the City, which is greater than what was included in the Envision Stockton 2040 General Plan Travel Demand Model for the Traffic Analysis Zones that represent the SSCC project site.
- The South Stockton Commerce Center Project's average daily home-based work vehicle miles traveled per worker is projected to be 21.05 mile for the industrial, food and retail employees that either live and work in the City of Stockton and employees that travel to and from neighboring cities to work at the SSCC Project. This is 2.49 miles (13.4%) higher when compared to Baseline (Existing) Conditions.
- The primary result of the daily home-based work VMT per worker VMT analysis is that although the proposed SSCC project's is greater than the Envision Stockton 2040 threshold (21.05 versus 19.73), the overall benefit of the SSCC project is improving the jobs / housing balance for City of Stockton residents and reducing the average home-based work vehicle miles traveled per worker from 19.73 to 19.69 (a 0.2% reduction).

Impact TR-1: Vehicle Miles Traveled

Implementation of the Proposed South Stockton Commerce Center Project would result in additional vehicle travel generated by the food, retail / commercial, and industrial / warehousing land uses. This would result in the average home-based work vehicle miles traveled per worker of 21.05 miles. This is greater than the Baseline (Existing) of 18.56 miles or Envision Stockton 2040 goal of 15.88 miles. Therefore, the impact of the Proposed South Stockton Commerce Center Project on VMT would be **Significant and Unavoidable**.

South Stockton Commerce Center Land Uses

The South Stockton Commerce Center Project proposes 6,091,551 gross square feet of industrial and warehousing space, with up to 2,880 employees. The South Stockton Commerce Center Project also proposes 140,350 gross square feet of food and retail space, with up to 320 employees. Based on the location of the SSCC project in the south-east area of the City of Stockton, the distance to and from existing and future workers who both live and work in the City of Stockton, results in an average travel distance that is greater than Baseline (Existing) conditions. Therefore, per the Technical Advisory, non-residential/non-office projects that results in a net increase in total VMT may indicate a significant transportation impact.

Mitigation TR-1: Travel Demand Management.

1) The Proposed Project would generate a net increase in the average daily home-based work VMT per worker (21.05 miles) that is greater than the City of Stockton's Baseline (existing) average daily home-based work VMT per worker (18.56).

2) The Proposed Project would generate average daily home-based work VMT per worker (21.05 miles) that exceeds the City of Stockton's goal of 15.0 percent below baseline average daily home-based work VMT per worker (15.78).

Per OPR's Technical Advisory, the Proposed SSCC Project's increase in VMT per worker for these land uses may indicate a significant transportation impact when compared to baseline VMT. The project applicant shall work with the City of Stockton to implement feasible Transportation Demand Management (TDM) strategies, which would decrease the VMT generated by the project. Specific potential TDM strategies include, but are not limited to, the following:

- Incentivize the use of alternative travel modes through shared use of e-bikes and e-scooters;
- Provide public transit service, including improving San Joaquin Rapid Transit District (RTD) transit service connecting workers with existing and future residential developments;
- Implement a fair value commuting program or other pricing of vehicle travel and parking;
- TDM coordinator for large employers;
- Provide carpool and/or vanpool incentive programs;
- Provide on-site lockers and showers for workers who take alternative transportation;
- Promote walking and bicycling for employees who live and/or work in the area through the preparation of an Active Transportation Plan;
- Allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours; and
- Employer coordination to SJCOG's DIBs program for workers.

Significance after Mitigation

Implementation of Mitigation Measure TR-1 is feasible because it is within the applicant's purview to implement and has been found effective in previous academic studies. However, the precise effectiveness of specific TDM strategies can be difficult to accurately measure due to a number of external factors such as types of tenants, employee responses to strategies, and changes to technology. Additionally, it is noted that with the current planned growth and development in the City of Stockton, the City's jobs-housing ratio is expected to increase in 2040, and city-wide home-based work VMT per worker is projected to increase. TDM strategies alone cannot eliminate VMT increases caused by land use imbalance in the rest of the City and greater San Joaquin County geographic area.

With the implementation of Mitigation Measure TR-1, the impact would remain **significant and unavoidable** when compared to the City of Stockton's VMT goal of reducing average home-based work VMT per worker from 18.56 miles to 15.66 miles.

Impact TR-2: Conflict with Existing and Planned Multi-Modal Facilities

Implementation of the Proposed Project would not result in a conflict with existing and planned pedestrian facility, pedestrian facility, or transit service/facility. In addition, the project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. The impact would be **Less-Than-Significant.**

As described in the Environmental Settings section, there is currently no existing pedestrian, bicycle, or transit service/facility within the undeveloped project area. The Approved Envision Stockton 2040 general Plan consists of an interconnected, hierarchical system of sidewalks, on-street bike lanes and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Stockton. The project's transportation and circulation system are designed to accommodate access to and from Airport Way via the signalized Airport Way / Commerce Drive intersection, a grade-separated Commerce Drive / UPRR overcrossing, and pedestrian / bicycle facilities connecting each of the building to Commerce Drive. Therefore, this impact would be **Less-Than-Significant.**

Impact TR-3: Hazards Impacts

Implementation of the Proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards for the City of Stockton. The project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design. Therefore, the impact would be **Less-Than-Significant.**

The Proposed Project does not propose any new roadways or transportation facilities that would be inconsistent with applicable design standards for the City of Stockton. The Project proposes an increased land use density, which would result in increased travel activity, including vehicle (cars and trucks), bicycle, pedestrian, and potentially transit trips. In order to provide access to and from the project site, the signalized Airport Way / Commerce Drive intersection will be designed to serve all travel modes and STAA vehicles. These project-generated trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes. Therefore, the Proposed Project would not result in a change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned roadways and transportation facilities. Therefore, this impact would be **Less-Than-Significant**.

Impact TR-4: Emergency Access Impacts

Implementation of the Proposed Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The Airport Way / Commerce Drive intersection and internal transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency. The impact would be **Less-Than-Significant.**

Several emergency (police and fire) services are located within the project study area. The signalized Airport Way / Commerce Drive intersection will provide emergency vehicle pre-emption (EVP) capabilities to ensure emergency vehicle response times are maintained. In addition, the internal transportation network is designed to maintain high levels of emergency vehicle accessibility and mobility, which ensures vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from Airport Way or from the secondary access point via the SR 99 Frontage Road will have unimpeded access to the South Stockton Commerce Center Project. An emergency response/evacuation plan for the project site should be developed in coordination with local police, local fire departments, as well as the San Joaquin County Office of Emergency Services to ensure that South Stockton Commerce Center employees and visitors would be quickly and safely evacuated in the event of a large-scale emergency or natural disaster. Therefore, this impact would be **Less-Than-Significant.**

Impact TR-5: Construction Related Transportation Impacts

Implementation of the Proposed South Stockton Commerce Center Project would involve construction activities that could cause temporary impacts to transportation facilities, including temporary roadway closures, degrading roadway pavement conditions and temporary degradation in traffic operations during construction of the Airport Way / Commerce Drive signalized intersection. The majority of the construction activity would occur on the project site, including the construction of the Commerce Drive / UPRR overcrossing and the internal transportation system. Therefore, this impact would be **Less-Than-Significant.**

Implementation of the SSCC Project would consist of construction of industrial / warehousing retail and commercial buildings and projects that will span over several years for the 6,231,901 square feet of development. During construction of these projects, there may be periods of active construction in one or more areas of RID, depending on the location of each building and the individual timelines for project components. The construction of the Airport Way / Commerce Drive signalized intersection will include Traffic Management Plans (TMPs) to reduce potential impacts to the Airport Drive corridor. Once this intersection is completed, the majority of the construction activity would occur on the project site. Therefore, this impact would be **Less-Than-Significant.**

INTERSECTION AND FREEWAY ASSESSMENT

Even though Level of Service (LOS) is no longer the primary significance criteria for a CEQA document, the City of Stockton and Caltrans will continue to use LOS to aid in the understanding of potential major increases to vehicle delay at key signalized intersections (Policy TR-4: Effective Transportation Assessment) and determine improvements to the local and regional transportation system. Pages 22 through 57 of Appendix F present the results of Existing Conditions Impacts and Mitigation Measures and the Cumulative Conditions Impacts and Mitigation Measures.

The following intersection impacts would occur with the SSCC Project under Existing AM and PM Peak Hour Conditions:

- Impact TR-6: Intersections 11 and 12, Roth Road at I-5 Ramps
    - Implementation of identified improvements would result in LOS C/D operations during both AM and PM peak hour conditions; and
    - It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a *significant and unavoidable* level.

The following intersection impacts would occur with the SSCC Project under Cumulative With Project AM and PM Peak Hour Conditions.

- Impact TR-7: Intersection 1, Airport Way at French Camp Road
    - The implementation of improvements would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.
- Impact TR-8: Intersection 3, Airport Way at Arch-Airport Road
    - The implementation of improvements would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.
- Impact TR-9: Intersections 11 and 12, Roth Road at I-5 Ramps
    - Implementation of additional identified improvements would result in LOS C/D operations during both AM and PM peak hour conditions; and
    - It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a *significant and unavoidable* level.
- Impact TR-10: Airport Way At-Grade Railroad Crossing
    - Contribute a fair share towards planned grade separated crossings in the area. With implementation of this measure, the impact would be reduced to a less-than-significant level. However, as these improvements are not fully funded, the impact would remain ***significant and unavoidable.***

Under Existing Conditions, all freeway segments evaluated operate at LOS D or better and would continue to do so with the addition of South Stockton Commerce Center project-generated traffic.

In the cumulative condition, several sections of Interstate 5 are projected to operate at level of Service E during either the AM or PM peak hour. The project would increase traffic on these freeway segments by less than 5 percent, resulting in less-than-significant project-specific freeway impacts in the cumulative condition. The addition of project traffic, in combination with traffic from other approved and pending projects, cumulatively contributes to the need to improve the freeway system within Stockton. Although no project specific freeway impacts were identified, the project would pay local and regional transportation impact fees to fund improvements to the regional roadway system.

1.0 INTRODUCTION

This report presents the technical analysis and findings of the Transportation Impact Assessment (TIA) for the proposed South Stockton Commerce Center (SSCC) Project in Stockton, California. This chapter discusses the TIA purpose, analysis methods, criteria used to identify significant impacts, and report organization.

TIA PURPOSE

The TIA's purpose is to evaluate the potential transportation impacts of the proposed South Stockton Commerce Center (SSCC) Project. The undeveloped site is comprised of 437.46 acres located in the southeast portion of the City of Stockton, bounded by State Route (SR) 99 to the east, Airport Way to the west, French Camp Road to the south, and Stockton Metropolitan Airport to the north.

The Project site is located west of the State Route (SR) 99 Frontage Road and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing southerly and exiting the project site.

The SSCC Project site is currently comprised of active agricultural fields. The majority of the fields produce watermelons, with a walnut orchard located in the eastern portion of the site. The Envision Stockton 2040 General Plan Land Use Map designates the Project site as Industrial and Commercial. Therefore, the proposed construction of 6,091,551 square feet of industrial / warehousing space and 140,350 square feet of commercial / retail space is consistent with the Envision Stockton 2040 General Plan Land Use designations for the 437.46-acre project site.

The General Plan contains the following standards to guide development for these land uses:

Industrial (I): This designation allows for a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, Retail Sales, service businesses, public and quasi-public uses, and other similar and compatible uses. Residential uses are prohibited. The maximum FAR for industrial uses is 0.6.

Commercial (C): This designation allows for a wide variety of retail, service, and commercial recreational uses; business, medical, and professional offices; residential uses; public and quasi-public uses; and other similar and compatible uses. Community or regional commercial centers as well as freestanding commercial establishments are permitted. Outside the Greater Downtown, the maximum FAR is 0.3.

The proposed SSCC Project include the development of 437.46 acres of land which will include: industrial, commercial, open space, public facilities, and roadway right-of-way land uses.

- Development of approximately 300 acres of industrial uses (building and parking areas);
- Development of approximately 41 acres of public facilities (storm basins and pump stations);
- Creation of approximately 54 acres of open space (park area and avoidance of French Camp Slough);
- Build up to a maximum of 6,091,551 square feet of employment-generating industrial land uses; Build up to a maximum of 140,350 square feet of employment-generating commercial / retail land uses; and
- Resulting in a FAR of 0.33 for the 437.46-acre project site.

REPORT ORGANIZATION

This report is divided into six (6) chapters as described below:

- ***Chapter 1 – Introduction*** discusses the purpose and organization of this report.
- ***Chapter 2 – Existing Conditions*** describes the transportation system in the project vicinity, including the surrounding roadway network, peak period intersection turning movement volumes, existing bicycle, pedestrian, and transit facilities, and intersection operations.
- ***Chapter 3 – Project Characteristics*** presents the project description, and trip generation, distribution, and assignment.
- ***Chapter 4 – Existing with Project Traffic Conditions*** addresses the existing condition with the project and discusses vehicular impacts.
- ***Chapter 5 –Cumulative Traffic Conditions*** addresses the future conditions, both without and with the project, and discusses vehicular impacts.
- ***Chapter 6 – Freeway Assessment*** evaluates the operations of mainline I-5 and SR 99 in the study area.

STUDY LOCATIONS

Project impacts on the study area roadway facilities were identified by measuring the effect project traffic would have on intersections in the site vicinity during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods when commute traffic is typically the highest and the project is expected to generate the most vehicular traffic. The study intersections were selected based on the proposed land uses, project trip generation and distribution of project generated traffic (cars and trucks) to the surrounding local and regional transportation system.

The following twelve (12) study intersections were identified based on a combination of project trip generation and directions of approach and departure of project-generated traffic (cars and trucks):

1. Airport Way / French Camp Road;
2. Airport Way / Commerce Drive (new intersection);
3. Airport Way / Arch-Airport Road;
4. Airport Way / Roth Road;
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI);
6. French Camp Road/SR 99 Southbound Ramps;
7. French Camp Road/SR 99 Northbound Ramps;
8. French Camp Road/Sperry Road (Arch-Airport Road);
9. French Camp Road/I-5 Southbound Ramps;
10. French Camp Road/I-5 Northbound Ramps;
11. Roth Road/I-5 Southbound Ramps; and
12. Roth Road/I-5 Northbound Ramps.

Freeway mainline operations were also assessed for the following:

- State Route 99 from north of Arch-Airport Road interchange to south of French Camp Road interchange; and
- Interstate 5 from north of the French Camp Road interchange to south of the Roth Road interchange.

ANALYSIS SCENARIOS

Operations of the study intersections and freeway segments above were evaluated for the following scenarios:

- ***Existing Conditions*** – Existing volumes obtained from pre COVID-19 traffic counts and the existing roadway system configuration.

- ***Existing with Project Conditions*** – Existing volumes obtained from traffic counts plus traffic estimated for the SSCC Project. The roadway system is the same as the Existing Conditions scenario, except for the new Airport Way / Commerce Drive signalized intersection.

- ***Cumulative Without Project Conditions*** – Projected traffic volumes and the projected roadway system using the Envision Stockton 2040 General Plan Travel Demand Model.
- ***Cumulative With Project Conditions*** – Traffic volumes from the cumulative without project scenario plus traffic estimated for the proposed South Stockton Commerce Center Project. The roadway system is the same as the Cumulative without Project network, except for the new Airport Way / Commerce Drive signalized intersection.

REGULATORY SETTING

FEDERAL

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the project.

STATE

The State of California has enacted several pieces of legislation that outline the state's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with state climate goals. The legislation with applicability to the analysis of the SSCC Project includes:

- Assembly Bill (AB) 32 (2006);
- Senate Bill (SB) 375 (2008); and
- SB 743 (2013).

Assembly Bill 32

AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that "(a) the statewide GHG emissions limit shall remain in effect unless otherwise amended or repealed; (b) it is the intent of the Legislature that the statewide GHG emissions limit continues in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020; (c) the California Air Resources Board (CARB) shall make recommendations to the Governor and the Legislature on how to continue reductions of GHG emissions beyond 2020." Vehicle emissions are a significant source of GHGs; therefore, GHG reduction targets include reductions in vehicle emissions, providing a nexus between AB 32 and transportation analyses.

Senate Bill 375

SB 375 requires metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their regional transportation plans (RTPs). The SCS demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning.

Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the CARB.

In 2017, the State Legislature passed SB 150, which requires CARB to prepare a report beginning in 2018 and every four years thereafter analyzing the progress made by each MPO in meeting the regional GHG emission reduction targets.

The San Joaquin Council of Governments (SJCOG) serves as the MPO for Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, Tracy, and San Joaquin County. River Islands is located in the City of Lathrop and therefore is within the SJCOG MPO.

SB 375 also provides streamlining (i.e., limited CEQA review) for certain transit priority projects that are consistent with the SCS.

Senate Bill 743

SB 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under CEQA. First, it directs the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the new metrics beyond TPAs. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. In the amended CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied their discretion to recommend its use statewide. The amended CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts" and the provisions requiring the use of VMT shall apply statewide as of July 1, 2020. The amended CEQA Guidelines further state that land use "projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less-than-significant transportation impact."

Second, SB 743 establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, SB 743 added section 21099 to the Public Resources Code, which states that automobile delay, as described by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment upon certification of the CEQA Guidelines by the Natural Resources Agency. Since the amended CEQA Guidelines were certified in December 2018, LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment under CEQA.

Lastly, SB 743 establishes a new CEQA exemption for a residential, mixed-use, and employment center project a) within a TPA, b) consistent with a specific plan for which an EIR has been certified, and c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

Technical Advisory on Evaluating Transportation Impacts in CEQA

To aid in SB 743 implementation, in December 2018 OPR released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory). The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement the SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches.

The Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- Small projects – projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail – local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant).
- Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below.

- Residential development that would generate vehicle travel exceeding 15 percent below existing (baseline) residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- Office projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
- Retail projects (and other non-residential/non-office projects) that results in a net increase in total VMT may indicate a significant transportation impact.

For mixed-use projects, the Technical Advisory suggests evaluating each component independently and applying the significance threshold for each project type included. Alternatively, the lead agency may consider only the project's dominant use.

The Technical Advisory also provides guidance on impacts to transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network."

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans.

The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development.

- Smart Mobility Framework (Caltrans February 2010)
- Complete Streets Implementation Action Plan (Caltrans February 1, 2010)
- California Transportation Plan 2040 (Caltrans June 2016)
- Strategic Management Plan 2015-2020 – 2019 Update (Caltrans 2019)
- State Highway System Management Plan (Caltrans May 2019)

VMT-Focused Transportation Impact Study Guide

On May 20, 2020, the VMT-Focused Transportation Impact Study Guide (TISG) was adopted. The TISG provides guidance on how Caltrans will review land use projects, with focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals; as well as identifying land use projects' possible transportation impacts to the State Highway System and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus, and references OPR's Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance

On July 2, 2020, Caltrans released the Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance. The purpose of the interim guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the State Highway System (SHS) and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically Local Roadway Safety Plans (LRSPs) and Systemic Safety Analysis Reports (SSARs), as a model for safety analysis of the local transportation network. This guidance supports implementation of SB 743 and complements the "VMT-Focused TISG" dated May 20, 2020. The new guidance has two main parts:

- Reactive: a review of Caltrans safety monitoring program data to see what known safety issues may be affected by the project; and
- Systemic: a review of LRSPs, SSARPs, Vision Zero plans, and other plans and assessments to see what safety patterns and improvements may be applicable to Caltrans facilities in the study area.

VEHICLE MILES TRAVELED (VMT)

Consistent with the discussion of SB 743 provided above, vehicle travel is evaluated using VMT as the primary metric. The following describes the baseline VMT levels in the City of Stockton. The baseline VMT is developed using the City of Stockton Travel Demand Model that was derived from the San Joaquin Council of Government's (SJCOG) Regional Travel Demand Model.

A model-wide analysis was performed to obtain daily trips and travel distance by all Transportation Analysis Zones (TAZs), and the product of daily trips and travel distance was summed up to obtain VMT estimates for home-based work trips for retail, food, and industrial employees that comprise the proposed South Stockton Commerce Center Project. The total VMT was then divided by the projected number of employees and the resulting home-based work VMT per employee was determined. This average home-based work VMT per employee was compared to Baseline Conditions and Goals developed by the City of Stockton to determine the potential impact of the proposed SSCC Project to the environments as defined by CEQA and SB 743.

VEHICLE MILES TRAVELED (VMT) ANALYSIS METHODOLOGY

This section describes the analysis methods used to determine impacts associated with transportation and circulation as defined by CEQA and SB 743 that would result from implementation of the project.

VMT CEQA GUIDELINES

As discussed above, LOS can no longer be used for evaluating project traffic impacts under CEQA with the passage of SB 743 and adoption of the amended CEQA Guidelines implementing SB 743 (see CEQA Guidelines Section 15064.3). Per CEQA Guidelines Section 15064.3, subdivision (c), the provisions in Section 15064.3 recommending VMT as the primary metric for analyzing traffic impacts shall apply on July 1, 2020.

