



MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Elder Creek 7-Eleven Annexation Project (P20-036): The project site is in the southern portion of unincorporated Sacramento County (APN: 062-0060-033). It is a vacant 2.49-acre site, on the northern side of Elder Creek Road between South Watt Avenue and Turner Road. Regional access to the project site is available from U.S. Highway 50 and State Routes 99 and 16.

The project would include a 7-Eleven convenience store, a fueling station with six pumps, a car wash, and other elements including lighting, hardscape, and landscaping (Figure 2-3). The project involves annexation of the project site into the City of Sacramento (City) and is already within the City's Sphere of Influence. The project application consists of a request for annexation of the project site into the City of Sacramento, an amendment to the 2035 General Plan to incorporate the project site into the City's Land Use Plan, pre-zoning/rezoning of the project area for consistency with the City's zoning plan, a tax exchange agreement for the transfer of property from the County to the City, development agreement, Site Plan and Design Review of the project, and Conditional Use Permits for the fueling station, alcohol sales, and tobacco sales.

The project requires annexation of the site to the City in order for the City to provide water service. The Sacramento County Local Agency Formation Commission (LAFCo) is responsible for ensuring the orderly growth and development of local jurisdictions and special districts. Annexations are defined under California Government Code Section 56017 as the "inclusion, attachment, or addition of territory to a city or district." In addition to consideration of the annexation request by the Sacramento Local Agency Formation Commission (LAFCo), a responsible agency under CEQA, the Commission would consider the following associated reorganizations associated with the project area. This reorganization would involve detachment of the 2.49 acres from the following service districts: detachment from Southgate Park District; detachment from Sacramento Metropolitan Fire District; detachment from Sacramento County Water Maintenance District Zones 11, 12, 13, 40, and 41 (water supply and drainage planning services); and detachment from County Service Areas No. 1 and 11

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required. This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code [PRC] Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

Due to concerns over COVID-19, the City of Sacramento, Community Development Department's Public Counter, at 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 is closed until further notice. A copy of this document and all supportive documentation may be reviewed through the City's website at [https://www.cityofsacramento.org/Community-Development/Planning/Environmental/ Impact-Reports](https://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports).

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: Scott Johnson

Date: August 15, 2022



Draft Initial Study/Mitigated Negative Declaration

Elder Creek 7-Eleven Annexation Project

Prepared for:

City of
SACRAMENTO

City of Sacramento
Community Development Department



Draft Initial Study/Mitigated Negative Declaration

Elder Creek 7-Eleven Annexation Project

Prepared for:



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August 2022

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LIST OF ABBREVIATIONS

2017 Scoping Plan	California's 2017 Climate Change Scoping Plan
AB	Assembly Bill
ADT	average daily trips
afy	acre feet per year
afy/ac	acre feet per year per acre
AMMs	avoidance and minimization measures
ARA	Aggregate Resources Area
BMP	best management practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geologic Survey
City	City of Sacramento
CO	carbon monoxide
CO ₂	carbon dioxide
DAC	disadvantaged community
dB	decibels
dBA	A-weighted decibels
diesel PM	particulate exhaust emissions from diesel-fueled engines
Draft IS/MND	draft initial study/mitigated negative declaration
DTSC	California Department of Toxic Substances Control

EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
ESD	equivalent single-family dwelling
FHSZ	Fire Hazard Severity Zone
FTA	Federal Transit Authority
GGRF	Greenhouse Gas Reduction Fund
GHG	greenhouse gas
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HMBEP	Hazardous Materials Business Emergency/Contingency Plan
in/sec	inches per second
LAFCo	Local Agency Formation Commission
lb/day	pounds per day
lbs	pounds
L_{eq}	Equivalent Continuous Sound Level
LID	Low Impact Development
L_{max}	Maximum Noise Level
Metro Fire	Sacramento Metropolitan Fire Department
mgd	million gallons per day
MRA	Mineral Resource Area
MRZ	mineral resources zone
MTCO _{2e}	metric tons per year of CO ₂ equivalent
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NOI	notice of intent
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System

OSHA	federal Occupational Safety and Health Administration
PM	particulate matter
PM ₁₀	PM less than or equal to 10 microns in diameter
PM _{2.5}	PM less than or equal to 2.5 microns in diameter
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
project	Elder Creek 7-Eleven Annexation Project
Regional San	Sacramento Regional County Sanitation District
ROG	reactive organic gases
RPS	renewables portfolio standard
SASD	Sacramento Area Sewer District
SB	Senate Bill
sf	square feet
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SPD	Sacramento Police Department
SQIP	Stormwater Quality Improvement Plan
SRPD	Southgate Recreation and Park District
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	South Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant

UAIC	United Auburn Indian Community
UBC	Uniform Building Code
USDOT	U.S. Department of Transportation
UST	underground storage tanks
UWMP	Urban Water Management Plan
VdB	vibration decibel
VMT	vehicle miles traveled

1 INTRODUCTION

The proposed Elder Creek 7-Eleven Annexation project, which is located on a vacant 2.49-acre parcel in Sacramento County, would include a 7-Eleven convenience store, fueling station with six pumps, a car wash, and other elements including lighting, hardscape, and landscaping. The project involves annexation of the project site into the City of Sacramento (City).

1.1 PURPOSE OF DOCUMENT

This draft initial study/mitigated negative declaration (Draft IS/MND) has been prepared by the City to evaluate potential environmental effects resulting from the project. Chapter 2, "Project Description," presents the detailed project information. The project would involve annexation of the project site from unincorporated Sacramento County into the City of Sacramento. In addition to the annexation request, the Sacramento Local Agency Formation Commission (LAFCo), a responsible agency under CEQA, would consider for approval the following associated reorganizations within the project area.

This reorganization would involve detachment of the 2.49 acres from the following service districts:

- ▶ detachment from Southgate Park District
- ▶ detachment from Sacramento Metropolitan Fire District
- ▶ detachment from Sacramento County Water Maintenance District Zones 11, 12, 13, 40, and 41 (water supply and drainage planning services)
- ▶ detachment from County Service Areas No. 1 and 11

The annexation request would be considered by LAFCo in a multi-step process. The initial action, the proposed General Plan amendment and prezone, would be considered by the City of Sacramento prior to action by LAFCo. If the prezone is approved and submitted to LAFCo, the Commission would then consider the proposed annexation and detachments. LAFCo consideration would be dependent upon the satisfactory completion of a tax sharing agreement between the City and the affected detached jurisdictions. Subsequent to the successful approval of the annexation, the City could consider the remaining City entitlements necessary to approve the project. The City, in consultation with LAFCo, must ensure that the environmental document prepared for the project adequately addresses LAFCo matters in addition to addressing City of Sacramento matters. Chapter 4, Reorganization, describes issues that are of primary importance to LAFCo. This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.). Under CEQA, an IS can be prepared by a lead agency to determine whether a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]) and thus to determine whether an environmental impact report must be prepared. The City, the lead agency for this project, has prepared the following analysis, which identifies the potential physical environmental impacts of the project and the mitigation measures that would reduce significant and potentially significant impacts to a less-than-significant level. As the lead agency, the City is responsible for complying with the provisions of CEQA.

In accordance with the provisions of CEQA, the City is distributing a notice of intent (NOI) to adopt an MND to solicit comments on the analysis and mitigation measures presented in this Draft IS/MND. The NOI will be distributed to property owners within 500 feet of the project site, as well as to the State Clearinghouse/Governor's Office of Planning and Research and each responsible and trustee agency. This Draft IS/MND will be available for review and comment from August 17, 2022 through September 16, 2022.

Written comments (including those submitted via e-mail) must be received by close of business on September 16, 2022. Letters should be addressed to:

City of Sacramento
Community Development Department
Environmental Planning Services
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811
Attn: Scott Johnson

E-mail comments should be addressed to srjohnson@cityofsacramento.org. Anyone with questions regarding the NOI or Draft IS/MND may call Scott Johnson at (916) 808-5842.

Digital copies of the NOI and Draft IS/MND are available at <https://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>. Hard copies of the NOI and Draft IS/MND can be made available by contacting Scott Johnson at the email or phone number listed above.

1.2 PUBLIC REVIEW PROCESS

This Draft IS/MND is being circulated for a 30-day public comment period and is available at the location identified above. A final IS/MND will be prepared including all comments received and any applicable responses and revisions to the Draft IS/MND that merely clarifies, amplifies, or makes insignificant modifications to the MND before the City of Sacramento City Council makes a decision on the project. The final IS/MND including all comments and any responses will be available on the City's EIR webpage at: <https://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>. Approval by Sacramento LAFCo, a responsible agency under CEQA, would be required for the associated reorganizations within the project area.