This analysis relies on guidance provided in the OPR Technical Advisory (December 2018) to assess the project's VMT impact. Specifically, this analysis considers the following:

- Does the project meet one or more of the "screening thresholds" identified in the Technical Advisory, such that a detailed analysis is not necessary?
- If so, what information or data is available to support the conclusion that the project meets the screening threshold and should be considered to have a less-than-significant transportation impact?

If the project does not meet one or more of the "screening thresholds," this analysis would proceed to a detailed analysis of the project's VMT impact. This includes quantifying the project's VMT generation and determining whether this VMT generation would not meet the recommended thresholds of significance in the OPR Technical Advisory or Envision Stockton 2040 General Plan policies.

VMT Screening Analysis

The OPR Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. As described in the Regulatory Setting section, the Technical Advisory suggests the following projects should be expected to have a less-than-significant impact on VMT:

- Small projects;
- Projects near existing major transit stops;
- Affordable residential development;
- Local-serving retail; or
- Projects in low VMT areas.

Of these project types, only the criterion for projects located near major transit stops are codified in the updated CEQA Guidelines. The remaining criteria for small projects, affordable residential development, local-serving retail, or projects in low VMT areas are not codified in the CEQA Guidelines but are suggested by OPR based on research cited in the Technical Advisory.

The Technical Advisory states that "retail development including stores larger than 50,000 square feet might be considered regional-serving." The SSCC Project includes 140,350 gross square feet of food, retail, and commercial land uses.

CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies should generally presume projects within ½-mile of an existing major transit stop or a stop along an existing high quality transit corridor will have a less-than-significant transportation impact. The SSCC Project is not located within an area that is served by transit or rail.

OTHER IMPACTS

Evaluation of potential transportation impacts related to conflict with existing and planned facilities, transportation hazards, emergency access, and construction activity are based on a review of project changes to the transportation network and a qualitative assessment of whether those changes would conflict with applicable standards or result in detrimental conditions based on the thresholds of significance.

VEHICLE MILES TRAVELED (VMT) ANALYSIS

The SSCC Project does not meet the screening criteria described above; therefore, a detailed VMT analysis was conducted for the Proposed Project using the City of Stockton Travel Demand Model. Roadway improvements and land use projections consistent with the SJCOG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City of Stockton General Plan, San Joaquin County General Plan, City of Lathrop General Plan and City of Manteca General Plan were included in the City of Stockton Travel Demand Model.

BASELINE AND CUMULATIVE SCENARIOS

A model-wide analysis was performed to obtain daily trips and travel distance by the Transportation Analysis Zones (TAZs) that represent the retail/commercial, food, and industrial/warehousing land uses that comprise the South Stockton Commerce Center Project. The product of daily trips and travel distance was summed up to obtain VMT estimates for home-based work trips. The total VMT was then divided by the projected number of employees and the resulting home-based work VMT per employee was determined. This average home-based work VMT per employee was then compared to Baseline Conditions (18.56 miles) and Goal developed by the City of Stockton (15.88 miles) to determine the potential impact of the proposed SSCC Project to the environments as defined by CEQA and SB 743.

Table 2 summarizes the results of the VMT Analysis for Home-Based Work Trips per Employee for Baseline and Cumulative With Project Conditions.

TABLE 1
VMT ANALYSIS – BASELINE VERSUS CUMULATIVE PROJECT
HOME-BASED WORK VMT PER WORKER

Scenario	Average Home-Based Work Vehicle Miles Traveled Per Worker	Decrease / Increase in Home-Based Work Vehicle Miles Traveled Per Worker	Percentage Decrease / Increase
Baseline City of Stockton Travel Demand Model	18.56		
General Plan – Envision Stockton 2040	19.73	+1.17	+6.3%
General Plan – Envision Stockton 2040 With SSCC Project	19.69	+1.13	+6.1%
General Plan – Envision Stockton 2040 Goal	15.78	-2.78	-15.0%
South Stockton Commerce Center Project	21.05	+2.49	+13.4%

Source: City of Stockton Travel Demand Model
Fehr & Peers, 2021.

The following key findings are derived **Table 1** are:

- According to the City of Stockton Baseline (Existing) Travel Demand Model, the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker is 18.56 miles. This includes a mix of employees who both live and work in the City of Stockton and employees that travel to and from neighboring cities to work in the City of Stockton.
- The goal of the City of Stockton is to decrease the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker from 18.56 miles to 15.78 miles, a 15.0% reduction when compared to Baseline (Existing) Conditions.
- According to the Envision Stockton 2040 General Plan Travel Demand Model, the City is projected to add a mix of jobs that would increase employment opportunities for both existing and future residents. This would improve the jobs / housing balance in the City of Stockton and theoretically reduce the Citywide Average Daily Home-Based Work Vehicle Miles Traveled per worker.
- On the other hand, based on the total increase in population compared to the total increase in employments, the Envision Stockton 2040 General Plan Travel Demand Model is projected to generate a Citywide average daily home-based work VMT per worker (19.73) that is greater than the City of Stockton's Baseline (existing) Citywide average daily home-based work VMT per worker (18.56), an increase of 6.3%.
- The proposed South Stockton Commerce Center Project would add a total of 3,200 new jobs (2,880 industrial, 130 food and 190 retail) to the southern part of the City, which is greater than what was included in the Envision Stockton 2040 General Plan Travel Demand Model for the Traffic Analysis Zones that represent the SSCC project site.

The following key findings are derived Table 1 are (continued):

- The South Stockton Commerce Center Project's average daily home-based work vehicle miles traveled per worker is projected to be 21.05 mile for the industrial, food and retail employees that either live and work in the City of Stockton and employees that travel to and from neighboring cities to work at the SSCC Project. This is 2.49 miles (13.4%) higher when compared to Baseline (Existing) Conditions.
- The primary result of the daily home-based work VMT per worker VMT analysis is that although the proposed SSCC project's is greater than the Envision Stockton 2040 threshold (21.05 versus 19.73), the overall benefit of the SSCC project is improving the jobs / housing balance for City of Stockton residents and reducing the average home-based work vehicle miles traveled per worker from 19.73 to 19.69 (a 0.2% reduction).

Impact TR-1: Vehicle Miles Traveled

Implementation of the Proposed South Stockton Commerce Center Project would result in additional vehicle travel generated by the food, retail / commercial, and industrial / warehousing land uses. This would result in the average home-based work vehicle miles traveled per worker of 21.05 miles. This is greater than the Baseline (Existing) of 18.56 miles or Envision Stockton 2040 goal of 15.88 miles. Therefore, the impact of the Proposed South Stockton Commerce Center Project on VMT would be **Significant and Unavoidable**.

South Stockton Commerce Center Land Uses

The South Stockton Commerce Center Project proposes 6,091,551 gross square feet of industrial and warehousing space, with up to 2,880 employees. The South Stockton Commerce Center Project also proposes 140,350 gross square feet of food and retail space, with up to 320 employees. Based on the location of the SSCC project in the south-east area of the City of Stockton, the distance to and from existing and future workers who both live and work in the City of Stockton, results in an average travel distance that is greater than Baseline (Existing) conditions. Therefore, per the Technical Advisory, non-residential/non-office projects that results in a net increase in total VMT may indicate a significant transportation impact.

Mitigation TR-1: Travel Demand Management.

1) The Proposed Project would generate a net increase in the average daily home-based work VMT per worker (21.05 miles) that is greater than the City of Stockton's Baseline (existing) average daily home-based work VMT per worker (18.56).

2) The Proposed Project would generate average daily home-based work VMT per worker (21.05 miles) that exceeds the City of Stockton's goal of 15.0 percent below baseline average daily home-based work VMT per worker (15.78).

Per OPR's Technical Advisory, the Proposed SSCC Project's increase in VMT per worker for these land uses may indicate a significant transportation impact when compared to baseline VMT.

The project applicant shall work with the City of Stockton to implement feasible Transportation Demand Management (TDM) strategies, which would decrease the VMT generated by the project. Specific potential TDM strategies include, but are not limited to, the following:

- Provide public transit service, including improving San Joaquin Rapid Transit District (RTD) transit service connecting workers with existing and future residential developments;
- Implement a fair value commuting program or other pricing of vehicle travel and parking;
- TDM coordinator for large employers;
- Provide carpool and/or vanpool incentive programs;
- Provide on-site lockers and showers for workers who take alternative transportation;
- Promote walking and bicycling for employees who live and/or work in the area through the preparation of an Active Transportation Plan;
- Incentivize the use of alternative travel modes for travel within the project site through shared use of e-bikes and e-scooters;
- Allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours; and
- Employer coordination to SJCOG's DIBs program for workers.

The TDM Plan shall be submitted to the City for review, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if necessary. The TDM Plan shall include the TDM strategies which will be implemented during the lifetime of the SSCC Project and shall outline the anticipated effectiveness of the strategies. The effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City.

Significance after Mitigation

Implementation of Mitigation Measure TR-1 is feasible because it is within the applicant's purview to implement and has been found effective in previous academic studies. However, the precise effectiveness of specific TDM strategies can be difficult to accurately measure due to a number of external factors such as types of tenants, employee responses to strategies, and changes to technology. Additionally, it is noted that with the current planned growth and development in the City of Stockton, the City's jobs-housing ratio is expected to increase in 2040, and city-wide home-based work VMT per worker is projected to increase. TDM strategies alone cannot eliminate VMT increases caused by land use imbalance in the rest of the City and greater San Joaquin County geographic area.

With the implementation of Mitigation Measure TR-1, the impact would remain **significant and unavoidable** when compared to the City of Stockton's VMT goal of reducing average home-based work VMT per worker from 18.56 miles to 15.66 miles.

Impact TR-2: Conflict with Existing and Planned Multi-Modal Facilities

Implementation of the Proposed Project would not result in a conflict with existing and planned pedestrian facility, pedestrian facility, or transit service/facility. In addition, the project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. The impact would be **Less-Than-Significant.**

As described in the Environmental Settings section, there is currently no existing pedestrian, bicycle, or transit service/facility within the undeveloped project area. The Approved Envision Stockton 2040 general Plan consists of an interconnected, hierarchical system of sidewalks, on-street bike lanes and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Stockton. The project's transportation and circulation system are designed to accommodate access to and from Airport Way via the signalized Airport Way / Commerce Drive intersection, a grade-separated Commerce Drive / UPRR overcrossing, and pedestrian / bicycle facilities connecting each of the building to Commerce Drive. Therefore, this impact would be **Less-Than-Significant.**

Impact TR-3: Hazards Impacts

Implementation of the Proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards for the City of Stockton. The project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design. Therefore, the impact would be **Less-Than-Significant.**

The Proposed Project does not propose any new roadways or transportation facilities that would be inconsistent with applicable design standards for the City of Stockton. The Project proposes an increased land use density, which would result in increased travel activity, including vehicle (cars and trucks), bicycle, pedestrian, and potentially transit trips. In order to provide access to and from the project site, the signalized Airport Way / Commerce Drive intersection will be designed to serve all travel modes and STAA vehicles. These project-generated trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes. Therefore, the Proposed Project would not result in a change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned roadways and transportation facilities. Therefore, this impact would be **Less-Than-Significant**.

Impact TR-4: Emergency Access Impacts

Implementation of the Proposed Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The Airport Way / Commerce Drive intersection and internal transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency. The impact would be **Less-Than-Significant.**

Several emergency (police and fire) services are located within the project study area. The signalized Airport Way / Commerce Drive intersection will provide emergency vehicle pre-emption (EVP) capabilities to ensure emergency vehicle response times are maintained. In addition, the internal transportation network is designed to maintain high levels of emergency vehicle accessibility and mobility, which ensures vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from Airport Way or from the secondary access point via the SR 99 Frontage Road will have unimpeded access to the South Stockton Commerce Center Project. An emergency response/evacuation plan for the project site should be developed in coordination with local police, local fire departments, as well as the San Joaquin County Office of Emergency Services to ensure that South Stockton Commerce Center employees and visitors would be quickly and safely evacuated in the event of a large-scale emergency or natural disaster. Therefore, this impact would be **Less-Than-Significant.**

Impact TR-5: Construction Related Transportation Impacts

Implementation of the Proposed South Stockton Commerce Center Project would involve construction activities that could cause temporary impacts to transportation facilities, including temporary roadway closures, degrading roadway pavement conditions and temporary degradation in traffic operations during construction of the Airport Way / Commerce Drive signalized intersection. The majority of the construction activity would occur on the project site, including the construction of the Commerce Drive / UPRR overcrossing and the internal transportation system. Therefore, this impact would be **Less-Than-Significant.**

Implementation of the SSCC Project would consist of construction of industrial / warehousing retail and commercial buildings and projects that will span over several years for the 6,231,901 square feet of development. During construction of these projects, there may be periods of active construction in one or more areas of RID, depending on the location of each building and the individual timelines for project components. The construction of the Airport Way / Commerce Drive signalized intersection will include Traffic Management Plans (TMPs) to reduce potential impacts to the Airport Drive corridor. Once this intersection is completed, the majority of the construction activity would occur on the project site. Therefore, this impact would be **Less-Than-Significant.**

ADDITIONAL VMT (SB 743) CONSIDERATIONS

Emerging Trends & City of Stockton Travel Demand Model Limitations

This analysis concludes that the Proposed Project would have a significant and unavoidable impact on VMT based on the recommended screening analysis methodology presented in the OPR Technical Advisory. This includes reliance on data from the City of Stockton Travel Demand Model. While the City of Stockton Travel Demand Model represents state of the practice, travel behavior and the transportation systems are changing quickly in response to emerging trends, new technologies, and different preferences, as noted in the Environmental Setting section. These changes combined with the current COVID-19 pandemic increase the uncertainty of how VMT generation rates may fluctuate by the time buildout of the South Stockton Commerce Center Project occurs.

The trajectory of deployment, market acceptance, and government regulation of these new travel options and technologies is difficult to predict, and these elements directly influence the inputs and algorithms for the City of Stockton Travel Demand Model. As such, the City of Stockton Travel Demand Model as a travel forecasting model has limitations in the ability to capture the full range of potential travel effects from emerging travel options and technologies.

2018 Progress Report

As noted in the Regulatory Setting section, CARB is tasked with preparing a report every four years analyzing the progress made under SB 375 pursuant to SB 150. While MPOs have consistently produced SCSs that contain forecasts demonstrating compliance with SB 375 GHG reduction targets, observed data related to VMT and GHG mobile emission trends tell a different story. CARB's *2018 Progress Report California's Sustainable Communities and Climate Protection Act* (2018 Progress Report) shows VMT per capita and GHG per capita rates increased from 2012 to 2018. According to the report, "California – at the state, regional, and local levels – has not yet gone far enough in making the systemic and structural changes to how we build and invest in communities that are needed to meet state climate goals." Of note, local agencies have not changed land use patterns or housing amounts consistent with SCS expectations. Further, improved economic activity (prior to the COVID-19 pandemic), new vehicle travel options (i.e., Uber and Lyft), internet shopping, higher visitation, and low fuel prices contributed to increased vehicle travel that was not fully accounted for in SCS forecasts.

VMT Effects of COVID-19 Pandemic

The COVID-19 pandemic abruptly decreased VMT as a result of government orders that curtailed mobility and suppressed economic activity. While this sudden and severe decline in VMT is expected to be temporary, it is uncertain what long-term effects the COVID-19 pandemic will have on travel behavior. By necessity, large portions of the public adapted to a notable increase in teleworking, distance learning, telemedicine, and internet shopping and home delivery. The current physical distancing orders have also reduced demand for mass transit and shared mobility options. The combination of these effects could result in increased or decreased VMT per capita levels in the future, depending on how temporary or permanent these behavioral changes become.

INTERSECTION AND FREEWAY ASSESSMENT

Even though Level of Service (LOS) is no longer the primary significance criteria for a CEQA document, the City of Stockton and Caltrans will continue to use LOS to aid in the understanding of potential major increases to vehicle delay at key signalized intersections (Policy TR-4: Effective Transportation Assessment) and determine improvements to the local and regional transportation system.

INTERSECTION LEVEL OF SERVICE

The operations of roadway facilities are described with the term "level of service" (LOS). LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (i.e., free flow conditions) to LOS F (over capacity conditions). LOS E corresponds to operations "at capacity." When volumes exceed capacity, stop-and-go conditions result, and operations are designated as LOS F. The City of Stockton generally strives to maintain LOS D or better for peak hour intersection operations. However, the City may permit LOS E or F for vehicles if improvements to accommodate vehicle travel are contrary to other goals and policies of the City. Different methods are used to assess signalized and unsignalized (stop-controlled) intersections. Vehicle delay at intersections was calculated using the Highway Capacity Manual – 6th Edition (TRB 2016 and HCS7) method as implemented by the Synchro 10 software.

Signalized Intersections

Operations of signalized intersections were evaluated using the method from Chapter 16 of the Transportation Research Board's *2016 Highway Capacity Manual* which uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average control delay experienced by motorists traveling through an intersection. Control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 2** summarizes the relationship between average delay per vehicle and LOS for signalized intersections. This method evaluates each intersection in isolation and the effects of vehicle queue spillback are not considered in the analysis results.

TABLE 2
SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity (V/C) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: *Highway Capacity Manual, 2016.*

Unsignalized Intersections

Operations at unsignalized intersections were evaluated using the method from Chapter 17 of the Transportation Research Board's *2016 Highway Capacity Manual*. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each movement that must yield the right-of-way. At two-way or side street-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left-turn movement from the major street, and the entire intersection. For controlled approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. **Table 3** summarizes the relationship between delay and LOS for unsignalized intersections.

TABLE 3
UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual, 2016.*

FREEWAY LEVEL OF SERVICE

For the freeway mainline segments, LOS was calculated using the method described in Chapter 11 of the *2010 Highway Capacity Manual*. This method takes into consideration peak hour traffic volumes, free-flow speeds, percentage of heavy vehicles, and number of travel lanes. These factors are used to determine the vehicle density, measured in passenger cars per mile per lane. **Table 4** summarizes the relationship between vehicle density and LOS for mainline freeway segments.

TABLE 4
FREEWAY MAINLINE LOS CRITERIA

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0 to 11
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	> 11 to 18
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	> 18 to 26
D	Speeds begin to decline slightly with flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	> 26 to 35
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	> 35 to 45
F	Breakdown in vehicle flow.	> 45

Note: [1]pc/mi/ln = passenger cars per mile per lane
Source: *Highway Capacity Manual,* 2010

SIGNIFICANCE CRITERIA

Even though Level of Service (LOS) is no longer the primary significance criteria for a CEQA document, the City of Stockton and Caltrans can use LOS to aid understanding of potential major increases to vehicle delay at key signalized intersections (Policy TR-4.1) and determine improvements to the local and regional transportation system.

The General Plan – Envision Stockton 2040 identified the following Strive for Level of Service (LOS) D or better for both daily roadway segment and peak hour intersection operations, except when doing so would conflict with other land use, environmental, or economic development priorities, and with the following additional exceptions:

- In the Greater Downtown, strive for LOS E or better, but LOS F may be acceptable after consideration of physical or environmental constraints and other City goals and policies.

- Strive for different LOS standards along the following corridors in the project study area due to physical constraints that limit the improvements that can be constructed:
    - French Camp Road, Manthey Road to I-5 – LOS E
    - French Camp Road, I-5 to Frank W. Circle / Val Dervin Parkway – LOS F
    - Interstate 5, Hammer Lane to Benjamin Holt Drive – LOS E
    - Interstate 5, Benjamin Holt Drive to Downing Avenue – LOS F
    - Interstate 5, Downing Avenue to French Camp Road – LOS
    - Roadway segments determined to be operating at deficient LOS by the San Joaquin Council of Governments in the Regional Congestion Management Program

- Accept worse than adopted-standard LOS at intersections where widening the intersection would reduce bicycle and pedestrian safety and/or increase pedestrian crossing times such that they would create longer traffic delays due to signal timing.

Therefore, the Conditions without and with the SSCC Project have been compared to identify significant impacts according to the following criteria:

- If a signalized intersection is projected to operate acceptably (i.e., LOS D or better with a with an average control delay of equal to or less than 55.0 seconds per vehicle) without the project and the project is expected to cause the facility to operate at an unacceptable LOS (LOS E or worse with an average control delay greater than 55.0 seconds per vehicle), the impact is considered significant.

- If an unsignalized intersection is projected to operate acceptably (i.e., LOS D or better with an average control delay equal to or less than 35.0 seconds per vehicle) without the project and the project is expected to cause the facility to operate at an unacceptable LOS (LOS E or worse with an average control delay greater than 35.0 seconds per vehicle), and result in peak hour volume signal warrants being satisfied, the impact is considered significant.