1.3 DOCUMENT ORGANIZATION

This Draft IS/MND is organized as follows:

Chapter 1, "Introduction": This chapter provides an introduction to the environmental review process and describes the purpose and organization of this document.

Chapter 2, "Project Description": This chapter provides a detailed description of the project.

Chapter 3, "Environmental Settings and Environmental Impacts": This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines whether implementing the project would result in no impact, a less-than-significant impact, or a less-than-significant impact with mitigation incorporated for the different issues. Where needed to reduce impacts to a less-than-significant level, mitigation measures are presented.

Chapter 4, "Reorganization": This chapter provides setting information and identifies potential impacts related to reorganization of the project specific to LAFCo policies and standards related to the environment. A reorganization is defined as two or more changes of organization. Reorganization of the project site consists of annexation of the project area to the City and detachment from affected special districts.

Chapter 5, "List of Preparers": This chapter lists the organizations and people who prepared the document.

Chapter 6, "References": This chapter identifies the references used to prepare this Draft IS/MND.

1.4 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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |
| <input checked="" type="checkbox"/> None with Mitigation | | |

1.5 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.
- 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.

Scott Johnson

Signature

August 15, 2022

Date

Scott Johnson

Printed Name

Senior Planner

Title

City of Sacramento

Agency

2 PROJECT DESCRIPTION

2.1 INTRODUCTION

This chapter presents a detailed description of the Elder Creek 7-Eleven Annexation Project (project), including the project location, project objectives, project background, proposed facilities and operations, and anticipated construction activities. Tekin & Associates is the applicant for the project.

2.2 PROJECT LOCATION

The project site is in the southern portion of unincorporated Sacramento County (see Figure 2-1). It is a vacant 2.49-acre site, on the northern side of Elder Creek Road between South Watt Avenue and Turner Road (see Figure 2-2). Regional access to the project site is available from U.S. Highway 50 and State Routes 99 and 16.

Areas surrounding the site are developed as industrial and commercial uses, including a recycling center to the south and a landscaping materials company to the north. The project site is partially developed with two existing concrete pads surrounded by deteriorated asphalt pavement. The remainder of the site consists of undeveloped previously graded land.

2.3 PROJECT OBJECTIVES

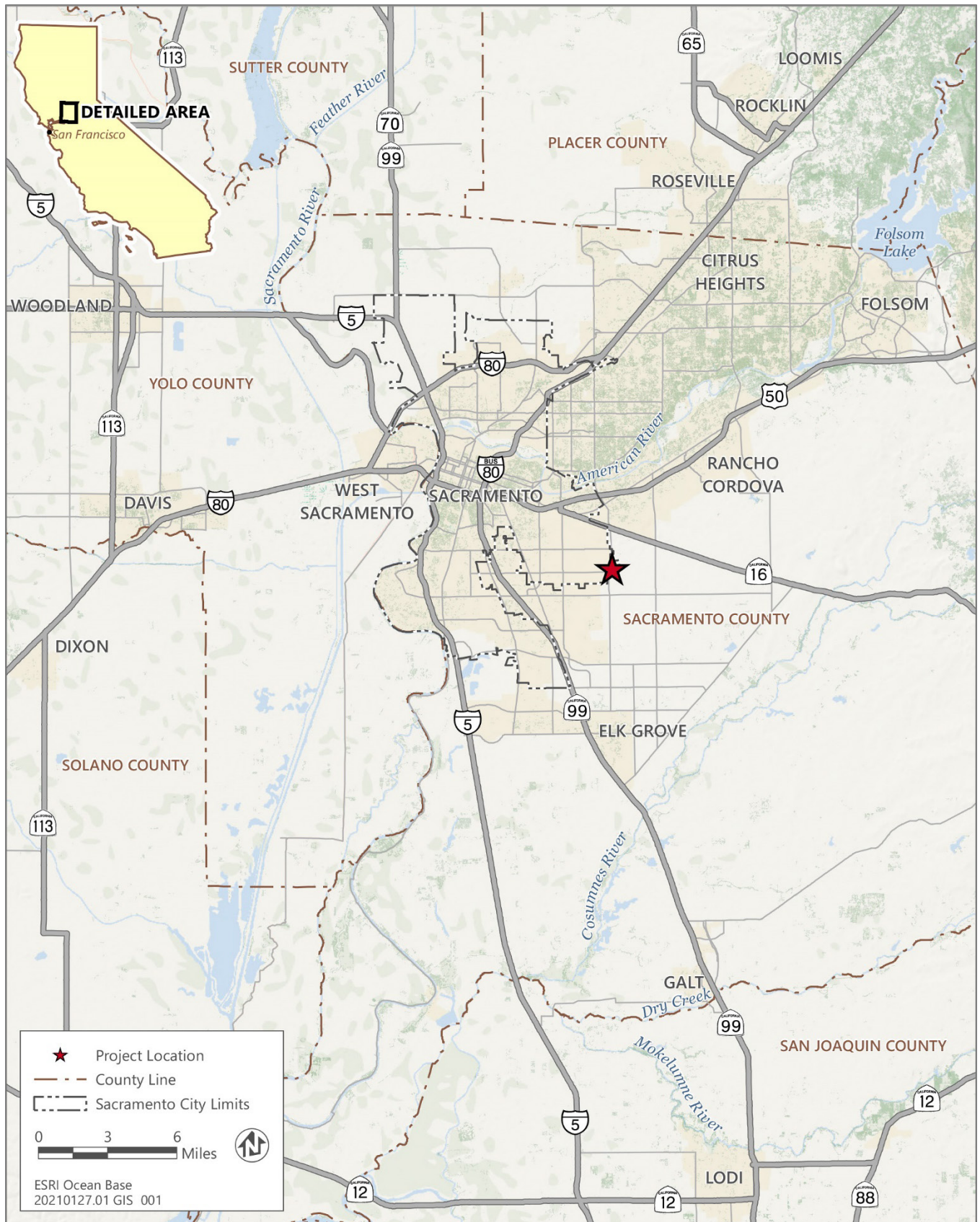
Specific objectives of the project are:

- ▶ develop a project that creates a commercial retail use on vacant land and is compatible with existing industrial and commercial uses;
- ▶ develop a property of sufficient size to accommodate a convenience store, fueling station, and car wash facility;
- ▶ plan and develop areas within the City's Sphere of Influence; and
- ▶ provide employment opportunities for residents within the City.

2.4 PROPOSED PROJECT

The project would include a 7-Eleven convenience store, a fueling station with six pumps, a car wash, and other elements including lighting, hardscape, and landscaping (Figure 2-3). The project involves annexation of the project site into the City of Sacramento (City) and is already within the City's Sphere of Influence (Figure 2-4). The project application consists of a request for annexation of the project site into the City of Sacramento, an amendment to the 2035 General Plan to incorporate the project site into the City's Land Use Plan, pre-zoning/rezoning of the project area for consistency with the City's zoning plan, a tax exchange agreement for the transfer of property from the County to the City, development agreement, Site Plan and Design Review of the project, and Conditional Use Permits for the fueling station, alcohol sales, and tobacco sales.

The project requires annexation of the site to the City in order for the City to provide water service. The Sacramento County Local Agency Formation Commission (LAFCo) is responsible for ensuring the orderly growth and development of local jurisdictions and special districts. Annexations are defined under California Government Code Section 56017 as the "inclusion, attachment, or addition of territory to a city or district." In addition to consideration of the annexation request by the Sacramento Local Agency Formation Commission (LAFCo), a responsible agency under CEQA, the Commission would consider the following associated reorganizations associated with the project annexation.



Source: adapted by Ascent in 2021.

Figure 2-1 Regional Location



Source: adapted by Ascent in 2021.

Figure 2-2 Project Location detachment from Sacramento Metropolitan Fire District

This reorganization would involve detachment of the 2.49 acres from the following service districts:

- ▶ detachment from Southgate Park District;
- ▶ detachment from Sacramento County Water Maintenance District Zones 11, 12, 13, 40, and 41 (water supply and drainage planning services); and
- ▶ detachment from County Service Area No. 1 and 11.

2.4.1 Project Features

The project would include an approximately 4,150 square foot (sf) 7-Eleven convenience store proposed at the southwest corner of the project site. The convenience store would operate 24 hours a day, seven days a week, and offer a wide assortment of snack foods, fresh foods, candies, ancillary automobile goods, tobacco products, coffee, and beverages. Alcoholic beverages would be sold on site.