- If a facility is projected to operate unacceptably (i.e., LOS E or worse) without the project, and the project is expected to increase the average control delay by more than 5 seconds, the impact is considered significant.
- If a facility is projected to operate at an unacceptable LOS E without the project and the project is expected to cause the facility to operate at an unacceptable LOS F, but the average control delay does not increase by more than 5 seconds, City staff would determine whether the project has a significant impact.
- If a freeway segment is projected to operate acceptably (i.e., LOS D or better) without project and the project is expected to cause the facility to operate at an unacceptable service level (i.e., LOS E or worse), the impact is considered significant.
- If a freeway segment is projected to operate unacceptably (i.e., LOS E or worse) without project and the project is expected to increase traffic volumes on the facility by more than 5 percent, the impact is considered significant.
- Failure to comply with the City of Stockton General Plan Policy Document, as listed previously, would result in a significant impact.

The Regional Congestion Management Program as adopted by the San Joaquin Council of Governments strives to maintain LOS E on roadways that are designated routes of regional significance, which includes Airport Way, French Camp Road, Sperry Road, Arch Road, Roth Road, and Mathews Road, west of I-5, in addition to SR 99 and I-5.

For signalized intersections on these roadway segments, an impact would be identified if the facility were projected to:

- If a facility is projected to operate acceptably (i.e., LOS E or better with a with an average control delay of equal to or less than 80.0 seconds per vehicle) without the project and the project is expected to cause the facility to operate at an unacceptable LOS (LOS F or worse with an average control delay greater than 80.00 seconds per vehicle), the impact is considered significant.
- If a facility is projected to operate unacceptably (i.e., LOS F) without the project, and the project is expected to increase the average control delay by more than 4 seconds, the impact is considered significant.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities[1], however, Caltrans recognizes that achieving LOS C/LOS D may not always be feasible. Consistent with the 2040 Stockton General Plan, a standard of LOS D or better on a peak hour basis was used as the planning objective for the evaluation potential freeway impacts of this development.

[1] *Guide for the Preparation of Traffic Studies*, Caltrans, December 2002.

2.0 EXISTING CONDITIONS

This chapter describes the existing transportation conditions in the study area, including the roadway network and transit, pedestrian, and bicycle facilities in the vicinity of the project site.

ROADWAY SYSTEM

Regional access to the project site is provided by I-5 at the E. French Camp Road (to and from the north) and Roth Road (to and from the south) interchanges. Access to and from SR 99 at the Arch Airport Road (to and from the north) and E. French Camp Road (to and from the south) interchanges.

Interstate 5 (I-5) is a major north-south freeway that traverses the western United States, originating in southern California and continuing north toward Sacramento and beyond. I-5 runs through the western portion of the City of Stockton, west of the project site. Three mixed-flow lanes are provided in each direction on I-5 in the vicinity of the project site. Typical daily volumes on I-5 in the vicinity of the project site are approximately 110,000 vehicles.

State Route 99 (SR 99) is a north-south freeway that traverses the central valley of California. It originates south of Bakersfield, branching off of I-5 and continues north to Sacramento, where it reconnects with I-5. SR 99 runs through the eastern portion of the City of Stockton, east of the project site. Three mixed-flow lanes are provided in each direction on SR 99 in the vicinity of the project site. Typical daily volumes on SR 99 in the vicinity of the project site are approximately 70,000 vehicles. North of E. French Camp Road, there are frontage roads on both sides of SR 99.

E. French Camp Road is a two-lane, east-west roadway that extends from west of I-5 to east of SR 99 and forms the southern boundary of the project site. Left-turn pockets are provided at major intersections. There are no bicycle facilities and limited pedestrian facilities provided on this roadway in the study area.

Sperry Road/Arch-Airport Road is an east-west roadway north of the project site that extends from west of I-5 to east of SR 99. East of Frank W Circle, the recently constructed grade-separated segment of Arch-Airport Road is four-lane roadway with a 45 mile-per-hour speed limit that includes pedestrian facilities. West of S. Airport Way and east of Performance Drive this roadway is called Sperry Road. Sperry Road is a four-lane roadway with left-turn pockets at major intersections. East of S. Airport Way, Sperry Road becomes Arch-Airport Road with between one and two travel lanes in each direction. There are limited pedestrian facilities on this roadway and no bicycle facilities.

S. Airport Way is a two-way, north-south roadway that connects Downtown Stockton south through the City of Manteca and bisects the project site. It is a four-lane facility with right and left-turn lanes and median dividers at most intersections. There are limited pedestrian facilities on this roadway and no bicycle facilities.

Roth Road is a two-lane east-west collector roadway located south of the project. Roth Road connects Manthey Road with S. Airport Way. An interchange with I-5 is provided at Roth Road.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

PEDESTRIAN FACILITIES

Pedestrian facilities include sidewalks, pathways, crosswalks, and pedestrian signals. Sidewalks are provided along most roadways in Stockton where land uses have been developed adjacent to the roadway. Within the study area, limited pedestrian facilities are provided along S. Airport Way, French Camp Road, Arch-Airport Road, and Roth Road. Crosswalks, pedestrian signal heads and pedestrian call push buttons are provided at the following study intersections:

1. Airport Way / French Camp Road (north side, east side and south side);
2. Airport Way / Commerce Drive (will be provided on the north side, east side and south side);
3. Airport Way / Arch-Airport Road (no crosswalks provided);
4. Airport Way / Roth Road (no crosswalks provided;
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI) (north side of interchange);
6. French Camp Road/SR 99 Southbound Ramps (no crosswalks provided);
7. French Camp Road/SR 99 Northbound Ramps (no crosswalks provided);
8. French Camp Road/Sperry Road (Arch-Airport Road)(north side, west side, east side and south side);
9. French Camp Road/I-5 Southbound Ramps (south side of interchange);
10. French Camp Road/I-5 Northbound Ramps (south side of interchange);
11. Roth Road/I-5 Southbound Ramps (no crosswalks provided); and
12. Roth Road/I-5 Northbound Ramps (no crosswalks provided).

Pedestrian signal heads and pedestrian call push buttons are provided at the following study intersections:

1. Airport Way / French Camp Road (north leg, east leg and south leg);
2. Airport Way / Commerce Drive (will be provided on the north leg, east leg and south leg);
3. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI) (SB off-ramp and NB on-ramp);
4. French Camp Road/Sperry Road (Arch-Airport Road)(north, west, east and south legs); and
5. French Camp Road/I-5 Northbound Ramps (NB off-ramp).

BICYCLE FACILITIES

Bicycle facilities in Stockton include the following general types:

- Class I: Shared Use Path - Referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.
- Class II: Bicycle Lane - Bicycle lanes provide a restricted right-of-way and are designated for the use of bicycles for one-way travel with a striped lane on a street or highway. Bicycle lanes are generally a minimum of five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.

- Class III: Bicycle Route - These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is designated as a bicycle route through the use of signage and optional pavement markings where bicyclists travel on the shoulder or share a lane with motor vehicles. Class III bike routes are utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes.
- Class IV: Separated Bikeway - Commonly known as cycle tracks, are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths

There are further distinctions made in the City of Stockton Municipal Code regarding bicycle facilities. A Bicycle Path is a shared bicycle and pedestrian facility parallel to a public street or roadway, a minimum of 75 feet away from the public street/roadway. Additionally, the City of Stockton permits bicyclists to share the sidewalk with pedestrians.

Class I bicycle paths exist on Arch-Airport Road between E. French Camp Road and Sperry Road.

The City has an on-going Class IV separated bikeway project on Airport Way. As of July 2021, the facility has been constructed from Charter Way to the north and 12th Street to the south as part of Public Works Project PW1808. Ultimately, the Class IV project will extend south beyond Arch-Airport Road to Performance Drive / Dixon Street, which is about 0.75 miles north of the South Stockton Commerce Center Project.

EXISTING TRANSIT SERVICE

Transit service in the area is provided by San Joaquin Regional Transit District (RTD). San Joaquin RTD provides public transit services in the Stockton Metropolitan area, as well as inter-city and rural transit services countywide. There are limited transit services provided to project site, with the closest routes, Routes 44, 91 and 510 , serving Arch-Airport Road with stops approximately 3 miles from the project site.

EXISTING TRAFFIC COUNTS

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection turning movement counts were developed using a combination of pre-COVID 19 traffic counts and growth factors to develop separate counts of trucks, pedestrians and bicyclists. For the study intersections, the single hour with the highest traffic volumes during each count period was identified. The AM peak hour in the study area is generally from 7:15 to 8:15 AM and the PM peak hour is generally from 4:15 to 5:15 PM.

The observed heavy vehicle percentages were also considered in the analysis. Traffic counts indicate that trucks comprise approximately fifteen (15) percent of total traffic in the area. Trucks behave differently than passenger vehicles as they take longer to accelerate, decelerate, and negotiate turns; therefore, they also affect intersection operations. The observed peak hour truck percentage at each study intersection is shown in **Table 5.**

In addition to truck percentages, peak hour factors[2] were used to account for the variation in traffic volumes during the peak hour. Existing peak hour factors were used at all intersections for the existing conditions analyses. For the analysis of cumulative conditions, a peak hour factor of 1.0 was used.

EXISTING OPERATIONS

INTERSECTION ANALYSIS

Existing intersection operations were evaluated using the methods described in Chapter 1 for the weekday AM and PM peak hours at the study intersections, based on existing volumes and lane configurations. The results are summarized in **Table 6** based on the HCM 6th Edition methodology and the Synchro 10 software. Observed peak hour factors were applied, and truck, pedestrian and bicycle activity were factored into the analysis.

As shown in **Table** 6**6**, study intersections generally operate at overall acceptable service levels in accordance with benchmarks set by the City of Stockton during both the morning and evening peak hours. The primary conclusions of the Existing Conditions analysis are:

- The Airport Way / French Camp Road and Airport Way / Arch-Airport Road intersections operates at acceptable LOS D conditions during both AM and PM peak hour conditions;
- The other seven (7) signalized study intersections operate at acceptable LOS B/C conditions during both AM and PM peak hour conditions; and
- The two (2) unsignalized study intersection on Roth Road operate at acceptable LOS A/B/C conditions during both AM and PM peak hour conditions.

[2] The relationship between the peak 15-minute flow rate and the full hourly volume is given by the peak-hour factor (PHF) as calculated by: PHF=Hourly volume/(4* volume during the peak 15 minutes of flow). The analysis of level of service is based on peak rates of flow occurring within the peak hour because substantial short-term fluctuations typically occur during an hour.

TABLE 5
EXISTING CONDITIONS
PEAK HOUR TRUCK PERCENTAGE

Intersection	Control[1]	Peak Hour	Truck Percentage
1. Airport Way / French Camp Road	Signalized	AM PM	15 % 8 %
2. Airport Way / Commerce Drive (new intersection)	N/A	N/A	N/A
3. Airport Way / Arch-Airport Road	Signalized	AM PM	24 % 16 %
4. Airport Way / Roth Road	Signalized	AM PM	21 % 11 %
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI)	Signalized	AM PM	23 % 19 %
6. French Camp Road/SR 99 Southbound Ramps	Signalized	AM PM	21 % 9 %
7. French Camp Road/SR 99 Northbound Ramps	Signalized	AM PM	18 % 9 %
8. French Camp Road/Sperry Road (Arch-Airport Road)	Signalized	AM PM	24 % 16 %
9. French Camp Road/I-5 Southbound Ramps	Signalized	AM PM	12 % 10 %
10. French Camp Road/I-5 Northbound Ramps	Signalized	AM PM	21 % 13 %
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	45 % 26 %
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	47 % 31 %

Notes: Signalized = signalized intersection; SSSC = side-street stop-control; AWSC = all-way stop-control.
Source: Fehr & Peers, 2021

TABLE 6
EXISTING CONDITIONS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control[1]	Peak Hour	Existing Conditions	
			Delay[2,3]	LOS[3]
1. Airport Way / French Camp Road	Signalized	AM PM	35 40	D D
2. Airport Way / Commerce Drive (new intersection)	N/A	N/A	N/A	N/A
3. Airport Way / Arch-Airport Road	Signalized	AM PM	42 47	D D
4. Airport Way / Roth Road	Signalized	AM PM	16 17	B B
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI)	Signalized	AM PM	21 22	C C
6. French Camp Road/SR 99 Southbound Ramps	Signalized	AM PM	21 24	C C
7. French Camp Road/SR 99 Northbound Ramps	Signalized	AM PM	22 17	C B
8. French Camp Road/Sperry Road (Arch-Airport Road)	Signalized	AM PM	21 25	C C
9. French Camp Road/I-5 Southbound Ramps	Signalized	AM PM	11 11	B B
10. French Camp Road/I-5 Northbound Ramps	Signalized	AM PM	17 17	B B
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	10 (18) 10 (23)	B (C) B (C)
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	2 (15) 3 (20)	A (C) A (C)

Notes: **Bold** indicates potentially deficient operations.
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. Average intersection delay calculated for signalized intersections using the *2000 HCM* method.
3. For SSSC intersections, average delay or LOS is listed first followed by the delay or LOS for the worst approach in parentheses.

Source: Fehr & Peers, 2021.

SIGNAL WARRANTS ANALYSIS

Peak hour traffic signal warrants were reviewed at the unsignalized study intersections. **Table 7** shows that peak hour warrants[3] are not satisfied at the following three study intersections based on existing conditions,

TABLE 7
EXISTING CONDITIONS PEAK HOUR SIGNAL WARRANT

Intersection	Control[1]	Peak Hour	Signal Warrant Met?
2. Airport Way / Commerce Drive (new intersection)	N/A	AM PM	N/A N/A
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	No No
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	No No

Notes:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.
Source: Fehr & Peers, 2021.

FREEWAY MAINLINE ANALYSIS

The I-5 freeway mainline segments from south of Roth Road to north of E. French Camp Road and SR 99 from south of E. French Camp Road to north of Arch-Airport Road were analyzed based Existing AM and PM peak hour volumes and the analysis method described in Chapter 1. Peak hour volumes were obtained from Caltrans Performance Measurement System (PeMS) data and supplemented with existing counts at the ramp terminal intersections. The analysis results indicate that in the study area both I-5 and SR 99 operate at LOS D or better during both AM and PM peak hours.

[3] Unsignalized intersection warrant analysis is intended to examine the general correlation between existing conditions and the need to install new traffic signals. Existing peak-hour volumes are compared against a subset of the standard traffic signal warrants recommended in the Manual on Uniform Traffic Control Devices (MUTCD) and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely on the warrants because the installation of signals can lead to certain types of collisions. The responsible State or local agency should undertake regular monitoring of actual traffic conditions and accident data and conduct a timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

TABLE 8
EXISTING CONDITIONS
FREEWAY MAINLINE ANALYSIS

Direction	From/To	Peak Hour	Existing Conditions	
			Density (pc/mi/ln)	LOS
Northbound **Interstate-5**	Lathrop Road to Roth Road	AM PM	23.6 30.7	C D
	Roth Road to El Dorado Street	AM PM	23.9 31.3	C D
	El Dorado Street to Mathews Road	AM PM	23.0 28.6	C D
	Mathews Road French Camp Road	AM PM	23.3 31.0	C D
	French Camp Road to Downing Avenue	AM PM	-- -	C C
Southbound **Interstate-5**	Downing Avenue to French Camp Road	AM PM	- -	C B
	French Camp Road to Mathews Road	AM PM	24.1 22.4	C C
	Mathews Road to El Dorado Street	AM PM	21.3 22.1	C C
	El Dorado Street to Roth Road	AM PM	21.9 22.9	C C
	Roth Road to Lathrop Road	AM PM	21.6 22.3	C C
Northbound **CA 99**	Lathrop Road to French Camp Road	AM PM	18,7 14.6	C B
	French Camp Road to Arch-Airport Road	AM PM	18.8 14.6	C B
	Arch-Airport Road to Mariposa Road	AM PM	17.4 15.6	B B
Southbound **CA 99**	Mariposa Road to Arch-Airport Road	AM PM	18.1 17.3	C B
	Arch-Airport Road to French Camp Road	AM PM	14.6 20.5	B C
	French Camp Road to Lathrop Road	AM PM	14.6 20.7	B C

Source: Fehr & Peers, 2021.

RAILROAD CROSSING COLLISION ANALYSIS

Accident data was reviewed for the at-grade railroad crossings in the study area. In the immediate study area, there are five (5) at-grade railroad crossings:

1. S. Airport Way, south of Stimson Street;
2. E. French Camp Road, east of Harlan Road;
3. E. French Camp Road, east of Priest Road;
4. Roth Road, west of McKinley Avenue; and
5. Roth Road, west of Intermodal Way.

Accident data at the above crossings was obtained from the Department of Transportation, Federal Railroad Administration. The accident experience at each crossing is discussed below, with a general description of the crossing, including the number of lanes, the range of train speeds over the crossing, and the typical number of trains per day based on data as of December 2019.

1. **S. Airport Way, south of Stimson Street** – The Airport Way crossing of the UP-railroad tracks is a four-lane at-grade crossing. No information is available from the FRA for this crossing; however, at other crossings of this line, limited train activity is noted.

2. **E. French Camp Road, east of Harlan Road** – The E. French Camp Road crossing of the UP-railroad tracks is a two-lane at-grade crossing. There are typically 34 trains per day at this crossing with train speeds of 35 to 70 mph. Gate arms, pavement markings, train signals and mast mounted flashing lights are provided at the crossing. Fatal accidents occurred in 1978 and 1991 and a non-fatal accident occurred in 1997. In the two fatal accidents, the train was traveling faster than 30 mph. In the non-fatal accidents, the train was traveling approximately 10 mph.

3. **E. French Camp Road, east of Priest Road** – This railroad crossing is a two-lane at-grade crossing. There are typically 12 trains per day at this crossing with train speeds of 30 to 60 mph. Gate arms, pavement markings, train signals and mast mounted flashing lights are provided at the crossing. An injury incident occurred in 1982, and a non-injury incident occurred in 1992.

4. **Roth Road, west of McKinley Avenue** – This crossing is a two-lane at-grade crossing. There are typically 12 trains per day at this crossing with train speed of 30 to 60 mph. Gate arms, pavement markings, train signals and mast mounted flashing lights are provided. Four incidents occurred at this crossing in 2001, resulting in two injuries and no fatalities. Prior incidents occurred in 1976 and 1979, resulting in one injury. In 2009 a non-injury incident occurred when a pick-up truck stopped on the crossing.

5. **Roth Road, west of Intermodal Way** – This crossing is a two-lane at-grade crossing. There are typically 34 trains per day with train speed of 35 to 70 mph. Gate arms, pavement markings, train signals and mast mounted flashing lights are provided at the crossing. There are a total of five reported incidents. Fatal accidents occurred in 2006 and 2009 and non-fatal accidents occurred in 2001, 2015, and 2016. Both fatalities involved the commuter train.

3.0 PROJECT CHARACTERISTICS

This chapter provides an overview of the proposed project components and addresses the proposed South Stockton Commerce Center (SSCC) Project trip generation, trip distribution, and trip assignment characteristics, all of which were used for the detailed evaluation of project impacts on the surrounding roadway network. The amount of traffic associated with the project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the campus was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the area was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

PROJECT DESCRIPTION

The South Stockton Commerce Center Project proposes a Tentative Map for the 437.45-acre site to create thirteen (13) development lots, two basin lots, one park lot, one open space lot, and one sewer pump station lot. Of the thirteen (13) development lots, twelve (12) will be for development of a mix of industrial uses and one will be for development of commercial uses.

The SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. A conceptual site plan was developed to establish a target Floor Area Ratio (FAR) that was used to generate the maximum square footage of building area for the Tentative Map and environmental analysis of Vehicle Miles Traveled and Level of Service. Based on a FAR of .47, a maximum of 6,091,551 square feet of industrial type land uses could be developed throughout the site.

The SSCC Tentative Map also proposes approximately 11 acres of general commercial uses located between Airport Way and the UPRR right-of-way. Similar to the industrial uses, a conceptual site plan was developed. Based on a FAR of .30, a maximum of 140,350 square feet of commercial land uses could be developed in this area.

The project proposes approximately 54 acres of open space area within the site, which will include approximately seven acres of park space located east of the UPRR and south of the future Commerce Drive (refer to the Circulation Improvements discussion below). The Project anticipates development of a passive park with shade structures and picnic tables for use by employees and visitors within the site.

CIRCULATION IMPROVEMENTS

The Project proposes a west-east trending primary road referred to as Commerce Drive that will provide access to Airport Way to the west and the 99 Frontage Road to the east. A grade separated crossing over the UPRR right-of-way will be constructed to accommodate the primary access road and avoid conflicts with the UPRR rail line.

The majority of Commerce Drive is proposed to have a 78-foot right-of-way with one 16-foot traffic lane in each direction, and a 16-foot center turn lane. Five-foot landscaped areas would separate the traffic lanes from the 8-foot sidewalks on both the north and south sides of the road.