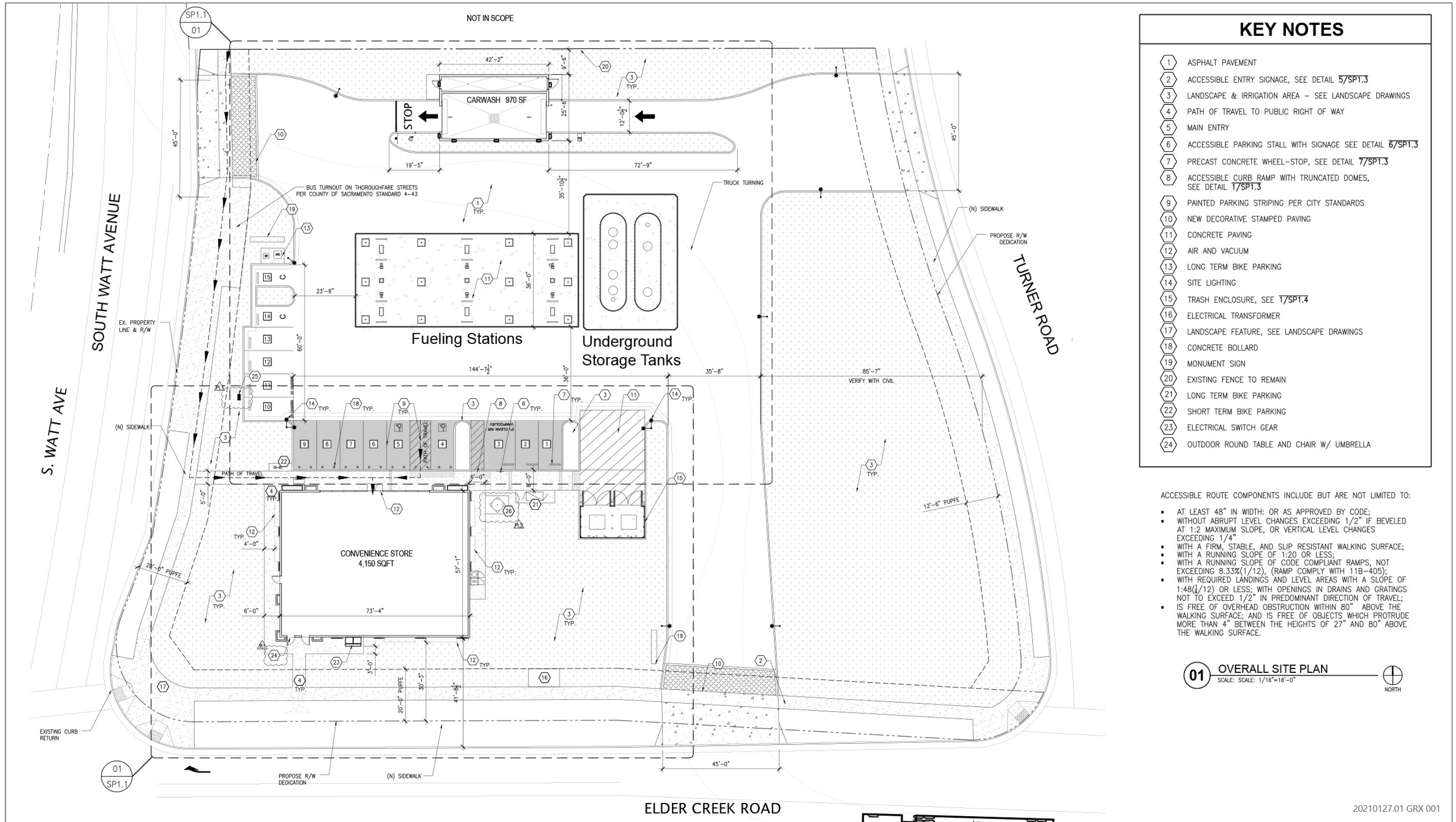
A six-pump fueling station with 12 fueling positions would be in the center of the project site. Two underground storage tanks would be located approximately 10–12 feet below grade. The fueling island would be covered by a canopy with typical signage and lighting.

A 970-sf car wash facility would be located at the northern edge of the project site. The car wash building would be one story and would consist of a car wash tunnel with various automated car washing equipment. An underground water clarifier/grease interceptor would be located on the north side of the building. All mechanical equipment associated with the car wash tunnel would be contained within the building to minimize sound travel associated with car wash operations. With exception of electric blower dryers at the exit of tunnel, all car wash equipment would be hydraulic. The hydraulic pumps would be contained within a 300-sf equipment room, located north and adjacent to the car wash. Employees would not be responsible for physically cleaning cars; rather, the car wash facility would use conveyor belts to transport vehicles through each step of an automated cleaning process. The wash cycle would last approximately three minutes per vehicle.

Water used in the washing process within the car wash tunnel would be reclaimed, pumped through cleaning and filtering equipment, and returned to the car wash equipment for reuse. Each vehicle would require approximately 40 gallons of water. Water for each car would be sourced from 60 percent reclaimed water, or approximately 24 gallons of recycled water and 16 gallons of fresh water. Accounting for water recycling, on average, approximately 12–15 gallons of dirtied water would be discharged to the City's wastewater system for every car washed. Water that is not recycled or discharged to the Sacramento Area Sewer District (SASD) wastewater system would be lost to evaporation and carried out by vehicles. Approximately 50 cars would be expected to use the car wash each day. Chemicals used in the cleaning process would be water-soluble but may be alkaline or acidic depending on the product selection.

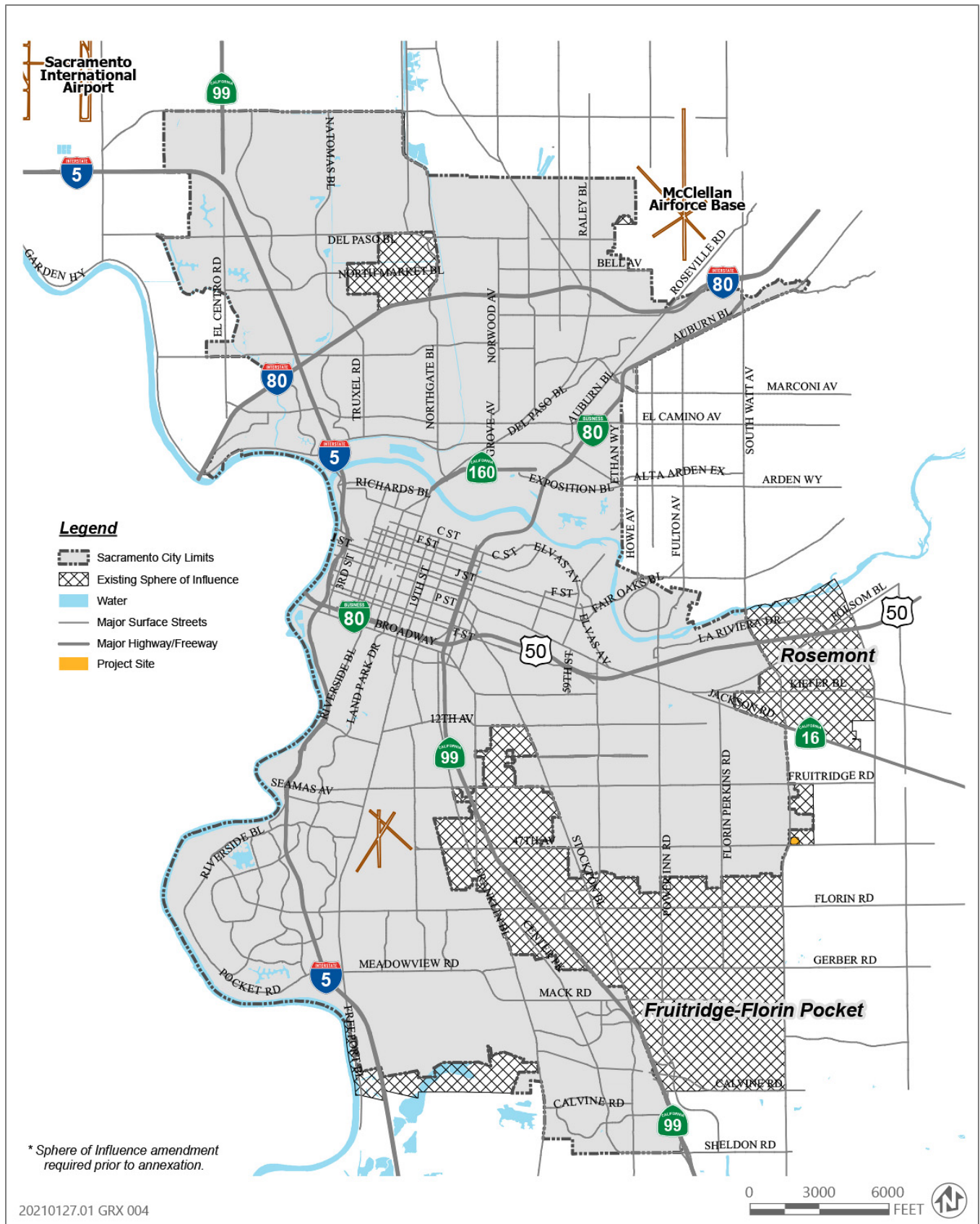
Vehicle access to the site would come from new driveways at South Watt Avenue, Elder Creek Road, and Turner Road. Pedestrian access to the convenience store would be available from paths connecting to the sidewalks along Elder Creek Road and South Watt Avenue. The project would include 15 vehicular parking spaces and two spaces each of both short and long-term bike parking. Pedestrian walkways would be established to allow entry into the convenience store from the north or south, via sidewalks along Elder Creek Road and South Watt Avenue, as well as the parking lot. Landscaping would be installed along South Watt Avenue, Elder Creek Road, and Turner Road. Air and vacuum stations would be located near the fueling island, and lighting fixtures would be placed throughout the site for safety and security.