As Commerce Drive approaches the intersection with Airport Way, the right-of-way will be reduced to 77 feet 5 inches and provide one 16-foot westbound traffic lane, a 16-foot left turn lane, a 14-foot eastbound traffic lane, and a 16-foot eastbound traffic lane. Five-foot landscaped areas and 8-foot sidewalks would continue to be provided on both the north and south sides of the road.

The grade separated crossing over the UPRR right-of-way will be 40-feet with one 16-foot travel lane in each direction. An eight-foot pedestrian walkway will be provided on the north side of the overcrossing.

As part of the Project, a 10-foot-wide right-of-way dedication will be provided along Airport Way, adjacent to the Project site.

The Project also proposes to potentially include rail service to up to three large parcels (parcels 2, 3, and 4) within the Project site. A potential railroad spur line would extend east from the UPRR along the Project site's northern edge providing rail access to the parcels.

The 99 Frontage Road will provide access to the Arch Road and SR 99 Interchange. Airport Way will provide access to both the French Camp/Arch Road and Interstate 5 Interchange and the French Camp and the SR 99 Interchange.

PROJECT TRIP GENERATION ANALYSIS

Fehr & Peers reviewed several sources of trip generation information for light industrial and warehousing land uses from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition (2018 and Supplement in 2020). The twelve (12) industrial land uses documented in the ITE Trip Generation Manual were reviewed and a blended trip generation rates were calculated using the following land uses and percentages to determine the 6,091,551 square feet of SSCC Project Daily, AM Peak Hour and PM Peak Hour Trip Generation:

- ITE Land Use Code 110 – General Light Industrial – 7%
- ITE Land Use Code 130 – Industrial Park – 15%
- ITE Land Use Code 150 – Warehousing – 15%
- ITE Land Use Code 151 – Mini-Warehouse – 3%
- ITE Land Use Code 154 – High-Cube Transload & Short-Term Storage Warehouse – 15%
- ITE Land Use Code 155 – High-Cube Fulfillment Center Warehouse – 15%
- ITE Land Use Code 156 – High-Cube Parcel Hub Warehouse – 15%
- ITE Land Use Code 157 – High-Cube Cold Storage Warehouse – 15%

The blended trip generation rate per 1,000 square feet of industrial / warehousing was determined to be:

- 2.65 vehicle trips on a daily basis;
- 0.30 vehicle trips during the AM peak hour; and
- 0.29 vehicle trips during the PM peak hour.

For the retail / commercial land uses, ITE L:and Use Code 820 (Shopping Center) was used to determine the Daily, AM Peak Hour and PM Peak Hour Trip Generation for the 140,350 square feet of retail development.

The trip generation rate per 1,000 square feet of retail/ commercial was determined to be:

- 64.01 vehicle trips on a daily basis;
- 3.03 vehicle trips during the AM peak hour; and
- 5.87 vehicle trips during the PM peak hour.

Table 9 shows that the proposed project is expected to generate approximately 22,633 net new daily trips, including 2,134 AM (with 1,567 inbound and 567 outbound) and 2,361 PM (with 779 inbound and 1,582 outbound) peak hour trips. Based on the trip generation analysis, the proposed project is expected to generate 17,081 net new daily passenger car, truck and sport utility vehicle (SUV) trips, including 1,924 AM (with 1,462 inbound and 462 outbound) and 2,071 PM (with 634 inbound and 1,437 outbound) peak hour trips. The proposed Project is expected to generate 5,552 net new daily truck trips, including 210 AM (with 105 inbound and 105 outbound) and 290 PM (with 145 inbound and 145 outbound) peak hour trips.

TABLE 9
PROJECT TRIP GENERATION ESTIMATES

Land Use	Size		Daily Trips	AM			PM		
				In	Out	Total	In	Out	Total
Trip Generation Rates Per 1,000 Square Feet									
Industrial & Warehousing			2.65	0.23	0.07	0.30	0.08	0.21	0.29
Retail / Commercial			64.01	1.64	1.39	3.03	2.88	2.99	5.87
Trip Generation Estimates									
Industrial & Warehousing	6,091,551	Cars	10,590	1,296	321	1,617	343	1,134	1,477
		Trucks	5,552	105	105	210	145	145	290
Retail / Commercial	140,350	Cars	8,984	230	195	425	404	420	824
Internal Trip Reduction - 15%			*1,348*	*35*	*29*	*64*	*61*	*63*	*124*
Retail / Commercial Pass-By Trip Reduction for Traffic Already on Airport Way			*1,145*	*29*	*25*	*54*	*52*	*54*	*106*

Net New SSCC Project Generated Trips - Cars	17,081	1,462	462	1,924	634	1,437	2,071
Net New SSCC Project Generated Trips - Trucks	5,552	105	105	210	145	145	290
Total Net New SSCC Project Generated Vehicle Trips	***22,633***	***1,567***	***567***	***2,134***	***779***	***1,582***	***2,361***

Source: Fehr & Peers, 2021.

TRIP DISTRIBUTION ANALYSIS

Estimates of project trip distribution were developed based on the City of Stockton Traffic Demand Model for the Existing + Project and Cumulative + Project scenarios and is summarized in **Table 10.** Project trips were assigned to the roadway system based on the directions of approach and departure using the Airport Way / Commerce Drive signalized intersection.

TABLE 10
PROJECT TRIP DISTRIBUTION PERCENTAGES

Destination	AM Peak Hour	PM Peak Hour
North on I-5	24%	23%
North on SR 99	16%	16%
North on S. Airport Way	6%	7%
East on Arch Road	6%	4%
South on I-5	24%	24%
South on SR 99	14%	15%
West on E. French Camp Road	3%	3%
East on E. French Camp Road	2%	2%
South on S. Airport Way	5%	6%
Total	100%	100%

Source: Fehr & Peers, 2021

4.0 EXISTING WITH PROJECT CONDITIONS

This chapter evaluates potential off-site traffic impacts under Existing with Project conditions.

EXISTING WITH PROJECT VOLUMES

South Stockton Commerce Center Project only traffic volumes were added to the existing volumes to estimate the Existing With Project AM and PM peak hour intersection turning movement volumes. It should be noted that no intersection improvements were assumed at any of the eleven (11) existing study intersections. For the Airport Way / Commerce Drive intersection that would be constructed as part of the SSCC project, the intersection would be designed to provide sufficient capacity for full build-out the project.

Traffic signal timings, peak hour factors, pedestrian and bicycle activity at the study intersections were left unchanged from existing conditions. Heavy vehicle percentages were reviewed and increased as needed with the addition of project-generated car and truck traffic.

EXISTING WITH PROJECT OPERATIONS

INTERSECTION LEVELS OF SERVICE ANALYSIS

Existing With South Stockton Commerce Center Project conditions were evaluated using the same methods described in Chapter 1. The analysis results based are presented in **Table 11**. With the addition of SSCC Project-generated traffic, the eight (8) existing signalized study intersections would continue to operate at acceptable LOS D conditions or better. The Airport Way / Commerce Drive intersection that would be constructed as part of the project would operate at acceptable LOS C conditions during both AM and PM peak hour conditions as a signalized intersection with the following geometrics:

- Two (2) northbound through lanes;
- One dedicated northbound right-turn pocket (300 feet);
- One dedicated southbound left-turn pocket (300 feet);
- Two (2) southbound through lanes;
- One dedicated westbound left-turn lane; and
- One dedicated westbound right-turn pocket (300 feet).

The addition of project-generated traffic would result in the side-street movements at the two (2) side-street stop-controlled intersections to degrade to LOS E conditions during PM peak hour conditions:

- Roth Road/I-5 Southbound Ramps (PM Peak Hour); and
- Roth Road/I-5 Southbound Ramps (PM Peak Hour).

TABLE 11
EXISTING WITH PROJECT CONDITION
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control[1]	Peak Hour	Existing No Project Conditions		Existing With Project Conditions	
			Delay[2,3]	LOS[3]	Delay[2,3]	LOS[3]
1. Airport Way / French Camp Road	Signalized	AM PM	35 40	D D	48 52	D D
2. Airport Way / Commerce Drive (new intersection)	Signalized	AM PM	N/A	N/A	21 24	C C
3. Airport Way / Arch-Airport Road	Signalized	AM PM	42 47	D D	51 54	D D
4. Airport Way / Roth Road	Signalized	AM PM	16 17	B B	22 25	C C
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI)	Signalized	AM PM	21 22	C C	25 24	C B
6. French Camp Road/SR 99 Southbound Ramps	Signalized	AM PM	21 24	C C	24 29	B C
7. French Camp Road/SR 99 Northbound Ramps	Signalized	AM PM	22 17	C B	25 19	C B
8. French Camp Road/Sperry Road (Arch-Airport Road)	Signalized	AM PM	21 25	C C	25 30	C C
9. French Camp Road/I-5 Southbound Ramps	Signalized	AM PM	11 11	B B	16 15	B B

TABLE 11
EXISTING WITH PROJECT CONDITION
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control[1]	Peak Hour	Existing No Project Conditions		Existing With Project Conditions	
			Delay[2,3]	LOS[3]	Delay[2,3]	LOS[3]
10. French Camp Road/I-5 Northbound Ramps	Signalized	AM PM	17 17	B B	23 21	C C
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	10 (18) 10 (23)	B (C) B (C)	14 (28) 25 **(45)**	B (D) D **(E)**
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	2 (15) 3 (20)	A (C) A (C)	5 (20) 7 **(38)**	A (C) A **(E)**

Notes: **Bold** indicates deficient operations; ***Bold Italics*** indicates potentially significant impact.
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. Average intersection delay calculated for signalized intersections using the *2000 HCM* method.
3. For SSSC intersections, average delay or LOS is listed first followed by the delay or LOS for the worst approach in parentheses.
Source: Fehr & Peers, 2021.

SIGNAL WARRANTS ANALYSIS

Peak hour traffic signal warrants were reviewed at the unsignalized study intersections. The addition of project-generated traffic would result in both AM and PM peak hour signal warrants being satisfied at the Airport Way / Commerce Drive study intersections, as summarized in **Table 12**. Therefore, the Airport Way / Commerce Drive intersection will be signalized as part of the construction of the Commerce Drive roadway serving the South Stockton Commerce Center Project. At the Roth Road / I-5 ramps, the addition of project-generated traffic would result in the PM peak hour signal warrant to be satisfied

TABLE 12
EXISTING WITH PROJECT CONDITIONS
PEAK HOUR SIGNAL WARRANT

Intersection	Control[1]	Peak Hour	Signal Warrant Met?	
			Existing No Project Conditions	Existing With Project Buildout
2. Airport Way / Commerce Drive (new intersection)	SSSC	AM PM	No No	**Yes** **Yes**
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	No No	No **Yes**
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	No No	No **Yes**

Notes:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.
Source: Fehr & Peers, 2021.

EXISTING CONDITIONS IMPACTS AND MITIGATION MEASURES

This section evaluates the intersection LOS results presented in **Table 11**, compares the results with the criteria for significant impacts, and presents the effectiveness of mitigation measures. As a condition of approval, the City of Stockton will collect applicable local and regional transportation impact fees (TIF) in addition to fair share contributions for other improvements needed to mitigate impacts to the surrounding transportation system. This is consistent with the City policy to collect fees from projects that have a significant impact on local and regional facilities.

SOUTH STOCKTON COMMERCE CENTER PROJECT IMPACTS

The following intersection impacts would occur with the SSCC Project under Existing With Project AM and PM Peak Hour Conditions.

Impact TR-6: Intersections 11 and 12, Roth Road at I-5 Ramps

The addition of project-generated vehicle trips would worsen the level of service conditions for the side street stop controlled southbound I-5 off-ramp approach from LOS C to LOS E operations during the weekday PM peak hour.

The addition of project-generated vehicle trips would worsen the level of service conditions for the side street stop controlled northbound I-5 off-ramp approach from LOS C to LOS E operations during the weekday PM peak hour.

Based on the level of service standard for the I-5 / Roth Road interchange, this is considered a ***significant*** impact. Because this intersection is a Caltrans ramp terminal intersection located in the City of Lathrop and outside the jurisdiction of the City of Stockton, the impact of the South Stockton Commerce Center Project would be **Significant and Unavoidable**.

Mitigation TR-6: Roth Road at I-5 Northbound and Southbound Ramps

The mitigation measure is the installation of traffic signals at both northbound and southbound ramp terminal intersections to serve Existing With SSCC Project traffic volumes. The implementation of this measure would result in LOS B/C operations during both AM and PM peak hour conditions with the following intersection geometrics:

Northbound I-5 Ramps / Roth Road

- Three Phase Tight-Diamond Phasing Traffic Signal;
- Northbound shared left-turn / through lane;
- Northbound dedicated right-turn lane;
- Westbound through lane;
- Westbound right-turn lane;
- Eastbound left-turn lane; and
- Two (2) eastbound through lanes.

Southbound I-5 Ramps / Roth Road

- Three Phase Tight-Diamond Phasing Traffic Signal;
- Southbound left-turn lane;
- Southbound shared left/through/right-turn lane;
- Westbound left-turn lane;
- Two (2) westbound through lanes;
- Eastbound through lane; and
- Eastbound shared through/right-turn lane.

It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a ***significant and unavoidable*** level.

5.0 CUMULATIVE CONDITIONS

This chapter presents the results of the level of service calculations under cumulative conditions without and with the project. The analysis of cumulative conditions reflects buildout of the Envision Stockton 2040 General Plan, as adopted in December 2018.

CUMULATIVE ROADWAY IMPROVEMENTS

Major roadway improvements in the study area are included in the City of Stockton *2040 General Plan,* as described in **Table 13** .

TABLE 13
PLANNED ROADWAY IMPROVEMENTS FOR THE FUTURE (YEAR 2040) SCENARIO

Location	Improvement
Interstate 5	Ten lanes from Eight Mile Road to Charter Road
Interstate 5	Eight lanes from Charter Road to Roth Road
E. French Camp Road	Six lanes between I-5 and west of SR 99, four lanes from west of SR 99 to Austin Road.
SR 99	Eight lanes between French Camp Road and Arch Road
S. Airport Way	Four lanes between Arch/Airport Road and E. French Camp Road.
Sperry Road/Arch-Airport Road	Four to six lanes between E. French Camp Road and SR 99.

Source: Envision Stockton 2040 General Plan.

CUMULATIVE INTERSECTION VOLUMES

Future (Year 2040) intersection traffic forecasts were developed using the 2040 General Plan Update traffic model. Traffic forecasts from the model were adjusted using the delta method. The peak hour project traffic volumes were added to the Future (Year 2040) Without Project volumes to determine future traffic volumes with the project.

SIGNAL WARRANTS ANALYSIS

Peak hour traffic signal warrants were reviewed at the unsignalized study intersections. Under both Cumulative No Project and Cumulative With Project Conditions, the I-5 / Roth Road interchange would meet both AM and PM peak hour signal warrants. The addition project traffic would result in peak hour signal warrants being satisfied at the Airport Way / Commerce Drive study intersections, as summarized in **Table 14**.

TABLE 14
CUMULATIVE NO PROJECT AND WITH PROJECT CONDITIONS
PEAK HOUR SIGNAL WARRANT

Intersection	Control[1]	Peak Hour	Signal Warrant Met?	
			Cumulative No Project Conditions	Cumulative With Project Buildout
2. Airport Way / Commerce Drive (new intersection)	SSSC	AM PM	N/A N/A	**Yes** **Yes**
11. Roth Road/I-5 Southbound Ramps	SSSC	AM PM	**Yes** **Yes**	**Yes** **Yes**
12. Roth Road/I-5 Northbound Ramps	SSSC	AM PM	**Yes** **Yes**	**Yes** **Yes**

Notes:
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-controlled intersection.
Source: Fehr & Peers, 2021.

ANALYSIS OF CUMULATIVE CONDITIONS

INTERSECTION LEVELS OF SERVICE ANALYSIS

Cumulative conditions were evaluated using the same methods described in Chapter 1. The analysis results based are presented in **Table 15**, based on the cumulative traffic volumes and lane configurations. For the analysis of cumulative conditions, peak hour factor of 1.0 was assumed. Truck percentages were also adjusted to reflect the projected increase in traffic volumes in the area for Cumulative No Project Conditions and the addition of project-generated traffic (cars and trucks) for Cumulative With Project Conditions.

The primary conclusions of the Cumulative No Project Conditions AM and PM peak hour analysis are:

- Projected increase in traffic volumes at the Airport Way / French Camp Road intersection will result in the signalized intersection operating at LOS E conditions during the AM peak hour;

- Projected increase in traffic volumes at the Airport Way / Arch-Airport Road intersection will result in the signalized intersection operating at LOS F conditions during the AM peak hour; and

- Projected increase in traffic volumes at the Interstate 5 / Roth Road interchange will result in both southbound and northbound ramp terminal intersection to operate at LOS D conditions during both AM and PM Peak Hour Conditions.

TABLE 15
CUMULATIVE CONDITION
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control[1]	Peak Hour	Cumulative No Project Conditions		Cumulative With Project		Impacted by Approved Project in 2040 Cumulative?
			Delay[2]	LOS	Delay[2]	LOS	
1. Airport Way / French Camp Road	Signalized	AM PM	***66*** 53	***E*** D	***69*** ***60***	***E*** ***E***	***Yes***
2. Airport Way / Commerce Drive (new intersection)	Signalized	AM PM	26 29	C C	31 34	C C	No
3. Airport Way / Arch-Airport Road	Signalized	AM PM	**88** 54	**F** D	***95*** ***60***	***F*** ***E***	***Yes***
4. Airport Way / Roth Road	Signalized	AM PM	17 42	B D	22 50	C D	No
5. Arch-Airport Road/SR 99 Single Point Urban Interchange (SPUI)	Signalized	AM PM	37 42	D D	38 44	C D	No
6. French Camp Road/SR 99 Southbound Ramps	Signalized	AM PM	23 20	C C	25 21	C C	No
7. French Camp Road/SR 99 Northbound Ramps	Signalized	AM PM	25 17	C B	26 18	C D	No
8. French Camp Road/Sperry Road (Arch-Airport Road)	Signalized	AM PM	34 37	C D	34 37	C D	No
9. French Camp Road/I-5 Southbound Ramps	Signalized	AM PM	24 31	C C	22 38	C D	No
10. French Camp Road/I-5 Northbound Ramps	Signalized	AM PM	25 22	C C	26 24	C C	No
11. Roth Road/I-5 Southbound Ramps	Signalized	AM PM	***>100*** ***>100***	***F*** ***F***	***>100*** ***>100***	***F*** ***F***	***Yes***
12. Roth Road/I-5 Northbound Ramps	Signalized	AM PM	***>100*** ***>100***	***F*** ***F***	***>100*** ***>100***	***F*** ***F***	***Yes***

Source: Fehr & Peers, 2021. Notes: **Bold** indicates deficient operations; ***Bold Italics*** indicates potentially significant impact.
1. SSSC = side-street stop-controlled intersection; AWSC = all-way stop-control.
2. Average intersection delay calculated for signalized intersections using the *2000 HCM* method.

CUMULATIVE CONDITIONS IMPACTS AND MITIGATION MEASURES

This section evaluates the intersection LOS results presented in **Table 15**, compares the results with the criteria for significant impacts, and presents the effectiveness of mitigation measures. As a condition of approval, the City of Stockton will collect applicable local and regional transportation impact fees (TIF) in addition to fair share contributions for other improvements needed to mitigate impacts to the surrounding transportation system. This is consistent with the City policy to collect fees from projects that have a significant impact on local and regional facilities.

SOUTH STOCKTON COMMERCE CENTER PROJECT IMPACTS

The following intersection impacts would occur with the SSCC Project under Cumulative With Project AM and PM Peak Hour Conditions.

Impact TR-7: Intersection 1, Airport Way at French Camp Road

The addition of project-generated vehicle trips would worsen the average delay for the signalized intersection from 66 seconds (LOS E) to 69 seconds (LOS E) operations during the weekday AM peak hour.

The addition of project-generated vehicle trips would worsen the level of service conditions for the signalized intersection from LOS D to LOS E operations during the weekday PM peak hour.

Based on the level of service standard for the Airport Way / French Camp Road intersection, this is considered a ***significant*** impact.

Mitigation TR-7: Airport Way at French Camp Road

The mitigation measure is the construction of the following intersection improvements as defined in the Envision Stockton 2040 General Plan:

- Protected left-turn (Eight Phase) Traffic Signal;
- Northbound dedicated left-turn pocket (200 feet);
- Northbound through lane;
- Northbound shared through/right-turn lane;
- Southbound dedicated left-turn pocket (200 feet);
- Two (2) southbound through lanes;
- Southbound dedicated right-turn pocket (200 feet);
- Westbound dedicated left-turn pocket (200 feet);
- Three (3) westbound through lanes;
- Westbound dedicated right-turn pocket (150 feet);
- Eastbound dedicated left-turn pocket (150 feet);
- Three (3) eastbound through lanes; and
- Eastbound dedicated right-turn pocket (150 feet).

The implementation of this measure would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.