During operation of the project, there would be a total of 12–20 employees who would work in shifts over the 24 hours per day/7 days per week schedule. A max of four employees would be onsite during any one 8-hour shift. It is anticipated that one fuel tanker per week would deliver diesel fuel and gasoline to the service station. An additional 1–2 truck deliveries would also be required weekly to provide inventory for the convenience store.



Source: Image produced and provided by Ignisio Studios in 2021.

Figure 2-3 Site Plan



Source: Image provided by City of Sacramento in 2022.

Figure 2-4 Sphere of Influence map

2.4.2 Utilities

Proposed utility improvements are depicted in Figure 2-5. Water service to the proposed project would be provided by the City of Sacramento and may include a public water main extension. As noted above, a portion of the water used in the car wash process would be recycled for use on-site prior to eventual discharge to the Sacramento Area Sewer District (SASD) sanitary sewer system. Wastewater from the car wash process, as well as the on-site restroom facility, would be routed by way of a new conveyance pipeline described below. Water service would be extended to serve only the project site and not be accessible to any surrounding properties. The project applicants would prepare a project specific water study for review and approval by the Department of Utilities.

Wastewater service would be provided by the Sacramento Area Sewer District (SASD) through a new conveyance pipeline that would connect the project site to the sewer main located within the intersection of South Watt Avenue and Elder Creek Road. The pipeline would connect to the project site at the northeastern corner, travel south for approximately 200 feet within Turner Drive, and then west within Elder Creek Road for approximately 330 feet. From this point, the pipeline would turn toward the southwest for approximately 170 feet to connect to the main sewer line at the intersections of Elder Creek Road and South Watt Avenue. The pipeline would be located near the center of the roadways and would be installed by trenching along the proposed alignment, then backfilling and repaving to bring the roadway to pre-project conditions. This connection would involve the installation of sanitary sewer manholes, a 6-inch pipeline to connect to the site, an 8-inch pipeline along Turner Drive, and an 18-inch pipeline along Elder Creek Road. Sewer main extensions would only be along the project site's frontage and not serve any surrounding properties.

Stormwater runoff generated by impervious areas created by the proposed project would be captured by a series of new drain inlets and conveyed to onsite treatment facilities. Treated runoff would be routed through new underground stormwater pipes to the City's existing storm drains. The project applicants would prepare a project specific drainage study meeting the criteria specified in the current Onsite Design Manual and/or the Design and Procedures Manual for review and approval by the Department of Utilities.

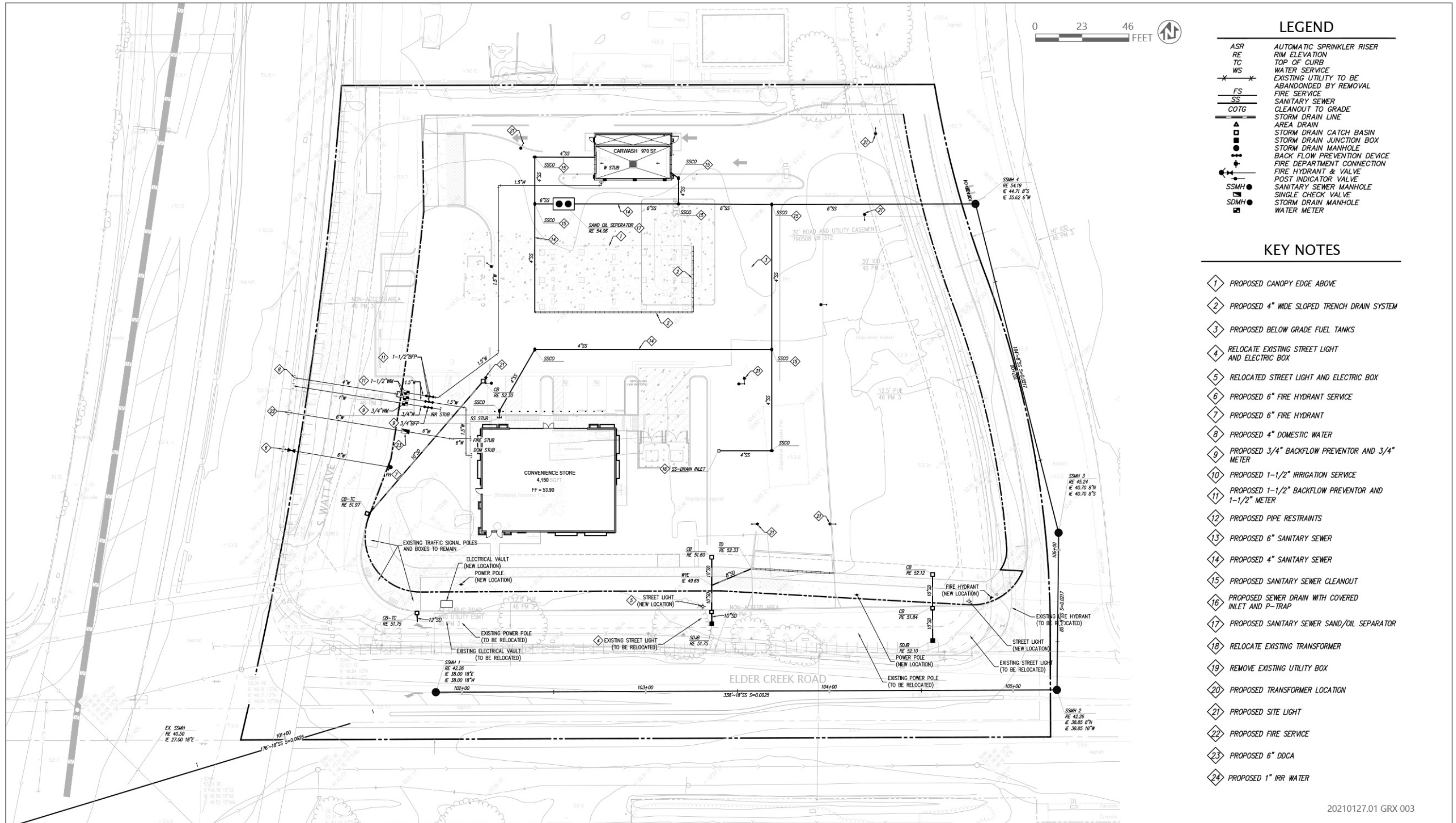
Electricity would be provided to the site from the Sacramento Municipal Utility District and gas would be provided by the Pacific Gas and Electric Company.

2.4.3 Construction Activities and Workforce

Construction of the project would occur over approximately 6-7 months, with construction phases overlapping to minimize construction time (Table 2-1). Construction equipment would vary from day to day depending on the project phase and the activities occurring, and would involve operation of graders, paddle wheel, bulldozers, compactors, backhoes, trenchers, water trucks, excavators, scrapers, tractors, forklifts, generator sets, pavers, paving equipment, rollers, welders, and air compressors.

Table 2-1 Construction Phasing and Duration

Construction Phase	Anticipated Duration
Construction mobilization	4 days
Grading and trenching	10 days
Installation of utilities, underground storage tanks, and water clarifier/grease interceptor	14 days
Paving	7 days
Development of convenience store, gas station, and car wash	4 months
Parking area striping and landscape installation	14 days



Source: Image produced and provided by Ignisio Studios in 2022.