Impact TR-8: Intersection 3, Airport Way at Arch-Airport Road

The addition of project-generated vehicle trips would worsen the average delay for the signalized intersection from 88 seconds (LOS F) to 95 seconds (LOS F) operations during the weekday AM peak hour.

The addition of project-generated vehicle trips would worsen the level of service conditions for the signalized intersection from LOS D to LOS E operations during the weekday PM peak hour.

Based on the level of service standard for the Airport Way / Arch-Airport Road intersection, this is considered a ***significant*** impact.

Mitigation TR-8: Airport Way at Arch-Airport Road

The mitigation measure is the construction of the following intersection improvements as defined in the Envision Stockton 2040 General Plan:

- Protected left-turn (Eight Phase) Traffic Signal;
- Northbound dedicated left-turn pocket (200 feet);
- Two (2) northbound through lanes;
- Northbound dedicated right-turn pocket (200 feet);
- Southbound dedicated left-turn pocket (200 feet);
- Two (2) southbound through lanes;
- Southbound dedicated right-turn pocket (200 feet);
- Westbound dedicated left-turn pocket (200 feet);
- Three (3) westbound through lanes;
- Westbound dedicated right-turn pocket (150 feet);
- Eastbound dedicated left-turn pocket (200 feet);
- Three (3) eastbound through lanes; and
- Eastbound dedicated right-turn pocket (150 feet).

The implementation of this measure would result in LOS D operations during both AM and PM peak hour conditions. With these improvements, this impact would be considered ***less-than-significant***.

Impact TR-9: Intersections 11 and 12, Roth Road at I-5 Ramps

The addition of project-generated vehicle trips would worsen the average delay for the signalized southbound I-5 and northbound I-5 off-ramp approach, resulting in LOS F operations during the weekday AM and PM peak hours.

Based on the level of service standard for the I-5 / Roth Road interchange, this is considered a ***significant*** impact. Because this intersection is a Caltrans ramp terminal intersection located in the City of Lathrop and outside the jurisdiction of the City of Stockton, the impact of the South Stockton Commerce Center Project would be **Significant and Unavoidable**.

Mitigation TR-9: Roth Road at I-5 Southbound Ramps

The mitigation measure is the construction of modifications to the I-5 / Roth Road interchange to provide additional capacity to serve Cumulative No Project and Cumulative With SSCC Project traffic volumes. The implementation of this measure would result in LOS C/D operations during both AM and PM peak hour conditions with the following intersection geometrics:

Northbound I-5 Ramps / Roth Road

- Three Phase Tight-Diamond Phasing Traffic Signal;
- Northbound left-turn pocket (200 feet);
- Two (2) northbound right-turn lanes;
- Two (2) westbound through lanes;
- Westbound right-turn pocket (150 feet);
- Eastbound left-turn lane; and
- Two (2) eastbound through lanes.

Southbound I-5 Ramps / Roth Road

- Three Phase Tight-Diamond Phasing Traffic Signal;
- Two (2) southbound left-turns lanes;
- Southbound right-turn pocket (150 feet);
- Westbound left-turn lane;
- Two (2) westbound through lanes;
- Eastbound through lane; and
- Eastbound shared through/right-turn lane.

It should be noted that because this intersection is outside the jurisdiction of the City of Stockton, this impact would remain at a ***significant and unavoidable*** level.

Impact TR-10: Airport Way At-Grade Railroad Crossing

The project has the potential to increase traffic across at-grade railroad crossings in the study area. Increased traffic across at-grade railroad crossings increase opportunities for vehicle/train conflicts and additional traffic increases potential vehicle queues at the crossings, especially when long freight trains are traveling through the area. Based on the City of Stockton significance criteria, this is considered a ***significant impact***.

Mitigation TR-10: Airport Way At-Grade Railroad Crossing

Contribute a fair share towards planned grade separated crossings in the area. With implementation of this measure, the impact would be reduced to a less-than-significant level. However, as these improvements are not fully funded, the impact would remain ***significant and unavoidable.***

6.0 REGIONAL FREEWAY OPERATIONS

This chapter summarizes the freeway analysis under Existing, Existing Plus Project, Cumulative No Project and Cumulative With Project conditions for I-5 and SR 99 in the project vicinity.

FREEWAY FORECASTS AND FREEWAY SYSTEM IMPROVEMENTS

Existing mainline freeway volumes were obtained from Caltrans and supplemented by existing counts at the ramp terminal intersections. For this assessment, the I-5 freeway mainline segments from north of E. French Camp Road to south of Roth Road and SR 99 from north of Arch-Airport Road to south of E. French Camp Road were analyzed based on the analysis method described in Chapter 1.

Project traffic was then added to the existing freeway volumes to develop the forecasts for the existing with project conditions, for both with Phase 1 and Buildout conditions.

To estimate near-term conditions, the existing freeway volumes were increased by ten percent, similar to the method used to estimate near-term intersection volumes. The City of Stockton General Plan Travel Demand Model was used to forecast cumulative freeway volumes. No freeway improvements were assumed in the analysis of existing or near-term conditions, but completion of the freeway projects noted in **Table 13,** including additional widening of I-5 and SR 99 was assumed for the analysis of cumulative conditions.

FREEWAY OPERATIONS

Freeway segment levels of service were calculated based on existing, near-term and cumulative scenarios for the same scenarios as the intersection analysis using the analysis methods outlined in Chapter 1 for freeway mainline, segments.

Results are presented in **Table 16** for Existing and Existing With Project, and **Table 17** for Cumulative No Project and Cumulative With Project scenarios. In the existing condition, all freeway segments evaluated operate at LOS D or better and would continue to do so with the addition of South Stockton Commerce Center project-generated traffic.

In the cumulative condition, several sections of Interstate 5 are projected to operate at level of Service E during either the AM or PM peak hour. The project would increase traffic on these freeway segments by less than 5 percent, resulting in less-than-significant project-specific freeway impacts in the cumulative condition. The addition of project traffic, in combination with traffic from other approved and pending projects, cumulatively contributes to the need to improve the freeway system within Stockton. Although no project specific freeway impacts were identified, the project would pay local and regional transportation impact fees to fund improvements to the regional roadway system.

TABLE 16
EXISTING AND EXISTING WITH PROJECT CONDITIONS
FREEWAY MAINLINE ANALYSIS

Direction	From/To	Peak Hour	Existing No Project		Existing With Project Buildout		
			Density[1]	LOS	Density[1]	LOS	Percent Increase
Northbound **Interstate-5**	Lathrop Road to Roth Road	AM	23.6	C	25.0	C	5.2
		PM	30.7	D	32.1	D	2.9
	Roth Road to El Dorado Street	AM	23.9	C	24.0	C	0.4
		PM	31.3	D	31.4	D	0.2
	El Dorado Street to Mathews Road	AM	23.0	C	23.1	C	0.4
		PM	28.6	D	28.7	D	0.3
	Mathews Road French Camp Road	AM	23.3	C	23.4	C	0.3
		PM	31.0	D	31.1	D	0.2
	French Camp Road to Downing Avenue[2]	AM	-	C	-	C	5.9
		PM	-	C	-	C	11.1
Southbound **Interstate-5**	Downing Avenue to French Camp Road[2]	AM	-	C	-	C	6.9
		PM	-	B	-	C	5.7
	French Camp Road to Mathews Road	AM	24.1	C	24.2	C	0.2
		PM	22.4	C	22.5	C	0.3
	Mathews Road to El Dorado Street	AM	21.3	C	21.3	C	0.2
		PM	22.1	C	22.2	C	0.3
	El Dorado Street to Roth Road	AM	21.9	C	21.9	C	0.2
		PM	22.9	C	22.9	C	0.3
	Roth Road to Lathrop Road	AM	21.6	C	22.4	C	3.4
		PM	22.3	C	23.9	C	6.6

TABLE 16
EXISTING AND EXISTING WITH PROJECT CONDITIONS
FREEWAY MAINLINE ANALYSIS

Direction	From/To	Peak Hour	Existing No Project		Existing With Project Buildout		
			Density[1]	LOS	Density[1]	LOS	Percent Increase
Northbound **CA 99**	Lathrop Road to French Camp Road	AM PM	18,7 14.6	C B	19.2 14.9	C B	2.7 2.6
	French Camp Road to Arch-Airport Road	AM PM	18.8 14.6	C B	19.2 15.4	C B	2.1 5.1
	Arch-Airport Road to Mariposa Road	AM PM	17.4 15.6	B B	18.2 17.2	C B	4.6 10.3
Southbound **CA 99**	Mariposa Road to Arch-Airport Road	AM PM	18.1 17.3	C B	20.1 18.7	C C	10.6 8.2
	Arch-Airport Road to French Camp Road	AM PM	14.6 20.5	B C	15.9 21.5	B C	8.6 4.7
	French Camp Road to Lathrop Road	AM PM	14.6 20.7	B C	15.4 22.2	B C	5.5 7.0

Notes:
1. Density presented in passenger cars per mile per lane.
2. As this section of highway has an auxiliary lane, it was analyzed as a weave segment using the Leisch method.

Source: Fehr & Peers, 2021.

TABLE 17
CUMULATIVE NO PROJECT AND CUMULATIVE WITH PROJECT CONDITIONS
FREEWAY MAINLINE ANALYSIS

Direction	From/To	Peak Hour	Cumulative No Project		Cumulative With Project			Impacted by Approved Project in Cumulative?
			Density[1]	LOS	Density[1]	LOS	Percent Increase	
Northbound **Interstate-5**	Lathrop Road to Roth Road	AM	25.2	D	26.0	D	2.7	No
		PM	31.1	D	31.8	D	1.6	No
	Roth Road to El Dorado Street	AM	27.0	D	27.1	D	0.3	No
		PM	29.9	D	30.0	D	0.2	No
	El Dorado Street to Mathews Road	AM	25.3	D	25.4	D	0.3	No
		PM	27.2	D	27.3	D	0.2	No
	Mathews Road French Camp Road	AM	26.0	D	26.1	D	0.4	No
		PM	27.7	D	27.8	D	0.3	No
	French Camp Road to Downing Avenue	AM	30.8	D	31.6	D	1.8	No
		PM	33.2	D	34.9	D	3.1	No
Southbound **Interstate-5**	Downing Avenue to French Camp Road	AM	33.8	D	34.3	D	2.4	No
		PM	**35.7**	**E**	**36.8**	**E**	1.8	No
	French Camp Road to Mathews Road	AM	33.2	D	34.0	D	0.2	No
		PM	28.6	D	28.8	D	0.5	No
	Mathews Road to El Dorado Street	AM	**33.2**	**D**	33.2	D	0.1	No
		PM	23.0	C	23.4	C	0.3	No
	El Dorado Street to Roth Road	AM	34.8	D	34.8	D	0.1	No
		PM	24.6	D	24.7	D	0.3	No
	Roth Road to Lathrop Road	AM	**36.5**	**E**	**37.3**	**E**	1.3	No
		PM	22.0	C	22.9	C	3.7	No

TABLE 17
CUMULATIVE NO PROJECT AND CUMULATIVE WITH PROJECT CONDITIONS
FREEWAY MAINLINE ANALYSIS

Direction	From/To	Peak Hour	Cumulative No Project		Cumulative With Project			Impacted by Approved Project in Cumulative?
			Density[1]	LOS	Density[1]	LOS	Percent Increase	
Northbound **CA 99**	Lathrop Road to French Camp Road	AM	25.8	D	26.4	D	1.7	No
		PM	22.5	C	22.8	C	1.5	No
	French Camp Road to Arch-Airport Road	AM	22.7	C	23.2	C	2.3	No
		PM	24.1	C	24.7	D	2.5	No
	Arch-Airport Road to Mariposa Road	AM	20.4	C	21.6	C	6.1	No
		PM	30.6	D	34.4	D	8.2	No
Southbound **CA 99**	Mariposa Road to Arch-Airport Road	AM	29.4	D	32.3	D	6.8	No
		PM	25.4	D	27.2	D	5.8	No
	Arch-Airport Road to French Camp Road	AM	20.9	C	21.4	C	2.5	No
		PM	24.5	D	25.2	D	2.7	No
	French Camp Road to Lathrop Road	AM	21.1	C	21.5	C	1.5	No
		PM	27.1	D	27.9	D	2.3	No

Notes:
1. Density presented in passenger cars per mile per lane.

Source: Fehr & Peers, 2021.

APPENDIX A: VMT ANALYSIS

APPENDIX B: INTERSECTION LEVEL OF SERVICE

EXISTING

EXISTING WITH PROJECT

CUMULATIVE

CUMULATIVE WITH PROJECT

APPENDIX C: FREEWAY ANALYSIS

EXISTING

EXISTING WITH PROJECT

CUMULATIVE

CUMULATIVE WITH PROJECT

APPENDIX G

Water Supply Assessment

Water Supply Assessment
South Stockton Commerce Center

in the

City of Stockton

October 2020

Prepared By:

City of Stockton
Municipal Utilities Department
Water Resources Division

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ABBREVIATIONS AND ACRONYMS

Cal-Water	California Water Service Company
CEQA	California Environmental Quality Act
COSMA	City of Stockton Metropolitan Area
COSMUD	City of Stockton Municipal Utilities Department
CVP	Central Valley Project
DDW	California State Water Board Division of Drinking Water
DMM	Demand Management Measure
DWSP	Delta Water Supply Project
PFS	Public Facilities and Services Policy
Project	South Stockton Commerce Center
SB	Senate Bill
SSCC	South Stockton Commerce Center
SEWD	Stockton East Water District
SWP	State Water Project
UWMP	Urban Water Management Plan
WMPU	Water Master Plan Update
WSA	Water Supply Assessment
WSE	Water Supply Evaluation
WTP	Water Treatment Plant

Foreword

The South Stockton Commerce Center (SSCC) Project (Project) proponents initiated a request for a Water Supply Assessment (WSA) from the City of Stockton in September 2020.

The City of Stockton Municipal Utilities Department (COSMUD), being the retail water provider, completed this WSA and makes the determination of water supply sufficiency based on existing surface and groundwater supplies. COSMUD secured a water right entitlement from the San Joaquin River and completed the Delta Water Supply Project (DWSP) to provide potable drinking water supplies to the City of Stockton for existing and planned future growth. In addition to the Delta water right, COSMUD has contracts for surface water from the Stockton East and Woodbridge Irrigation Districts to supplement existing groundwater supplies. COSMUD also has groundwater wells to augment these sources.

This WSA followed the guidance outlined in the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001* (California Department of Water Resources, October 2003).

1. BACKGROUND

The California Water Code requires coordination between land-use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of the proposed SSCC Project.

California Water Code Sections 10910 through 10915 (inclusive) requires land-use lead agencies: (1) to identify the responsible public water purveyor for a proposed development project, and (2) to request a Water Supply Assessment (WSA) from the responsible purveyor. The purpose of the WSA is to demonstrate the sufficiency of the purveyors' water supplies to satisfy the water demands of the proposed development project, while still meeting the current and projected water demands of existing customers. California Water Code Sections 10910 through 10915 delineates the specific information that must be included in the WSA.

A foundational document for compliance for both SB 610 and SB 221 is COSMUD's Urban Water Management Plan (UWMP). Both statutes identify the UWMP as a planning document that can be used by a water supplier to meet the standards set forth in both statutes. Thorough and complete UWMP's allow water suppliers to use UWMP's as a foundation to fulfill the specific requirements of the two statutes. Cities, counties, water districts, property owners and developers utilize this document when planning for and proposing new projects. The COSMUD's 2015 UWMP was used as the basis for this WSA.

1.1 PROJECT DESCRIPTION

The proposed Project site is comprised of 437 acres located in the southern portion of the City of Stockton, south of and adjacent to the Stockton Airport (Figure 1-1 and 1-2). The Project site is located west of the 99 Frontage Road and State Route (SR) 99 and east of Airport Way. The Union Pacific Railroad (UPRR) extends south from Airport Way bisecting the western portion of the site. French Camp Slough extends southeast from Airport Way across the southwestern portion of the site. It continues east under the UPRR and then south across the southwestern portion of the site, before continuing south off-site.

The Project includes the development of approximately 437 acres of land which will include: industrial, commercial, open space, public facilities, and roadway right-of-way land uses, as described below.

- Development of approximately 300 acres of industrial uses (building and parking areas);
- Development of approximately 41 acres of public facilities (storm basins and pump stations);
- Creation of approximately 54 acres of open space; and
- Build up to a maximum of 6,091,551 square feet of industrial floor space.

The Project proposes a Tentative Map for the 437-acre site to create 13 development lots, two basin lots, one park lot, one open space lot, and one sewer pump station lot. Of the 13 development lots, 12 will be for development of a mix of industrial uses and one will be for development of commercial uses.

More specifically, the SSCC Project Tentative Map proposes approximately 298 net acres of limited industrial uses. A maximum of 6,091,551 square feet of industrial type and 140,350 square feet of commercial land uses could be developed throughout the site.

A range of industrial uses is planned and include general light industrial, industrial park, warehousing, mini-warehouse, high-cube transload and short-term storage warehouse, high-cube fulfillment center warehouse, high-cube parcel hub warehouse, and high-cube cold storage warehouse.

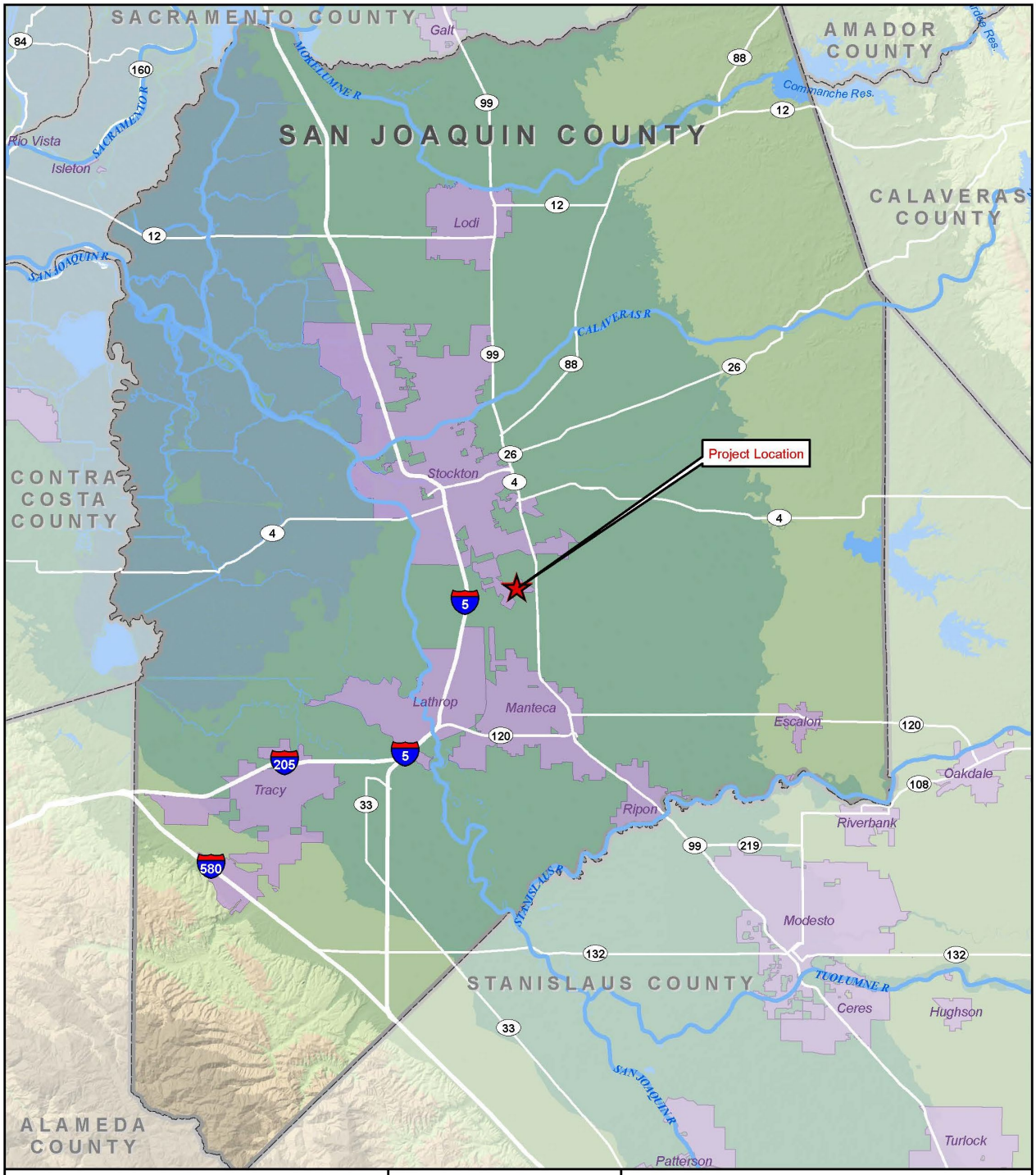
The project proposes approximately 54 acres of open space area within the site, which will include approximately seven acres of park space located east of the UPRR and south of the future Commerce Drive (refer to the Circulation Improvements discussion below). The Project anticipates development of a passive park with shade structures and picnic tables for use by employees and visitors within the site.