Figure 2-5 Utilities

Construction mobilization would include preparing and constructing site access improvements, establishing temporary construction trailers and sanitary facilities, and preparing initial construction staging areas. Grading activities would begin and occur over a 10-day period. Upon completion of grading activities, the site would be trenched to accommodate utilities, underground storage tanks, and the water clarifier/grease interceptor system. Next, the pad for the building would be established and construction of the convenience store, gas station, and car wash would occur simultaneously. Parking area striping and landscape features would be installed before operation of the project begins.

Fuel may be stored on-site during peak construction activities and would be stored consistent with standard construction best management practices. Fuel storage would be coordinated with the Sacramento County Environmental Health Department. Temporary lighting may be installed to facilitate deliveries and construction management.

The construction workforce would consist of 20 workers. Construction activities would occur between approximately 7:00 a.m. and 4:00 p.m., Monday through Friday, for most of project construction.

2.5 PERMITS AND OTHER APPROVALS

2.5.1 City Actions

City discretionary approvals required to implement the project include:

- ▶ adoption of the MND,
- ▶ adoption of the Mitigation Monitoring and Reporting Program,
- ▶ General Plan Amendment,
- ▶ pre-zone,
- ▶ initiate annexation into the City of Sacramento,
- ▶ Property Tax Exchange Agreement between the City and Sacramento County,
- ▶ LAFCo considers reorganization,
- ▶ rezoning,
- ▶ Conditional Use Permits for the proposed uses (gas station, tobacco sales, alcohol sales), and
- ▶ Site Plan and Design Review.

2.5.2 Sacramento LAFCo Actions

Subsequent to the City's action to prezone the property and enter into a Property Tax Exchange Agreement, LAFCo will consider approval of the request for annexation and related reorganizations/detachments associated with service providers for the project site, which will include the following actions:

- ▶ annexation to the City of Sacramento;
- ▶ detachment from Southgate Park District;
- ▶ detachment from Sacramento Metropolitan Fire District;
- ▶ detachment from Sacramento County Water Maintenance District Zones 11, 12, 13, 40, and 41 (water supply and drainage planning services); and
- ▶ detachment from County Service Area No. 1 and 11.

2.5.3 Responsible and Permitting Agencies

Responsible and permitting agencies are state and local public agencies, other than the lead agency, that have some authority over a project activity. This Draft EIR provides information to the following agencies to assist them in approval and/or permitting actions as they may apply to the project.

- ▶ State Water Resources Control Board: A Notice of Intent would need to be filed to obtain coverage under the General Construction Activity Storm Water Permit before project construction.
- ▶ Sacramento County: approval of property tax sharing agreement.
- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD): SMAQMD approval of dust control plans (authority to construct permit), permitting for fuel dispensers, and other permits may be necessary.
- ▶ Southgate Park District: detachment.
- ▶ Sacramento Metropolitan Fire District: detachment.
- ▶ Sacramento County Water Maintenance District Zones 11, 12, 13, 40, and 41: detachment
- ▶ Sacramento County Service Area No. 1 and 11: detachment.

3 ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

Aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the quality of the visual environment and of the public’s experience with it. The effects of the project on the visual environment are generally defined in terms of the project’s physical characteristics and potential visibility, the extent to which the project’s presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the project would alter existing views.

The project site is 2.49 acres in size, located on the northeast corner of the intersection of South Watt Avenue and Elder Creek Road, and bordered by Turner Road to the west, in Sacramento County. The project site and surrounding areas are flat. Land uses surrounding the project site are generally light industrial and commercial in nature and include a building supply warehouse at the northwest corner of the intersection, a commercial complex including a gas station and restaurant to the southwest, and a building and construction materials supply facilities to the southeast. A landscaping materials facility is adjacent to the northern edge of the project site. Other elements comprising the view of surrounding land uses include roadways, cars, powerlines, signage associated with the surrounding land uses, streetlights, and utility connections. Buildings in the vicinity of the project site are generally low in height and consistent with the industrial/commercial character of the surrounding areas.

The project site is currently vacant and undeveloped. Existing features on the site include grasses and shrubs, demolition debris such as concrete and metal rebar, and abandoned electrical equipment. Concrete and asphalt pads

from previous development are within the southern portion of the project site (Terracon 2019: I). No permanent structures exist on the site.

Viewers of the project site include pedestrian and motorists along South Watt Avenue and Elder Creek Road, and patrons and employees of the surrounding industrial and commercial businesses. The closest residences to the project site include single family residences located roughly 220 feet and 440 feet to the southeast on Elder Creek Road. Views from residences in vicinity of the project site are limited due the distance, and due to obstruction by vegetation, powerlines, traffic, and buildings associated with intermediate land uses.

A scenic vista is considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. The project site is located in a developed, industrial setting and does not contain remarkable scenery that would be considered a scenic vista. The closest designated scenic roadway is located in southern Sacramento County, along State Route 160, approximately 20 miles southeast of the proposed project site (Caltrans 2022). The closest designated scenic resource identified to the project site is a portion of the American River included in the federal Wild and Scenic Rivers system (City of Sacramento 2014), located approximately 3.8 miles northwest of the project site. The river is not visible from the project site.

Existing sources of nighttime light in the vicinity of the project site include street lighting and automobile lights along both Elder Creek Road and South Watt Avenue, lighting associated with surrounding buildings, lighting at fuel pumps southwest of the project site, and site lighting located at the landscaping materials facility north of and adjacent to the project site. No sources of light currently exist on the project site. Existing sources of daytime glare may result from passing automobiles along Elder Creek Road and South Watt Avenue.

3.1.2 Discussion

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

No impact. As discussed above, the project site and surrounding areas are not considered a scenic vista. No other scenic vistas are visible from the project site. Therefore, the project would have **no impact**.

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

No impact. The project site is not visible from a state scenic highway. Therefore, the project would have **no impact**.

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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant. The project is located within an urbanized, developed area. As described in Section 3.1.1., "Environmental Setting," the project site is surrounded by industrial and commercial land uses. Existing features on the site include grasses and shrubs, demolition debris such as concrete and metal rebar, abandoned electrical equipment, and litter.

Publicly accessible views of the project site are located along adjacent roadways and from surrounding commercial and industrial land uses. A restaurant is located approximately 450 feet southwest of the project site; however, views of the project site from this location are obstructed by fueling stations, landscaping, and fencing.

The project includes annexation of the project site into the City of Sacramento, and establishment of a land use designation and zoning district. The project would be consistent with the established land use designation, and consistent with the surrounding commercial and industrial land uses. The project would be subject to the City's applicable development standards and zoning district-specific standards pertaining to aesthetics, including requirements for signage, lighting, fences, and building height and setbacks.

Because the project would be consistent with the land use designation and zoning district established for the project site upon annexation of the project site into the City, this impact would be **less than significant**.

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

Less than significant. The project would be in operation 24 hours per day, seven days per week, and would therefore require lighting during nighttime hours on-site to ensure site safety and accessibility. Lighting at the project site would be consistent with City General Plan Policy ER 7.1.3, which requires the City to minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary, and requiring light for development to be directed downward to minimize spill-over onto adjacent properties and reduce vertical glare. In addition, Policy ER 7.1.4: Reflective Glass prohibits new development from resulting in any of the following: (1) using reflective glass that exceeds 50 percent of any building surface and on the bottom three floors; (2) using mirrored glass; (3) using black glass that exceeds 25 percent of any surface of a building; (4) using metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building; and (5) using exposed concrete that exceeds 50 percent of any building. The project would be required to comply with the aforementioned General Plan policies, which would be ensured through the Site Plan and Design Review process. While the project would introduce new sources of light to the project site, the type and intensity of light would be similar to that of the surrounding commercial and industrial uses. The proposed project would comply with all applicable General Plan policies related to minimizing light and glare, and compliance with such policies would be ensured during the design review for the project. Therefore, impacts to light and glare associated with the project would be **less than significant**.

3.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</p> <p>In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p> <p>Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.2.1 Environmental Setting

The project site is classified as “urban and built-up land” under the farmland mapping and monitoring program (FMMP) (DOC 2016). The project site and adjacent areas are developed with urban uses and do not contain farmland or agricultural land uses.

Project parcel and adjacent parcels are not under active or nonrenewal Williamson Act Contracts (County of Sacramento 2019: 20). The project parcel is currently zoned as M-1 Light Industrial per the Sacramento County General Plan and is not zoned for forest resources or timber production. The project site and adjacent areas are developed with urban uses and do not contain forest land.

3.2.2 Discussion

For information regarding LAFCo's statutory evaluation of agricultural resources, refer to Section 4, Reorganization, of this IS/MND.

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?**

No impact. The project site and adjacent areas are not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by FMMP. The project site, and adjacent parcels, are classified as "urban and built-up land" per the FMMP (DOC 2016). Neither the project site, nor adjacent areas contain agricultural land use. The project would include development of convenience store, fueling station, and car wash on the project site, and would not result in a conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. Therefore, there would be **no impact**.

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

No impact. Neither the project parcel nor adjacent parcels contain agricultural land uses or are subject to a Williamson Act Contract. The project involves annexation of the project site into the City. Upon annexation the land use designation and zoning district of the project site would be consistent with the proposed commercial uses. Therefore, there would be **no impact**.

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

No impact. The project parcel is currently zoned as M-1 Light Industrial per the Sacramento County General Plan and is not zoned for timber production. The project site and the land uses surrounding it are industrial and commercial in nature and do not support forest ecosystems. The project involves annexation of the project site into the City. Upon annexation the land use designation and zoning district of the project site would be consistent with the proposed commercial uses. Therefore, there would be **no impact**.

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

No impact. The project site and the land uses surrounding it are developed with industrial and commercial land uses, and do not contain forest land. Therefore, the project would have **no impact** on forest land.

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?**

No impact. The project site is previously disturbed, and surrounding land uses are commercial and industrial in nature. The project site and adjacent areas do not contain forest land or agricultural land uses. The project would include development of convenience store, fueling station, and car wash on the previously disturbed parcel, and would not result in conversion of forest land or agricultural land use into non forest of non-agricultural land uses. The project involves annexation of the project site into the City. Upon annexation the land use designation and zoning district of the project site would be consistent with the proposed commercial uses. Therefore, the project would have **no impact**.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants, which are known to be harmful to human health and the environment: carbon monoxide (CO), lead, nitrogen dioxide, ozone, particulate matter (PM) (which is categorized into PM less than or equal to 10 microns in diameter [PM₁₀] and PM less than or equal to 2.5 microns in diameter [PM_{2.5}]), and sulfur dioxide. The State of California has established the California Ambient Air Quality Standards (CAAQS) for these six pollutants, as well as for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. NAAQS and CAAQS are scientifically substantiated, numerical concentrations of criteria air pollutants established to protect the public from adverse health impacts caused by exposure to air pollution. A brief description of the criteria air pollutants and their effects on health is provided in Table 3.3-1.

The project site is located in unincorporated Sacramento County and would be annexed into the City of Sacramento as part of the project. Regardless of the annexation, the project site is located in a portion of Sacramento County which is within the Sacramento Valley Air Basin (SVAB). The SVAB is bounded on the north by the Northeast Plateau Air Basin, on the south by the San Joaquin Valley Air Basin, on the east by the southern portion of the Cascade Range and the northern portion of the Sierra Nevada, and on the west by the Coast Ranges. Sacramento County is currently designated as nonattainment with respect to the NAAQS and CAAQS for ozone, the NAAQS for PM_{2.5}, and the CAAQS for PM₁₀. The region is designated as attainment or unclassified with respect to the NAAQS and CAAQS for all other pollutants (CARB 2019).

Table 3.3-1 Criteria Air Pollutants Sources and Health Effects

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG), also sometimes referred to as volatile organic compounds by some regulating agencies, and oxides of nitrogen (NO _x). The main sources of ROG and NO _x , often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.
Carbon monoxide	Carbon monoxide (CO) is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Particulate matter	Some sources of particulate matter (PM), such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.	Scientific studies have suggested links between fine PM and numerous health problems, including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of PM in the air.
Nitrogen dioxide	Nitrogen dioxide (NO ₂) is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO ₂ .	Aside from its contribution to ozone formation, NO ₂ can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide	Sulfur dioxide (SO ₂) is a combustion product of sulfur or sulfur-containing fuels, such as coal and diesel.	SO ₂ is also a precursor to the formation of PM, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Notes: CO = carbon monoxide; PM=particulate matter; NO₂ = nitrogen dioxide; NO_x = nitrogen oxides; ROG = reactive organic gases; SO₂ = sulfur dioxide.

Source: EPA 2021.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the local agency responsible for air quality planning in Sacramento County. SMAQMD and other air districts with jurisdiction in the SVAB work together to maintain the region's portion of the State Implementation Plan (SIP) for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the federal ozone standard. Current air quality attainment plans related to SMAQMD include the *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (SMAQMD 2017) to address attainment of the 8-hour NAAQS for ozone, and the *2021 Sacramento County Second 10-Year PM₁₀ Maintenance Plan* (SMAQMD 2021) to address the attainment of the CAAQS for PM₁₀. SMAQMD has not yet established an attainment plan for PM_{2.5}, however the *2021 Sacramento County Second 10-Year PM₁₀ Maintenance Plan* will help to reduce PM_{2.5} emissions, which is a subset of PM₁₀. Regional emissions inventories in the attainment plans are developed based on anticipated growth in population, housing, and other parameters that are included in the Sacramento Area Council of Governments' 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG 2020).

SMAQMD also develops regulations and emissions reduction programs to control emissions of criteria air pollutants, ozone precursors (oxides of nitrogen [NO_x] and reactive organic gases [ROG]), toxic air contaminants (TACs), and odors within its jurisdiction. SMAQMD's Guide to Air Quality Assessment in Sacramento County, last updated in February 2021, provides guidance for the preparation of CEQA documents as it pertains to air quality and climate change. This guide includes SMAQMD-recommended thresholds of significance for evaluation of air quality impacts of projects in Sacramento County, including significance criteria that are tied to achieving or maintaining the attainment of the NAAQS and CAAQS.

For the purposes of this analysis, the following thresholds of significance, which are based on the SMAQMD-recommended thresholds, are used to determine whether project-generated emissions would produce a significant localized and/or regional air quality impact that would result in adverse effects to human health. These significance thresholds are also consistent with the checklist questions about air quality in Appendix G of the State CEQA Guidelines.

Air quality impacts would be significant if the project would:

- ▶ cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 pounds per day (lb/day) for NO_x, 80 lb/day or 14.6 tons per year (tons/year) for PM₁₀, or 82 lb/day or 15 tons/year for PM_{2.5}; in addition, all SMAQMD-recommended Basic Construction Emission Control Practices, also known as best management practices (BMPs), shall be implemented to minimize emissions of PM₁₀ and PM_{2.5}; otherwise, the threshold for both PM₁₀ and PM_{2.5} is 0 lb/day;
- ▶ result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_x, 80 lb/day and 14.6 tons/year for PM₁₀, or 82 lb/day or 15 tons/year for PM_{2.5}; in addition, all SMAQMD-recommended Operational Best Management Practices for Particulate Matter Emissions from Land Use Development Projects shall be implemented to minimize emissions of PM₁₀ and PM_{2.5}; otherwise, the threshold for both PM₁₀ and PM_{2.5} is 0 lb/day;
- ▶ emit levels of CO that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm during construction and operation;
- ▶ expose any off-site sensitive receptor to a substantial incremental increase in TAC emissions greater than 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or
- ▶ create objectional odors affecting a substantial number of people.

Sensitive Receptors

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants, and/or the potential for increased and prolonged exposure of individuals to pollutants.

The project site is located in an urban area of Sacramento County, on the eastern edge of the City of Sacramento, and is primarily surrounded by commercial and industrial land uses to the north and west, and single-family residences to the southeast. The nearest sensitive receptors to the project site include single family residences located roughly 220 feet and 440 feet to the southeast on Elder Creek Road.

3.3.2 Discussion

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

Less than significant. The applicable air quality plans the project would be subject to include the *2021 Sacramento County Second 10-Year PM₁₀ Maintenance Plan* and the *2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan*. A project in the SVAB has the potential to conflict with the air quality plans in

the region if the level of ozone precursor or PM emissions associated with the project would be greater than the projections used in the air quality plans. The project would include the development of a convenience store, gasoline pumps, a car wash, and other associated infrastructure (i.e., parking, lighting, and landscaping). The project would be consistent with general plan designations for retail land uses, and would not increase development or vehicle trips above what was currently anticipated for the City of Sacramento. Therefore, the project would be consistent with growth projections used in the air quality plans, and would not conflict or obstruct the implementation of applicable air quality plans in the region. This impact would be **less than significant**.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less-than-significant impact with mitigation incorporated. Sacramento County is currently in nonattainment for the federal and state ozone, state PM₁₀, and federal PM_{2.5} standards. The levels of criteria air pollutants and precursors emitted during project construction and project operation are discussed separately below.

Construction

Construction activities are anticipated to last approximately 6-7 months. Project construction would result in temporary emissions of ROG, NO_x, PM₁₀, and PM_{2.5} from site preparation (e.g., excavation, grading, clearing), off-road equipment, material delivery, worker commute trips, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Fugitive dust emissions of PM₁₀ and PM_{2.5} are associated primarily with site preparation and grading and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and vehicle miles traveled on and off the site. Emissions of ozone precursors, ROG, and NO_x, are associated primarily with construction equipment and on-road mobile exhaust. Paving and the application of architectural coatings result in off-gas emissions of ROG. PM₁₀ and PM_{2.5} are also contained in vehicle exhaust.