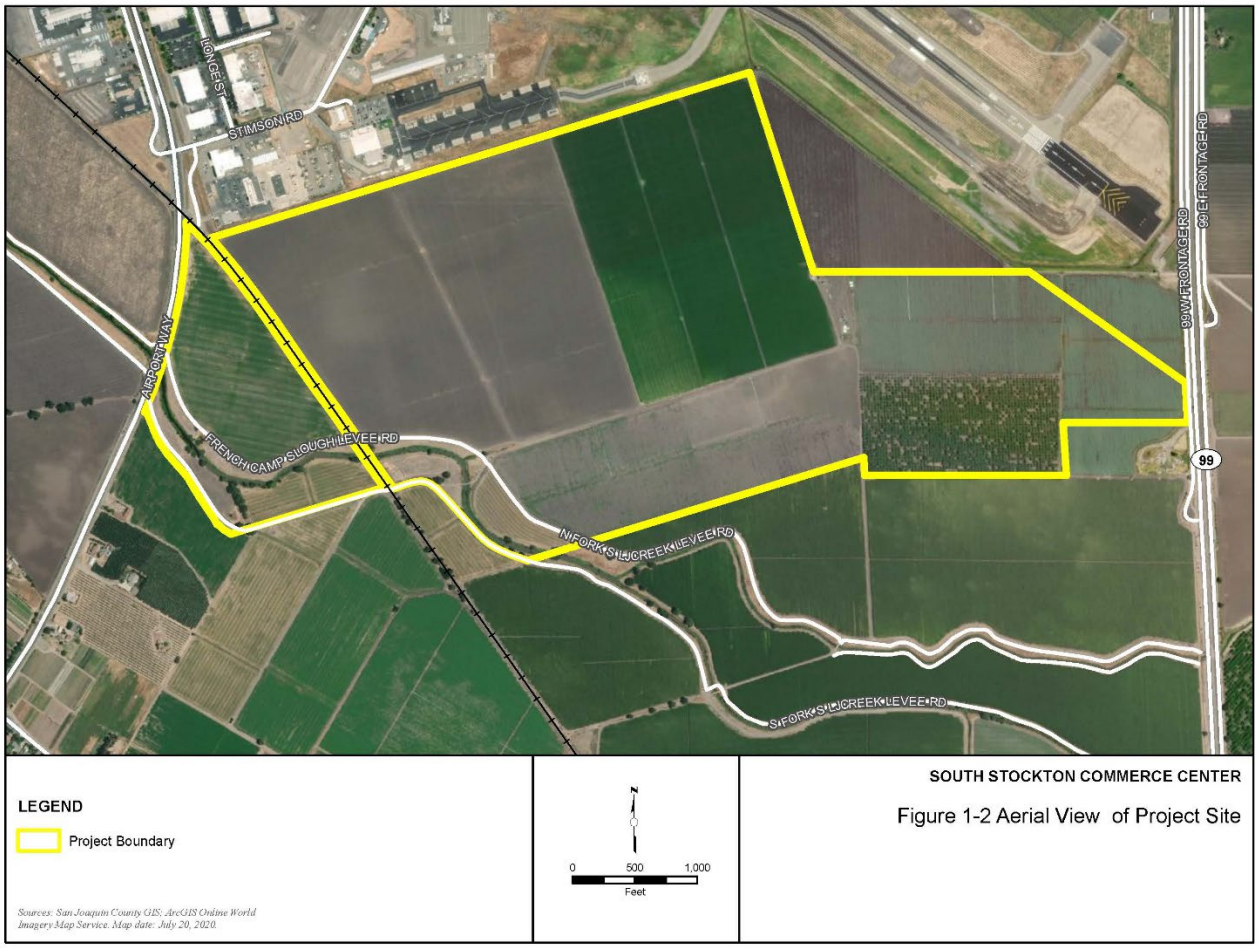
The remaining approximately 14 acres of the site will be identified as remainder areas and are not currently identified for development.

1.2 NEED FOR WRITTEN ASSESSMENT AND VERIFICATION

Due to the Project size and location (industrial of more than 40 acres of land or 650,000 square feet of floor space), a WSA as per Senate Bill (SB) 610 is required to identify the available water supplies for existing urbanized areas and foreseeable growth, including the Project, for 20 years into the future. SB 610 seeks to promote more collaborative planning

among local water suppliers, and Cities and Counties. This statute requires detailed information regarding water availability to be provided to the City and County decision makers before approval of specified large development projects. This statute also requires detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the City or County on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects.


SACRAMENTO COUNTY
AMADOR COUNTY
SAN JOAQUIN COUNTY
CALAVERAS COUNTY
CONTRA COSTA COUNTY
ALAMEDA COUNTY
STANISLAUS COUNTY
Galt
Rio Vista
Isleton
Lodi
Stockton
Lathrop
Manteca
Escalon
Tracy
Ripon
Oakdale
Riverbank
Modesto
Ceres
Hughson
Turlock
Patterson
Project Location
Mokelumne R
Sacramento R
San Joaquin R
Calaveras R
Stanislaus R
Tuolumne R
Commanche Res.
84
160
88
99
12
26
4
5
205
580
120
108
219
132
33
LEGEND
Project Location
County Boundary
City Area
Sources: CalAtlas; California County GIS Departments. Map date: July 20, 2020.
0
2½
5
Miles
SOUTH STOCKTON COMMERCE CENTER
Figure 1-1 Regional Location Map


LONG ST
STIMSON RD
AIRPORT WAY
FRENCH CAMP SLOUGH LEVEE RD
N F ORK S TUJ CREEK LEVEE RD
S F ORK S TUJ CREEK LEVEE RD
99 W FRONTAGE RD
99 E FRONTAGE RD
99
LEGEND
Project Boundary
Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: July 20, 2020.
N
0
500
1,000
Feet
SOUTH STOCKTON COMMERCE CENTER
Figure 1-2 Aerial View of Project Site

1.3 CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT (COSMUD)

The City of Stockton Metropolitan Area (COSMA) has three water retailers including COSMUD, California Water Service Company (Cal Water), and San Joaquin County within their respective service areas. The term COSMA is used only for convenience when grouping the water retailers and should not be construed as a legal entity.

As one of three retail water providers serving potable water supplies to the COSMA, COSMUD is responsible for preparing the WSA for the Project. In so doing, COSMUD has relied on and incorporates by reference its prior analysis including the following reference documents:

- City of Stockton 2015 UWMP (Brown and Caldwell, July 2016)
- City of Stockton Water Master Plan Update (WMPU) (West Yost and Associates, July 2008)
- City of Stockton Water Rate Study (HDR, May 2016)
- Envision Stockton 2040 General Plan (City of Stockton, December 2018)

1.4 PURPOSE OF WSA

Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for projects subject to the California Environmental Quality Act (CEQA).

1.5 SENATE BILL 610

Under SB 610 (codified as California Water Code, Section 10910 through 10915), each public water system responsible for serving proposed projects (including industrial parks that house more than 1,000 persons, occupy more than 40 acres of land, or have more than 650,000 square feet of floor area) must prepare a WSA evaluating whether the water system's "total projected water supplies…will meet the projected water demand associated with the proposed project," together with existing and other foreseeable planned future uses over a 20-year horizon. If, as a result of its assessment, the public water system concludes that its water supplies are not sufficient, the assessment must detail its plans in acquiring the necessary water supplies.

1.6 USE OF 2015 URBAN WATER MANAGEMENT PLAN

The importance of the Urban Water Management Plan (UWMP) and the General Plan

are best described from the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001*, (October 2003, DWR) as follows:

> *A foundational document for compliance with both SB 610 and SB 221 is the Urban Water Management Plan (UWMP). Both statutes repeatedly identify the UWMP as a planning document that, if properly prepared, can be used by a water supplier to meet the standards set forth in both statutes. Thorough and complete UWMPs will allow water suppliers to use UWMPs as a foundation to fulfill the specific requirements of these two statutes. Cities, counties, water districts, property owners, and developers will all be able to utilize this document when planning for and proposing new projects.*
>
> *UWMPs serve as important source documents for cities and counties as they update their General Plan. Conversely General Plans are source documents as water suppliers update their UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent. It is crucial that cities/counties and water suppliers work closely when developing and updating these planning documents.*

The purpose of the 2015 UWMP is premised on meeting the following:

> *The City's UWMP has been prepared in accordance with the Act, as amended, California Water Code, Division 6, Part 2.6, Sections 10610 through 10656. The Act became part of the California Water Code with the passage of Assembly Bill 797 during the 1983–1984 regular session of the California legislature. The Act was amended in November 2009 with the adoption of the Water Conservation Act or SBX 7-7 and was most recently amended in 2014. The Water Conservation Act is described in Division 6, Part 2.55, Section 10608. (Page 1-1 of 2015 UWMP)*

Due to the diligence of both COSMUD and the City of Stockton, the policy linkages provided in the 2015 UWMP between water supply and water demand is in agreement with the 2040 General Plan. In most cases the information and findings used in this WSA will relate back to the 2015 UWMP. Given the full description of supply and demand for the COSMUD service area in the 2015 UWMP, this WSA will fully rely on the 2015 UWMP to respond to some requirements of SB 610. When cited, the section and page number of the 2015 UWMP are included as reference.

1.7 SENATE BILL NO. 7 (SBX7-7), THE WATER CONSERVATION ACT OF 2009.

Reference to SBX7-7 in the beginning of the 2015 UWMP serves to highlight its importance in the overall UWMP implementation, and in planning estimates of water demand and demand management goals implemented over the next 10 years. SBX7-7 was enacted in November 2009 and was most recently amended in 2014. The Water Conservation Act is described in Division 6, Part 2.55, Section 10608.

The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to adopt and submit an UWMP every five years to the California Department of Water Resources (DWR). The Act describes the required contents of the UWMP as well as how urban water suppliers should adopt the UWMP.

The 2015 UWMP was approved and adopted by the Stockton City Council on July 12, 2016.

2. 0 PROJECTED SERVICE AREA DEMANDS

Under the California Water Code, demand and supply must be evaluated over a 20-year horizon. Therefore, COSMUD has evaluated the revised growth calculations in the 2015 UWMP (Table 3-3, Page 3-3 of 2015 UWMP), which includes the Project's water demand as well as water demand from planned future growth. Growth in the 2015 UWMP is based on population growth figures over the entire 2040 General Plan proposed Urban Policy Area. Planned future growth is described in the guidebook published by the California Department of Water Resources as follows:

> *"Neither SB 610 nor SB 221 defines planned future uses. However, it would be a reasonable interpretation that planned future uses are those that would be undertaken within the same time frame as the project under consideration. Each preparer of an assessment will determine what planned future uses it will include in the demand calculation to ensure that it is not identifying the same increment of water for more than one future use." (Section 5, Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, California Department of Water Resources, October 2008)*

This WSA is based on a project that is defined as a planned future use that has submitted a development application and WSA request to the City of Stockton. This WSA will consider the water demands for the above definition of growth and will compare this to water supplies from existing and future sources of supply. When looking at water supply sustainability, COSMUD has taken a conservative approach in their 2015 UWMP by looking out to 2040 for both demands and supplies.

2.1 SBX7-7 DEMAND REDUCTION GOALS

The actions of SBX7-7 are shown by including the 2015 UWMP Water Demand projection with and without the SBX7-7 requirement. Projected water demands for the City's retail water service area through the year 2040 meet the City's SBx7-7 GPCD target. As shown in **Table 2-1** and on **Figure 2-1**, the projected expected passive water savings and conservation program water savings will enable the City to meet its GPCD target of 165 GPCD.

TABLE 2-1. WATER DEMANDS PAST, PRESENT, AND FUTURE

Year	2010 UWMP and 2015 UWMP Actual Historical Demands (AF/year)	Tables 3-3 and 3-4 2015 UWMP Demands (AF/year)	Table 3-4 2015 UWMP Values Before SBX7-7 (AF/year)	Table 3-4 2015 UWMP Values After SBX7-7 (AF/year)
	(1)	(2)	(3)	(4)
2005	34,149	34,149		
2006	34,806			
2007	40,076			
2008	38,143			
2009	36,646			
2010	33,333			
2011				
2012		34,961	34,961	34,961
2013		34,394	34,394	34,394
2014		29,627	29,627	29,627
2015	24,843	24,843	24,843	24,843
2016		26,510		
2017		28,177		
2018		29,844		
2019		31,511		
2020		33,178	34,948	33,178
2021		33,618		
2022		34,059		
2023		34,499		
2024		34,940		
2025		35,380	37,925	35,380
2026		36,147		
2027		36,915		
2028		37,682		
2029		38,450		
2030		39,217	39,800	37,743
2031		39,723		
2032		40,230		
2033		40,736		
2034		41,243		
2035		41,749	42,473	40,274
2036		42,292		
2037		42,835		
2038		43,379		
2039		43,922		
2040		44,465	45,325	42,989

Notes:
1. Actual Demands in Col(1) are based on a combination of Table 6 and Table 9 in the 2010 UWMP. In cases where the two do not agree, the values in Table 6 were used. The Actual Demand in Col(1) for the Year 2015 is from Table 3-4 of the 2015 UWMP. Data for Years 2011 through 2014 are not available in the 2015 UWMP.
2. The 2015 UWMP demand for Year 2005 is not available in the 2015 UWMP, so the Year 2005 demand in Col(3) is based on Table 6 of the 2010 UWMP. The Table 3-3 and 3-4 2015 UWMP demands were used as a starting point from which the remaining values were calculated based on the average yearly increase in demand.
3. The Col(3) and (4) demand values are taken directly out of Table 3-4 of the 2015 UWMP.

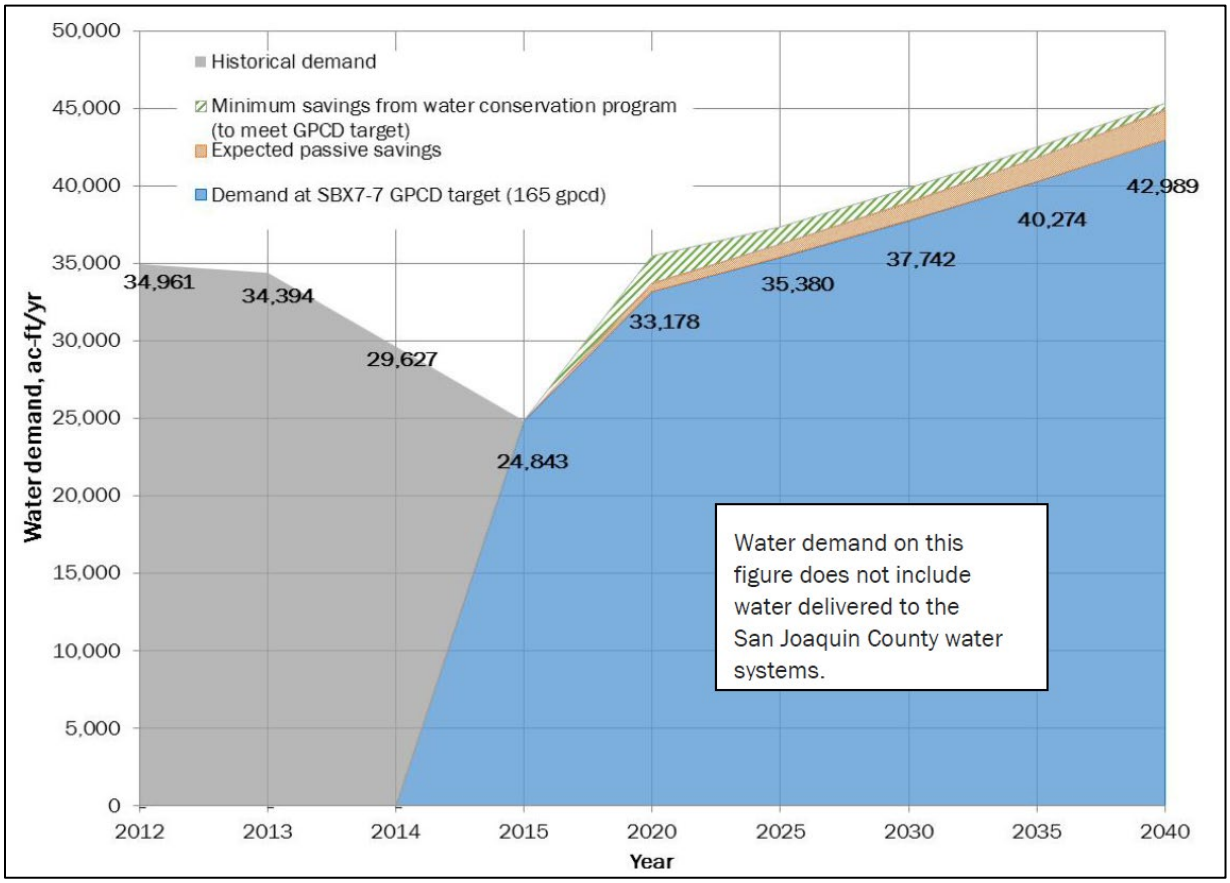


FIGURE 2-1. 2015 UWMP CITY OF STOCKTON RETAIL WATER SYSTEM HISTORICAL AND PROJECTED WATER DEMAND

2.2 CALCULATION OF BASELINE WATER DEMANDS

In **Figure 2-2**, the Project water demands lie below the 2015 UWMP Projected Demands curve but on top of what is now considered to existing population and all approved growth (a.k.a. Baseline of Existing Water Demands). The best illustration of the baseline demands is by considering existing population as existing water use that slowly increases with each year due to one or more of the following:

- Purchase of vacant homes that are currently on the market for sale
- Construction and purchase of new homes in already approved developments
- Construction of new homes in separate infill projects that do not meet the requirements of needing a WSA but require adherence to the 2040 General Plan and approval by City Council

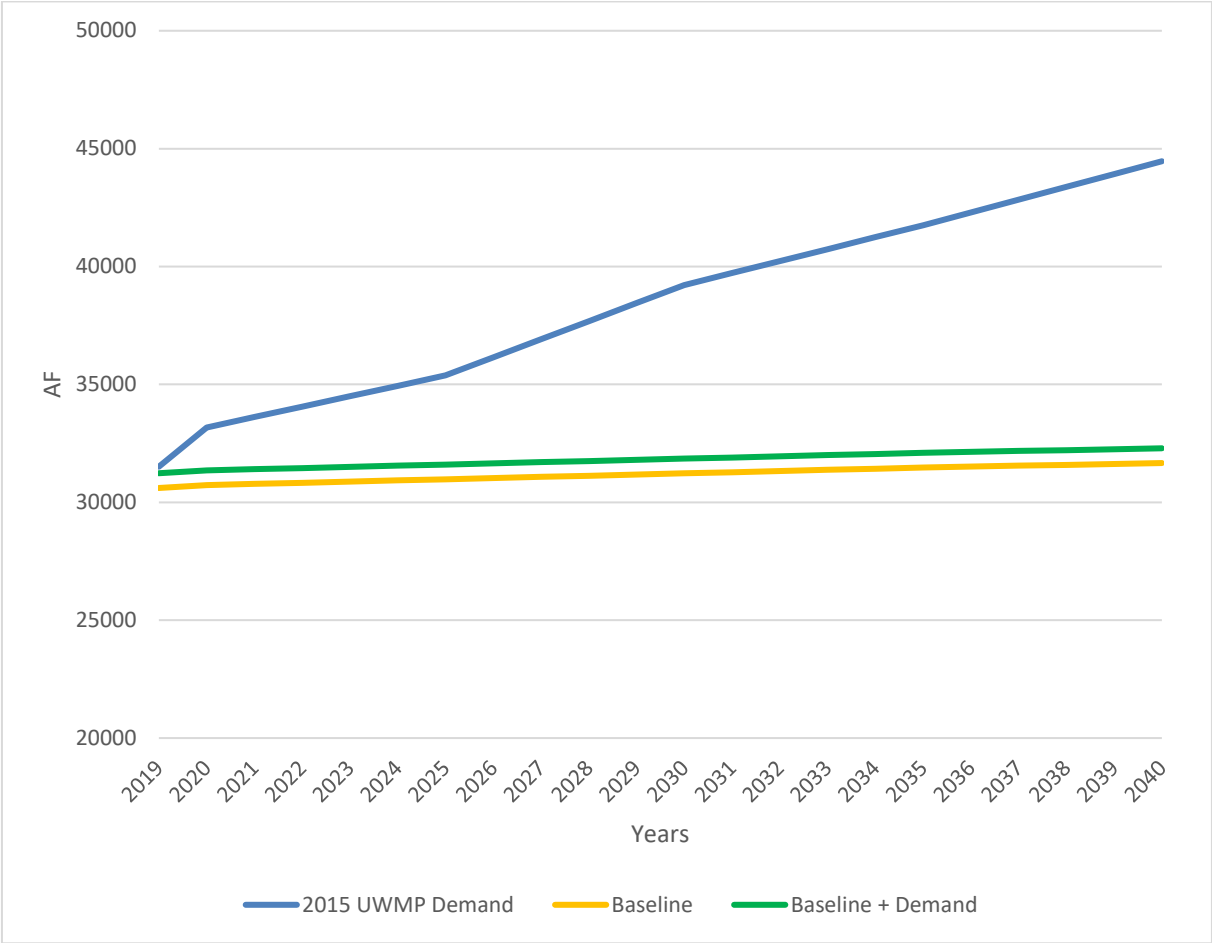


FIGURE 2-2. PROJECTED WATER DEMANDS WITH PROJECT

These are all intended to accommodate the adsorption of planned growth in the COSMA assuming no new developments are approved. These growth measures result in an increase to the COS population and an increase to COSMUD's water demands. The subtle increase in the baseline demand to account for the population increase is assumed to be 0.4% per year in 2020, 0.16% per year in 2035, and 0.12% per year in 2040. The 70-year distribution (i.e., assumed build-out in 2080) of growth is based on the amount of land with entitlements to build new homes that are assumed to be within the COSMUD service area. The amount of undeveloped land was estimated by the City of Stockton Planning Department as 3,500 acres. The 2015 UWMP projected water demand curve and the calculated "Baseline of Existing Water Demands" are shown on **Figure 2-2**.