Construction-generated emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA 2021). Modeling was based on project-specific information and reasonable assumptions based on typical construction activities. Default values in CalEEMod were used based on the project’s location and land use types.

Maximum daily construction emissions were estimated based on anticipated construction activities that would occur simultaneously. Table 3.3-2 summarizes the modeled maximum daily emissions from construction activities for all pollutants. For detailed assumptions and modeling inputs, refer to Appendix A. Table 3.3-2 also shows the mass emission levels SMAQMD recommends for determining whether a project’s construction-related emissions of criteria air pollutants and precursors would result in a cumulatively considerable contribution to the nonattainment condition of a pollutant with respect to the NAAQS or CAAQS and, therefore, conflict with air quality planning in the SVAB (SMAQMD 2020a).

Table 3.3-2 Summary of Unmitigated Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction (2021)

	Maximum Daily Emissions (lb/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Project	4	12	6	3
SMAQMD Threshold of Significance	None	85	0	0
Exceeds Significance Threshold?	No	No	Yes	Yes

Notes: CO = carbon monoxide; lb/day = pounds per day; SMAQMD = Sacramento Metropolitan Air Quality Management District; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; ROG = reactive organic gases.

See Appendix A for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental in 2021.

As shown in Table 3.3-2, project construction would result in emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. Construction activities may result in emissions of PM₁₀ and PM_{2.5} that exceed the respective SMAQMD-recommended thresholds of significance (i.e., 0 lb/day before implementation of best management practices [BMPs] or best available control technology [BACT]). Therefore, construction emissions may contribute to the existing nonattainment condition in the SVAB with respect to the CAAQS for PM₁₀, and NAAQS for PM_{2.5}. To support the use of SMAQMD’s non-zero thresholds of significance for construction PM₁₀ and PM_{2.5} emissions, SMAQMD provides guidance on BMPs to reduce construction PM emissions from land use development projects (SMAQMD 2020b). However, because the BMPs are not included in the project design, the zero thresholds for PM₁₀ and PM_{2.5} apply. If the project complies with the BMPs, the construction PM₁₀ and PM_{2.5} thresholds increase to 80 and 82 lb/day, respectively.

Operation

Project operation would result in the generation of long-term operation emissions of ROG, NO_x, and PM (i.e., PM₁₀ and PM_{2.5}) generated by mobile, stationary, and area-wide sources. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips to and from the gas station and car wash, employee commute trips, and other associated vehicle trips (e.g., delivery of fuel and supplies, maintenance trips).

Stationary and area-wide sources would include the combustion of natural gas for space and water heating (i.e., energy use), electricity consumption for lighting and building use, the use of landscaping equipment or other small equipment, and the periodic application of architectural coating. Refueling of storage tanks with fuel from trucks and the individual refueling of vehicles at pump stations would result in long term operational sources of ROG off-gassing. Table 3.3-3 summarizes the daily maximum operational-related emissions of criteria air pollutants and ozone precursors at full buildout.

Table 3.3-3 Summary of Annual Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2021)

Emissions	Maximum Daily Emissions (lb/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	<1	<1	<1	<1
Energy	<1	<1	<1	<1
Mobile	14	5	3	1
Total Emissions	14	5	3	1
SMAQMD Threshold of Significance	65	65	0	0
Exceed Significance Threshold?	No	No	Yes	Yes

Notes: lb/day = pounds per day; SMAQMD = Sacramento Metropolitan Air Quality Management District; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; ROG = reactive organic gases.

See Appendix A for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental in 2021

As shown in Table 3.3-3, the project’s operational activities would result in emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. In order to support the use of SMAQMD’s non-zero thresholds of significance for operational PM₁₀ and PM_{2.5} emissions, SMAQMD provides guidance on BMPs to reduce operational PM emissions from land use development projects. (SMAQMD 2020b). The BMPs provided are generally required by existing regulations and are therefore not considered mitigation measures. If the project complies with the BMPs, the operational PM₁₀ and PM_{2.5} thresholds increase to 80 and 82 lb/day, respectively. Therefore, if the project complies with following list of BMPs for operational PM emissions and is below SMAQMD’s thresholds for operational PM₁₀ and PM_{2.5}, the impact would be considered less than significant.

- ▶ Comply with SMAQMD rules to control operational PM emissions that are applicable to this project including:
 - **Rule 402. Nuisance** – Protect public health from the emission of air contaminants which constitute a nuisance.

- **Rule 446. Storage of Petroleum Products** – Limit emissions from storage tanks for organic liquids with a vapor pressure greater than 1.5 psia (10.3 kPa) under actual storage conditions.
 - **Rule 448. Gasoline Transfer into Stationary Storage Containers** – Limit emissions resulting from the transfer of gasoline into or from any stationary storage container.
 - **Rule 449. Transfer of Gasoline into Vehicle Fuel Tanks** – Limit the emission of gasoline vapor into the atmosphere when motor vehicle fuel tanks are filled.
- ▶ Comply with mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of energy at a nonresidential land use.
 - ▶ Comply with mandatory measures in the California Green Building Code (Title 24, Part 11) (CALGreen). Current mandatory and applicable measures related to operational PM include requirements for bicycle parking, parking for fuel efficient vehicles, and electric vehicle (EV) capable charging.

Compliance with SMAQMD's BMPs for operational PM emissions for land use development projects would result in the use of SMAQMD's thresholds of 80 lb/day for PM₁₀ and 82 lb/day for PM_{2.5}. The project would be required to comply with the SMAQMD rules mentioned above to control operational PM emissions regarding nuisances, gasoline storage and transfer tanks, and gasoline transfer into motor vehicles. Because the City of Sacramento has adopted the CalGreen Code, the project would be constructed to meet the current Title 24, Part 6 standards that pertain to energy efficiency for nonresidential development and electric vehicle charging. The project would include the installation of short- and long-term bicycle parking as shown in the project's site plan in Section 2, "Project Description." The project would also be beholden to the mandatory requirements of the CalGreen code, which requires nonresidential projects with 10 to 25 spaces to include, at a minimum, 1 EV capable charging space. The project would comply with the CalGreen code such that at least 1 EV capable charging space would be implemented. Therefore, through compliance with SMAQMD's rules and the provisions of the California Energy Code and CalGreen, operational emissions would not exceed SMAQMD's thresholds of 80 and 82 lb/day for PM₁₀ and PM_{2.5}, respectively. Thus, operational emissions would not contribute to the existing nonattainment condition in the SVAB with respect to the CAAQS for PM₁₀, and NAAQS for PM_{2.5}.

Conclusion

The project's operational emissions would not exceed SMAQMD's adjusted thresholds for PM₁₀ and PM_{2.5} following compliance with SMAQMD's relevant rules and the California Energy Code and CalGreen Code. Nevertheless, the project's construction emissions would exceed SMAQMD's zero thresholds for PM₁₀ and PM_{2.5}, and therefore could result in a cumulatively considerable net increase of criteria air pollutants for which the region is nonattainment. The impact from construction emissions would be **potentially significant** and mitigation would be required.

MITIGATION MEASURES

Mitigation Measure 3.3-1: Implement SMAQMD's Basic Construction Emission Control Practices

Due to the nonattainment status of the SVAB with respect to ozone, PM₁₀, and PM_{2.5}, SMAQMD requires that projects implement a set of Basic Construction Emission Control Practices regardless of the significance determination. The Basic Construction Emissions Control Practices are considered feasible for controlling fugitive dust from construction site thereby reducing PM emissions. The practices also serve as BMPs, allowing the use of the non-zero PM significance thresholds for construction (SMAQMD 2019).

Under Mitigation Measure 3.3-1, the following Basic Emission Control Practices recommended by SMAQMD for the reduction of PM₁₀ and PM_{2.5} shall be implemented during project construction.