2.3 UNIT WATER DEMANDS

The calculation of total water demand for the Project is based on the 2015 UWMP and its use of AF/year per connection. The unit demand factors applied were derived from the Water Planning Demands for the project and are similar to those used in previous WSA's for similar development. Based on these known parameters, **Table 2-2** includes the demand factor to be used in this WSA.

TABLE 2-2 Unit Water Demands

Water Demand AF/yr			
Site	Area	Average Annual Demand	
	Acres	Unit Factor AF/acre	AF/year
SSCC	437	1.43	626

2.4 CALCULATION OF PROJECT'S AVERAGE ANNUAL WATER DEMANDS

Application of the unit demand factor in **Table 2-2** yields the total annual water demand of the Project at build-out as calculated in **Table 2-3**.

TABLE 2-3. UWMP Demand Baseline + Project

	2015 UWMP Demand	Baseline	SSCC Demand	Baseline + Demand
2019	31511	30607	626	31233
2020	33178	30729	626	31355
2021	33618	30779	626	31405
2022	34059	30828	626	31454
2023	34499	30877	626	31503
2024	34940	30927	626	31553
2025	35380	30976	626	31602
2026	36147	31026	626	31652
2027	36915	31075	626	31701
2028	37682	31125	626	31751
2029	38450	31175	626	31801
2030	39217	31225	626	31851
2031	39723	31275	626	31901
2032	40230	31325	626	31951
2033	40736	31375	626	32001
2034	41243	31425	626	32051
2035	41749	31475	626	32101
2036	42292	31513	626	32139
2037	42835	31551	626	32177
2038	43379	31589	626	32215
2039	43922	31627	626	32253
2040	44465	31665	626	32291

3. 0 ELEMENTS OF A WSA [WATER CODE SECTION 10910]

The format of this WSA is intended to follow California Water Code Sections 10910 through 10915 to clearly delineate the specific requirements of a WSA. This WSA is structured according to those requirements. Section 10910 of the California Water Code is intended to evaluate if existing water supply sources are adequate to meet existing water demands, the Project demands, and the demands of all planned foreseeable future uses within the public water system. What follows is a breakdown of the elements of the California Water Code that respond to the adequacy of existing supplies. If under Section 10910 existing water supplies are adequate to serve existing water demands, the Project and all planned future uses within the public water system over the 20-year horizon, the WSA can move forward with a positive finding of sufficiency in water supplies. If Section 10910 is not satisfied, further evaluation into planned water supply sources and projects need to be included as per Section 10911 of the California Water Code.

In addition to meeting the California Water Code, this WSA will also assist City Planners in their evaluation of the Project's compliance in meeting 2040 General Plan policies (Goal PFS-2).

3.1 DETERMINE IF PROJECT IS SUBJECT TO CEQA [SECTION 10910(A)]

The City of Stockton Planning Department has determined that the Project is subject to CEQA and satisfies the criteria set forth in Section 10912 of the California Water Code requiring the completion of a WSA.

3.2 IDENTIFY RESPONSIBLE PUBLIC WATER SYSTEM [SECTION 10910(B)]

The City of Stockton Planning Department has identified COSMUD as the responsible public water system purveyor for the Project. The Planning Department and the COSMA water retailers possess information regarding existing and approved development and pending development applications (i.e., reasonably foreseeable development) within the City of Stockton that may be provided water by one or more of the water retailers, which should be considered in the preparation of this WSA.

3.3 DETERMINE IF 2015 UWMP INCLUDES WATER DEMANDS [SECTION 10910(C)]

The 2015 UWMP adopted for the COSMUD estimates water demand associated with projected growth and applied forecasted water supply conditions to 2040.

COSMUD's water conservation best management practices and dry hydrologic year rationing measures are incorporated into the per capita water demands of the 2015 UWMP (Section 7, Water Shortage Contingency Plan, of 2015 UWMP). COSMUD's eight Water Demand Management Measures (DMM's) are fully described in the 2015 UWMP (Section 8, of 2015 UWMP), and are incorporated into COSMUD's overall water demand growth projections illustrated in **Figure 2-1 & 2-2** and **Table 2-1, 2-2, & 2-3** in this WSA.

3.3.1 Identify Existing Water Supplies for the Project [Section 10910(d)(1)]

Section 10910(d)(1) requires identification of existing water supply entitlements, water rights, or water service contracts relevant to the Project and quantification of water obtained by the City of Stockton pursuant to those water supply entitlements, water rights, or water service contracts in previous years.

All COSMUD's existing water supply entitlements, rights, and service water contracts are included in the 2015 UWMP (Section 5 of 2015 UWMP) which is included as Appendix A.

3.3.2 Capital Outlay Program for Financing Delivery of Water [Section 10910(d)(2)(B)]

This subsection requires a copy of the capital outlay program for financing the delivery of water to the Project. Groundwater is provided by COSMUD groundwater wells and surface water is supplied from the DWSP via COSMUD's water rights to the San Joaquin River. Surface water is also purchased from SEWD and Woodbridge Irrigation District (WID). User rates and connection fees pay for COSMUD's operating and capital expenses, including purchased water.

COSMUD's capital improvements are identified in the 2008 Water Master Plan and further defined in the currently adopted Capital Improvement Program (CIP). The water rate structure is defined in the 2016 Water Rate Study.

3.3.3 Federal, State, and Local Permits Required [Section 10910(d)(2)(C)]

This subsection requires identification of any federal, state, and local permits required for construction of any infrastructure associated with delivering water to the Project.

Any new wells constructed for growth based on the 2040 General Plan will be added to each of the water purveyor's State Water Resources Control Board Division of Drinking

Water (DDW) system permit to serve potable water supplies. The design of those facilities will require coordination with DDW. No other regulatory approvals are anticipated for meeting existing demands plus the Project demands.

3.3.4 Regulatory Approvals Required [Section 10910(d)(2)(D)]

This subsection requires identification of any regulatory approvals required for delivery of the water supply to the Project.

The local groundwater and surface water facilities to serve the Project will be added to the DDW permit to serve potable water supplies within the COSMUD service area. The design of those facilities will require coordination with DDW. No other regulatory approvals are anticipated.

3.4 IDENTIFY POTENTIAL CONFLICTS IN EXERCISING WATER RIGHTS [SECTION 10910(E)]

This section states:

> *If no water has been received in prior years by the public water system,…under the existing water supply entitlements, water rights, or water service contracts [identified to serve the proposed project], the public water system,…shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system,…has identified as a source of water supply within its water supply assessments.*

The intent of this section is to identify any potential conflicts that may arise from the exercise of an existing water supply entitlement, water right, or water service contract to serve a proposed project if such water supply entitlement, water right, or water service contract has not been previously exercised.

- **Use of Groundwater** – The water demands of the COSMA will be met in part with groundwater. The COSMA urban water retail purveyors have previously exercised their rights as overlying groundwater appropriators to serve the water demands of their customers through above normal, drought, and multiple drought years over the past 20+ years and will continue to exercise those rights to sustainable levels to provide potable water supplies.

- **Use of Surface Water** – The surface water supplies associated with the conjunctive use program fall into three categories: (1) water supplies derived from the Central Valley Project (CVP), (2) interim water supply contracts, and (3) surplus supplies available on an intermittent basis and (4) supplies based on a Water Right Permit(s). Intermittent supplies may be used, if available, but are not considered "firm" and not used in the WSA.

The parties that could most directly be affected by exercise of these water rights are CVP contractors, State Water Project (SWP) contractors, water rights holders subject to Term 91 conditions, and riparian diverters downstream from the points of diversion for each contract.

3.5 GROUNDWATER ASSESSMENT [SECTION 10910(F)]

The water demands of the Project will be met partially with groundwater. Consequently, Section 10910(f) requires specific additional information.

3.6 SECTION 10910(F)(1)

Section 10910(f)(1) requires a review of groundwater data contained in the UWMP.

The 2015 UWMP identifies past volumes of groundwater extracted by COSMUD (Section 5.2 of the 2015 UWMP) and fully describes the COSMUD's past and future use of groundwater as a supply source.

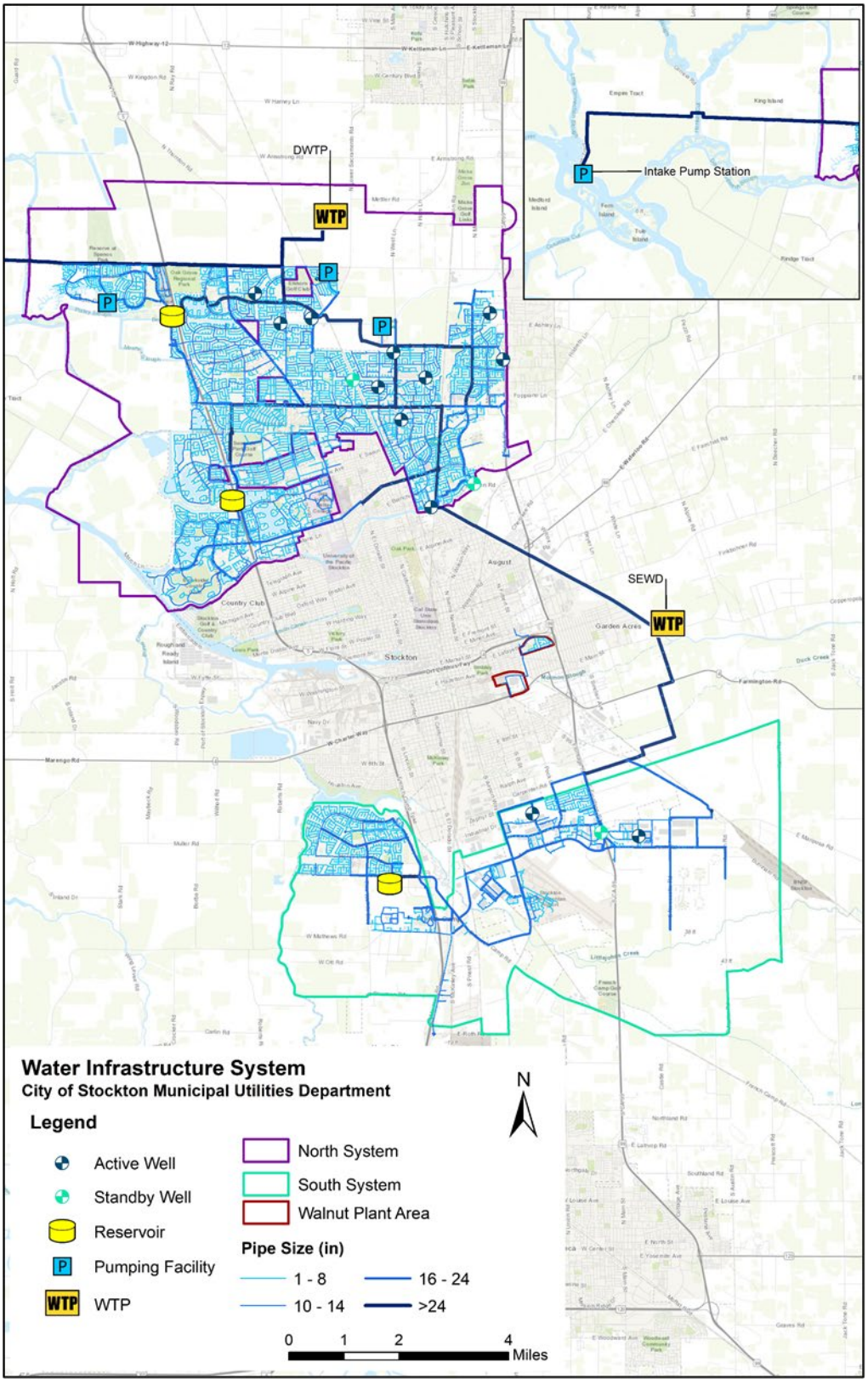
3.6.1 Section 10910(f)(4)

Section 10910(f)(4) requires a description of the projected volume and geographic distribution of groundwater extractions from the basin. For the existing supplies, this is presented in Section 10910(d)(1) above and the location of groundwater wells are represented on **Figure 3-1**.

3.6.2 Section 10910(f)(5)

Section 10910(f)(5) requires an analysis of the sufficiency of the groundwater basin to meet the demands associated with the Project. This is presented in Section 5.2 of 2015 UWMP.

FIGURE 3-1. 2020 LOCATION OF COSMUD MUNICIPAL GROUNDWATER WELLS



4. 0 DETERMINATION OF WATER SUPPLY SUFFICIENCY

This WSA determines that the COSMUD can support the Project based on the 2015 UWMP. COSMUD has shown, without a doubt that sufficient water supplies exist to meet the Project's build-out water demand as well as all existing and reasonably foreseeable water demands.

COSMUD makes this determination based on the information provided in this WSA and on the following specific facts:

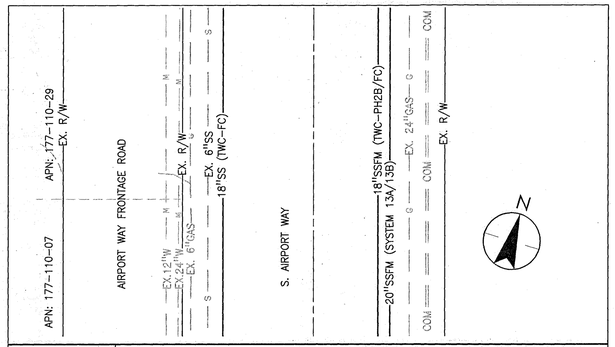
- The existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin underlying the COSMA.
- The Project water demands will be positively affected by the implementation of COSMUD's Demand Management Measures.
- The existing and future use of groundwater supplies has been extensively described in the 2015 UWMP which includes the Eastern San Joaquin Groundwater Basin Management Plan by reference. All studies show that sufficient groundwater supplies exist.

Appendix “A”

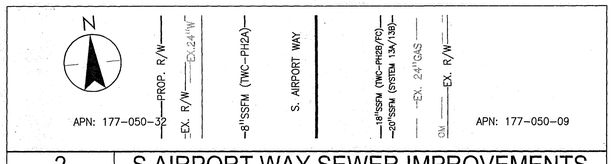
2015 UWMP (without appendices)

APPENDIX H

Tidewater Crossing Overall Master Sewer Plan



1	S AIRPORT WAY SEWER IMPROVEMENTS
1"=30'	



2	S AIRPORT WAY SEWER IMPROVEMENTS
1"=30'	

SANITARY SEWER DESIGN TABLE					
FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
1	EX.	0.0110	20	8	TWC-PH1
2	1	0.0012	600	8	TWC-PH1
3	2	0.0012	600	8	TWC-PH1
4	3	0.0012	600	8	TWC-PH1
5	4	0.0050	236	8	TWC-PH1

NOTES:
1. PROPOSED SANITARY SEWER INFRASTRUCTURE NOT LOCATED IN PUBLIC STREET MUST BE INSTALLED WITHIN 20' PUBLIC UTILITY EASEMENTS.
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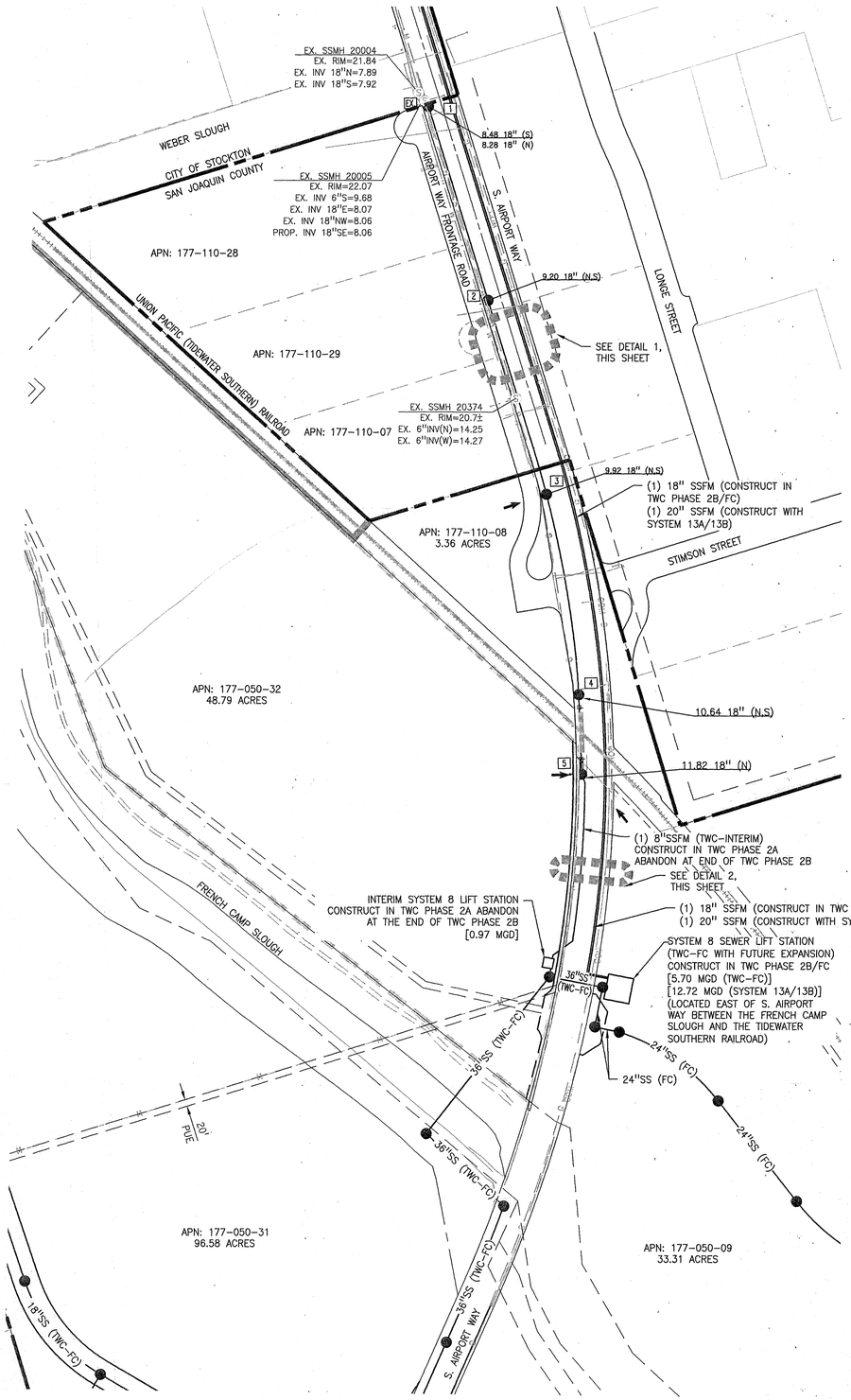

LEGEND

- SEWER MASTER PLAN LIMITS
- SEWER AREA BOUNDARY
- CITY OF STOCKTON LIMITS
- 18"SS — SEWER LINE AND SIZE
- SEWER LINE (BORE AND JACK)
- 1 — SEWER MANHOLE AND NUMBER
- X.XX — PIPE INVERT ELEVATION

Know what's **below.** **Call** before you dig.

CONSULTING ENGINEERS
430 10th Street
Modesto, CA 95354
Tel.: 209.568.4477
Fax: 209.568.4478

Engineer's Seal

REGISTERED PROFESSIONAL ENGINEER — BRIAN A. VEIT — C74008 — DEV 06-30-21 — 8/4/20 — CIVIL — STATE OF CALIFORNIA

Engineer's Signature:
Signature Date:

Client/Project
TIDEWATER CROSSING
UTILITY MASTER PLAN

STOCKTON, CALIFORNIA

Title
PHASE 1 MASTER SEWER PLAN

Revision No.	Description	MM/YY	By	Apprvd. By

TIDEWATER CROSSING
STOCKTON, CALIFORNIA
PHASE 1 MASTER SEWER PLAN
MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

SCALE: SHOWN	APPROVED BY:
DESIGNED BY: BV	
DRAWN BY: IY/CP	ASST. DIRECTOR OF MUNICIPAL UTILITIES STOCKTON, CA
CHECKED BY: BV	DATE: 8-11-2020
RECORD DWG:	

SHEET NO. 1 OF 4
JOB NO. 11110100

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2020-08-03 14:02 By: bveitch

ORIGINAL SHEET – ARCH D

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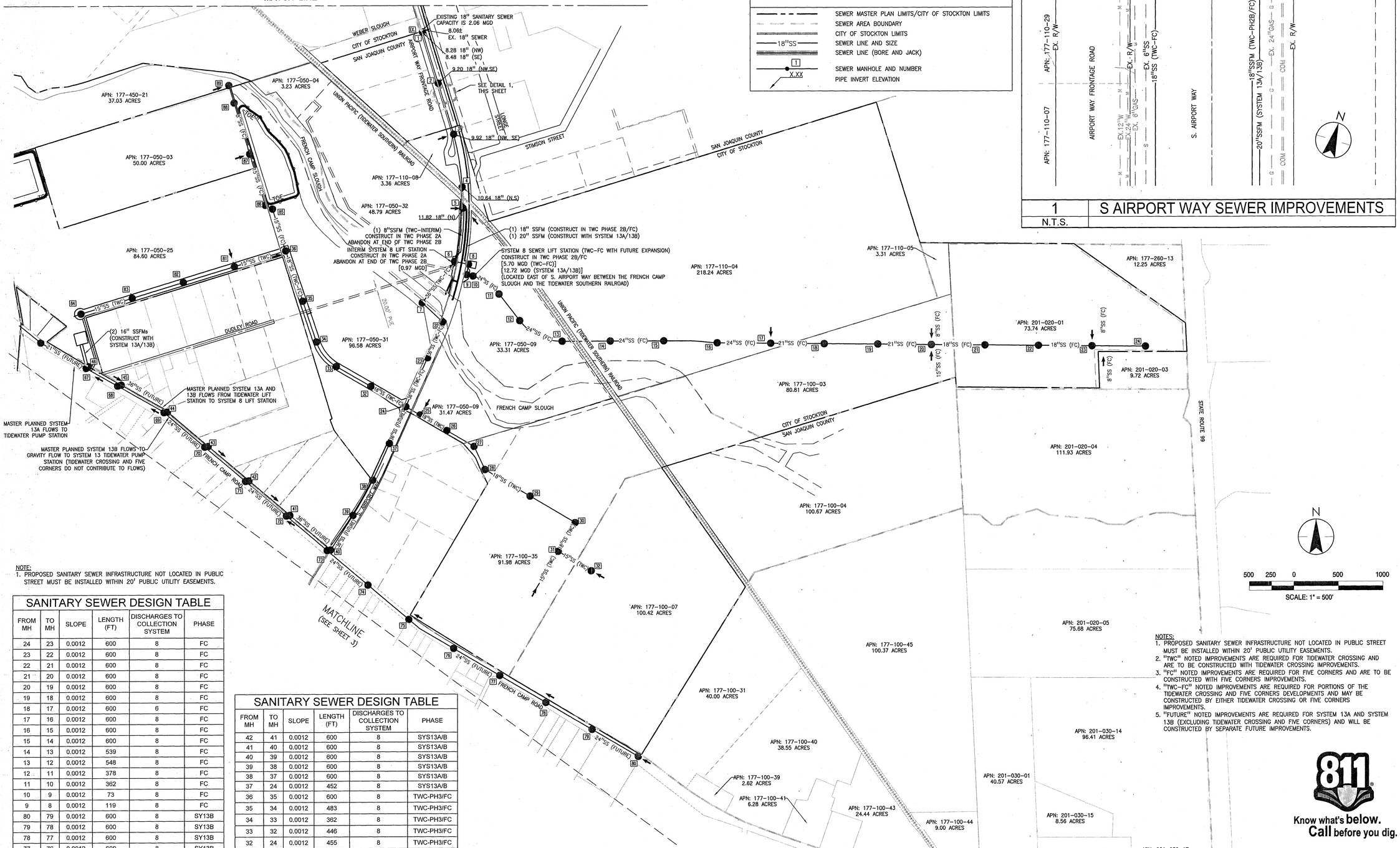
SEE SHEET 4
MATCH LINE



LEGEND

- SEWER MASTER PLAN LIMITS/CITY OF STOCKTON LIMITS
- SEWER AREA BOUNDARY
- CITY OF STOCKTON LIMITS
- 18"SS — SEWER LINE AND SIZE
- SEWER LINE (BORE AND JACK)
- 1 — SEWER MANHOLE AND NUMBER
- X.XX — PIPE INVERT ELEVATION

1	S AIRPORT WAY SEWER IMPROVEMENTS
N.T.S.	

NOTE:
1. PROPOSED SANITARY SEWER INFRASTRUCTURE NOT LOCATED IN PUBLIC STREET MUST BE INSTALLED WITHIN 20' PUBLIC UTILITY EASEMENTS.

SANITARY SEWER DESIGN TABLE

FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
24	23	0.0012	600	8	FC
23	22	0.0012	600	8	FC
22	21	0.0012	600	8	FC
21	20	0.0012	600	8	FC
20	19	0.0012	600	8	FC
19	18	0.0012	600	8	FC
18	17	0.0012	600	6	FC
17	16	0.0012	600	8	FC
16	15	0.0012	600	8	FC
15	14	0.0012	600	8	FC
14	13	0.0012	539	8	FC
13	12	0.0012	548	8	FC
12	11	0.0012	378	8	FC
11	10	0.0012	362	8	FC
10	9	0.0012	73	8	FC
9	8	0.0012	119	8	FC
80	79	0.0012	600	8	SY13B
79	78	0.0012	600	8	SY13B
78	77	0.0012	600	8	SY13B
77	76	0.0012	600	8	SY13B
76	75	0.0012	600	8	SY13B
75	74	0.0012	600	8	SY13B
74	73	0.0012	600	8	SY13B
73	72	0.0012	600	8	SY13B
72	71	0.0012	600	8	SY13B
71	70	0.0012	600	8	SY13B
70	69	0.0012	600	8	SY13B
69	68	0.0012	600	8	SY13B
68	67	0.0012	406	8	SY13B
46	45	0.0012	423	8	SYS13A/B
45	44	0.0012	600	8	SYS13A/B
44	43	0.0012	600	8	SYS13A/B
43	42	0.0012	600	8	SYS13A/B

SANITARY SEWER DESIGN TABLE

FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
42	41	0.0012	600	8	SYS13A/B
41	40	0.0012	600	8	SYS13A/B
40	39	0.0012	600	8	SYS13A/B
39	38	0.0012	600	8	SYS13A/B
38	37	0.0012	600	8	SYS13A/B
37	24	0.0012	452	8	SYS13A/B
36	35	0.0012	600	8	TWC-PH3/FC
35	34	0.0012	483	8	TWC-PH3/FC
34	33	0.0012	362	8	TWC-PH3/FC
33	32	0.0012	446	8	TWC-PH3/FC
32	24	0.0012	455	8	TWC-PH3/FC
32	31	0.0015	429	8	TWC-PH2B
31	30	0.0012	373	8	TWC-PH2B
30	29	0.0012	586	8	TWC-PH2A
29	28	0.0012	586	8	TWC-PH2A
28	27	0.0012	288	8	TWC-PH2A
27	26	0.0012	355	8	TWC-PH2A
26	25	0.0012	346	8	TWC-PH2A
25	24	0.0015	185	8	TWC-PH2A
89	88	0.0045	207	8	FC
88	87	0.0045	600	8	FC
87	86	0.0020	600	8	FC
86	85	0.0020	91	8	FC
85	36	0.0012	493	8	FC
84	83	0.0015	600	8	TWC-PH4
83	82	0.0015	600	8	TWC-PH4

SANITARY SEWER DESIGN TABLE

FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
82	81	0.0015	600	8	TWC-PH4
81	36	0.0015	600	8	TWC-PH4
24	23	0.0012	600	8	TWC-PH2A/FC
23	22	0.0012	437	8	TWC-PH2A/FC
22	7	0.0012	314	8	TWC-PH2A/FC
7	6	0.0012	590	8	TWC-PH2A/FC
6	8	0.0012	160	8	TWC-PH2B/FC

SANITARY SEWER DESIGN TABLE

FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
1	EX.	0.0110	20	8	TWC-PH1
2	1	0.0012	600	8	TWC-PH1
3	2	0.0012	600	8	TWC-PH1
4	3	0.0012	600	8	TWC-PH1
5	4	0.0050	236	8	TWC-PH1

NOTES:
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CONSULTING ENGINEERS
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Engineer's Seal

REGISTERED PROFESSIONAL ENGINEER — BRIAN A. VEITZ — C74008 — EXP. 06/30/21 — 9/4/20 — CIVIL — STATE OF CALIFORNIA

Engineer's Signature:
Signature Date:

Revision No.	Description	MM.YY	By	Appvd By

Client/Project
TIDEWATER CROSSING
UTILITY MASTER PLAN
STOCKTON, CALIFORNIA

Title
OVERALL MASTER SEWER PLAN

TIDEWATER CROSSING
STOCKTON, CALIFORNIA

OVERALL MASTER SEWER PLAN

MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

SCALE: SHOWN	APPROVED BY:
DESIGNED BY: BV	
DRAWN BY: IY/CP	
CHECKED BY: BV	ASST. DIRECTOR OF MUNICIPAL UTILITIES STOCKTON, CA
RECORD DWG:	DATE: 8-11-2020

SHEET NO. 2 OF 4

JOB NO. 11110100

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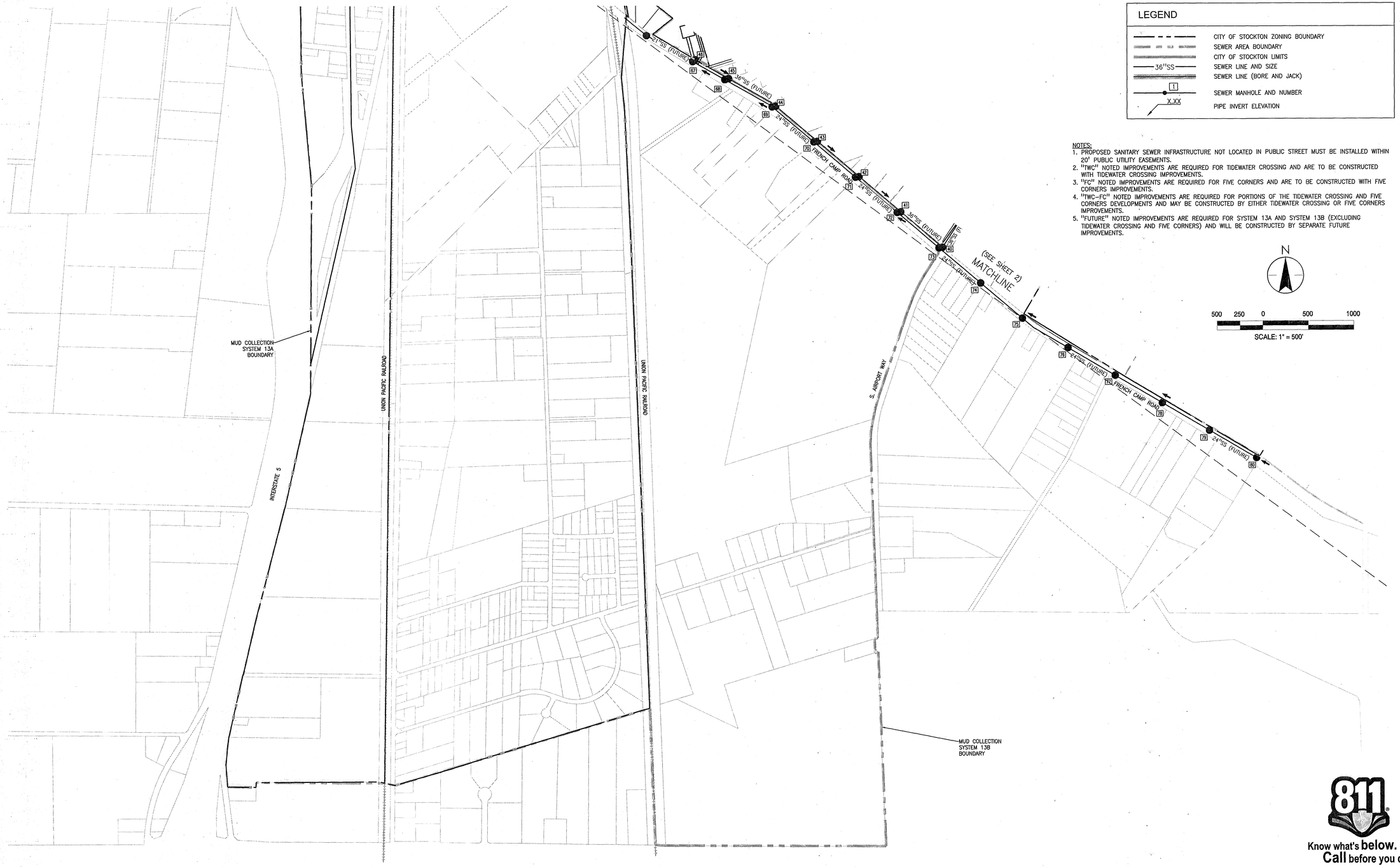

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Fax: 209.568.4178

Engineer's Seal

REGISTERED PROFESSIONAL ENGINEER
BRIAN A. VEIT
C74008
EXP. 06-30-21
8/4/20
CIVIL
STATE OF CALIFORNIA

Engineer's Signature:
Signature Date:

Client/Project
TIDEWATER CROSSING
UTILITY MASTER PLAN

STOCKTON, CALIFORNIA

Title
OVERALL MASTER SEWER PLAN

Revision No.	Description	MM.YY	By	Apprvd. By

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OVERALL MASTER SEWER PLAN
MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

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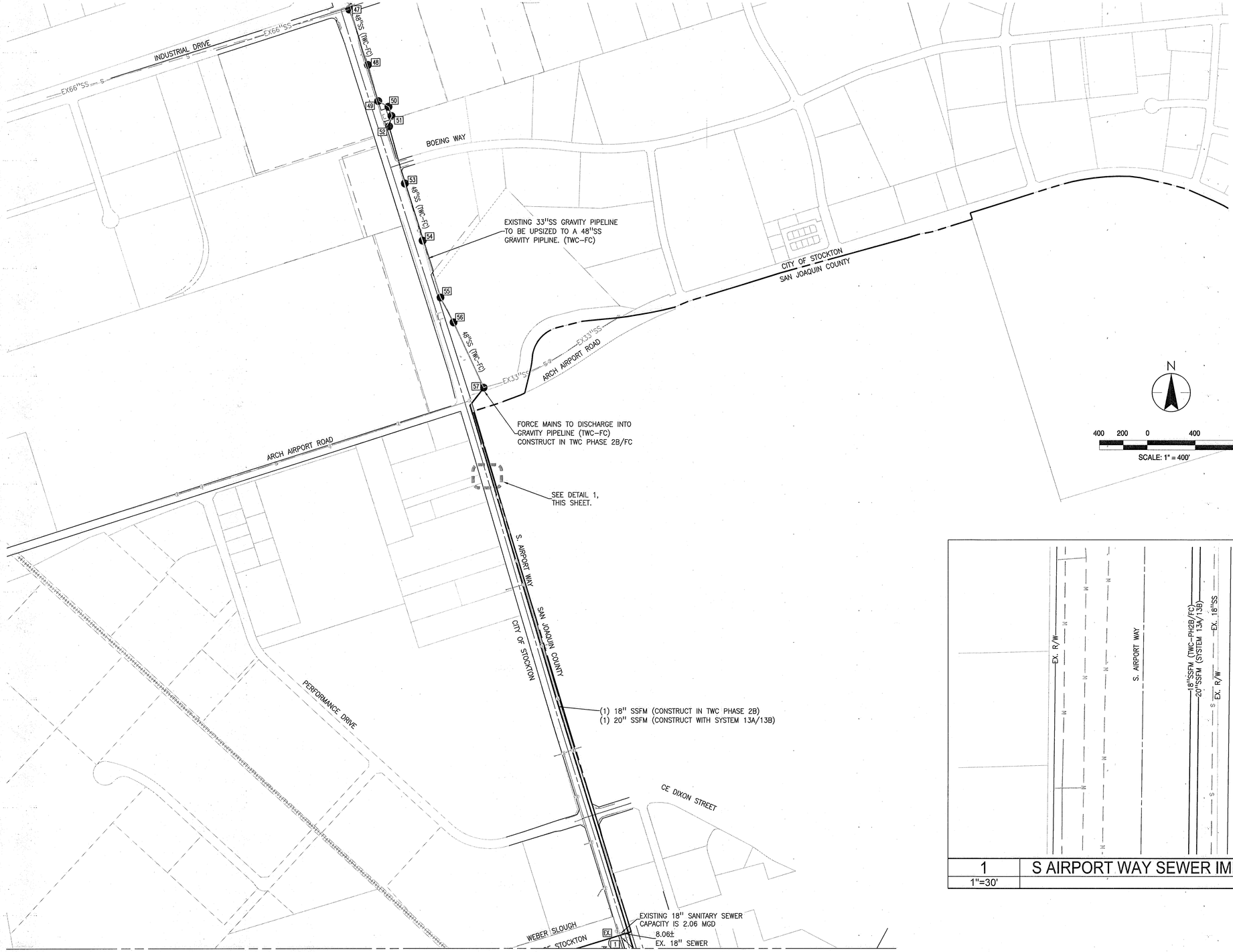
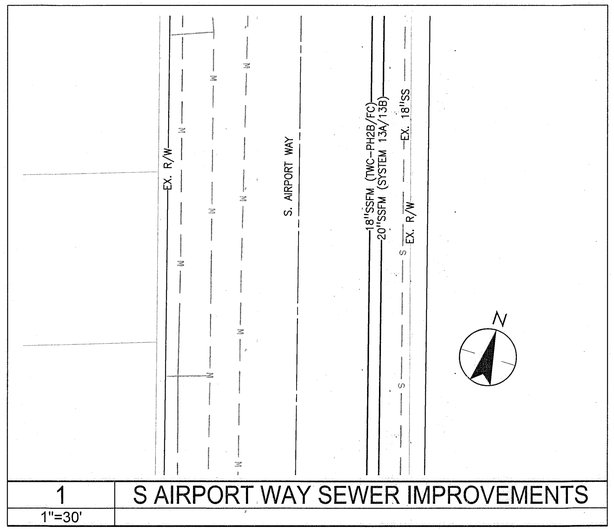


SANITARY SEWER DESIGN TABLE					
FROM MH	TO MH	SLOPE	LENGTH (FT)	DISCHARGES TO COLLECTION SYSTEM	PHASE
48	47	0.0008	488	8	TWC-PH4/FC
49	48	0.0008	315	8	TWC-PH4/FC
50	49	0.0008	98	8	TWC-PH4/FC
51	50	0.0008	81	8	TWC-PH4/FC
52	51	0.0008	89	8	TWC-PH4/FC
53	52	0.0008	494	8	TWC-PH4/FC
54	53	0.0008	500	8	TWC-PH4/FC
55	54	0.0008	500	8	TWC-PH4/FC
56	55	0.0008	235	8	TWC-PH4/FC
57	56	0.0008	600	8	TWC-PH4/FC
58	57	0.0012	227	8	TWC-PH4/FC

N

400 200 0 400 800

SCALE: 1" = 400'



1 S AIRPORT WAY SEWER IMPROVEMENTS

1"=30'

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- 18"SS — SEWER LINE AND SIZE
- SEWER LINE (BORE AND JACK)
- 1 — SEWER MANHOLE AND NUMBER
- X.XX — PIPE INVERT ELEVATION

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Engineer's Seal

REGISTERED PROFESSIONAL ENGINEER
BRIAN A. VERCAMPT
C74008
Exp. 06-30-21
CIVIL
STATE OF CALIFORNIA

Engineer's Signature:
Signature Date:

Client/Project
TIDEWATER CROSSING
UTILITY MASTER PLAN

STOCKTON, CALIFORNIA

Title
OVERALL MASTER SEWER PLAN

Revision No.	Description	MM.YY	By	Apprvd. By

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TIDEWATER CROSSING
STOCKTON, CALIFORNIA
OVERALL MASTER SEWER PLAN
MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

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RECORD DWG:	DATE: 8-11-2020

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JOB NO. 11110100

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