Basic Construction Emission Control Practices

- ▶ Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

- ▶ Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- ▶ Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- ▶ Limit vehicle speeds on unpaved roads to 15 miles per hour.
- ▶ Complete the paving of all roadways, driveways, sidewalks, and parking lots to be paved as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- ▶ Minimize idling time either by shutting equipment off when not in use by reducing the time of idling to 5 minutes (California Code of Regulations, Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- ▶ Provide current certificate(s) of compliance for the California Air Resources Board (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulation (California 2449 and 2449.1). For more information, contact CARB at 877-593-6677, doors@arb.ca.gov, or www.arb.ca.gov/doors/compliance_cert1.html.
- ▶ Maintain all construction equipment in proper working condition according to manufacturers' specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

With the implementation of Mitigation Measure 3.3-1, the project would be able to use the non-zero thresholds for PM₁₀ and PM_{2.5} emissions (i.e., 80 lb/day for PM₁₀ and 82 lb/day for PM_{2.5}). As shown in Table 3.3-3, the maximum daily emissions during construction would be 3 lb/day for PM₁₀ and 1 lb/day for PM_{2.5}. These would be below SMAQMD's thresholds for construction emissions. NO_x emissions would remain below the applicable SMAQMD-recommended threshold.

Through implementation of Mitigation Measure 3.3-1 the project's construction emissions would be reduced to levels that would not exceed applicable SMAQMD adjusted thresholds for PM₁₀ and PM_{2.5} (i.e., 80 and 82 lb/day). Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the region is nonattainment with respect to the NAAQS or CAAQS. Thus, Mitigation Measure 3.3-1 would reduce construction emissions to a **less-than-significant** level.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant. The levels of CO and TAC emissions emitted during project construction and project operation are discussed separately below.

Toxic Air Contaminants

Construction

Construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparations (e.g., clearing, grading, excavation); paving; application of architectural coatings; and on-road truck travel. For construction activity, diesel PM emitted by off-road construction equipment is the primary TAC of concern.

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) was identified as a TAC by CARB in 1998. With regards to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, Health Risks Assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70- to 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015:2-4). Construction

activities are anticipated to last 6-7 months, a duration substantially shorter than the exposure period used for typical health risk calculations (i.e., 30 years).

Based on the emissions modeling found in Appendix A, maximum daily emissions of diesel PM₁₀ and PM_{2.5} would be less than 1 lb/day during project construction. SMAQMD has not established a quantitative threshold of significance for construction-related TAC emissions. Therefore, SMAQMD recommends considering the specific construction-related characteristics of a project and its proximity to off-site receptors.

Existing sensitive receptors nearest to the project site include single-family residences located roughly 220 feet and 440 feet to the southeast on Elder Creek Road. Construction activity would last for 6-7 months, and would occur intermittently throughout the day. Given the temporary and intermittent nature of construction, the dose of any exposure to diesel PM of any on receptor would be limited. Additionally, as construction progresses, activity intensity and duration would vary. As such, no single existing would be exposed to construction-related emissions of diesel PM for extended periods of time. Further, as discussed in question b) Mitigation Measure 3.3-1 would result in the reduction of diesel PM exhaust emissions, in addition to criteria pollutant emissions, by minimizing engine idling time and maintaining construction equipment in proper working conditions and according to manufacturer's specifications.

Therefore, because construction activity would be intermittent and temporary and diesel PM emissions would be less than 1 lb/day, construction would not be expected to expose existing sensitive receptors to substantial pollutant concentrations.

Operation

Operation of the project would not result in any new permitted stationary sources nor would the project site new sensitive receptors. However, operation of the project would result in new sources of TACs associated with commercial and fuel delivery trucks, as well as vehicles refueling.

With regards to the placement of the project near existing sensitive receptors, the project would be located approximately 220 feet from the nearest residence. Per CARB's Air Quality and Land Use Handbook, large gasoline dispensing facilities should be located at least 300 feet from sensitive receptors (CARB 2005:4). A large gasoline dispensing facility is considered one which has an annual throughput of 3.6 million gallons. The project is anticipated to have an annual throughput of less than 2 million gallons per year, thus it would not be considered large by CARB's standards.

The project is not located near a major roadway that experiences significant traffic volumes (i.e., more than 100,000 vehicles per day). Based on the modeling conducted, the project is anticipated to generate approximately 4,000 daily trips that would be dispersed through the local roadway network. There would be no long-term, ongoing generation of TACs from vehicles that would expose nearby receptors for extended periods of time.

Refueling at gasoline dispensing facilities releases benzene into the air. Benzene is a potent carcinogen and is one of the highest risk air pollutants regulated by CARB. Over 90 percent of benzene emissions are accounted for by vehicle use (CARB 2005:30). Benzene would be emitted from passenger vehicles refueling at the gasoline pumps associated with the project. CARB notes that a well-maintained vapor recovery system at a gasoline fueling station can decrease benzene emissions by more than 90 percent compared to an uncontrolled facility (CARB 2005:31). Per SMAQMD Rule 449, the project would be required to limit the emissions of gasoline vapor into the atmosphere when motor vehicle fuel tanks are filled.

Carbon Monoxide

Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels at nearby sensitive land uses. As a result, it is recommended that CO not be analyzed at the regional level, but at the local.

Construction would last 6-7 months. Construction-related traffic would be spread over the duration of construction activities. The anticipated size of the construction crew at the site would be limited to approximately 20 worker per day. As such, construction-generated traffic is not anticipated to result in large peaks at any one time over the course of construction. Thus, construction activities would not expose sensitive receptors to substantial concentrations of CO.

Similarly, operation of the project would not result in vehicle traffic that would affect nearby roadway intersections such that a localized impact would occur. As described by SMAQMD, "In general, land use development projects do not typically have the potential to result in localized concentrations of criteria air pollutants that expose sensitive receptors to substantial pollutant concentrations" (SMAQMD 2020b:4-7). Considering the relatively low emissions of criteria air pollutants associated with the project as shown in Table 3.3-3, this project would not be large enough to result in localized concentrations that could exceed the applicable CAAQS. Moreover, the types of vehicles associated with project-generated trips are not anticipated to be substantially different from the typical fleet of vehicles that operate in the region. For these reasons, project-generated local mobile-source CO emissions would not substantially contribute to concentrations that exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm.

Conclusion

Considering the relatively short duration in which diesel PM-emitting construction activity would occur, the distance to the nearest off-site sensitive receptors, and the highly dispersive properties of diesel PM, construction-related TAC emissions would not expose nearby sensitive receptors to substantial pollutant concentrations that exceed applicable thresholds. Operational activities would not site new sensitive receptors, the project is not considered a large gasoline dispensing facility per CARB's standards, and there would be relatively few daily trips that would not result in long-term TAC exposure to nearby receptors. Thus, new sources of diesel PM associated with project operational activities would not expose existing sensitive receptors to increased TAC emissions.

Construction activities and operational vehicle trips associated with the project would not expose nearby sensitive receptor to substantial concentrations of CO emissions. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations during construction or operational activities. This impact would be **less than significant**, and no mitigation would be required.

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

Less than significant. Minor odors from the use of heavy-duty diesel-powered off-road equipment and the laying of asphalt during construction activities would be temporary and intermittent and would dissipate rapidly from the source with increases in distance. As discussed above, the closest residential receptors are approximately roughly 220 feet and 440 feet to the southeast on Elder Creek Road. Given the temporary nature of construction activities and the distance of the sensitive receptors from the project site, project construction is not anticipated to result in an odor-related impact during the construction phase of the project. Operation of the project would result in diesel-fueled delivery trucks and refueling by passenger vehicles and trucks, activities that could result in long-term operational odors. These types of odors are similar to existing odor sources, including nearby roadways (i.e., Watt Avenue and Elder Creek Road). The project would be subject to SMAQMD Rule 402, "Nuisance" regarding the control of nuisances, including odors, which would help to reduce any potential odor impacts on sensitive receptors. Additionally, odors would dissipate rapidly from the source with increases in distance, and therefore not be anticipated to result in substantial operational sources of odor. The project does not include the development of any new substantial stationary sources of odor (e.g., landfill or refinery). Therefore, both project construction and operation are not anticipated to result in the frequent exposure to nearby sensitive receptors to substantial objectionable odors. Thus, this impact would be **less than significant**, and no mitigation would be required.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4.1 Environmental Setting

This section describes biological resources on the project site and evaluates potential impacts on such resources as a result of project implementation. To determine the biological resources that may be subject to project impacts, Ascent biologists conducted a reconnaissance survey of the project site on August 25, 2021, and reviewed the following data sources:

- ▶ California Natural Diversity Database (CNDDDB 2021),
- ▶ California Native Plant Society Online Inventory of Rare and Endangered Plants (CNPS 2021),
- ▶ South Sacramento Habitat Conservation Plan (SSHCP) (Sacramento County 2018), and
- ▶ aerial photographs of the project site and region.

The project site has previously been developed but is currently vacant. It is located adjacent to developed, industrial areas and contains two land cover types: ruderal and developed. The project site is within the plan area of the SSHCP; however, upon annexation, the project site would be within the City of Sacramento, which is not a participant in the SSHCP. Although the project would not be subject to the SSHCP, mitigation measures described below are consistent with the covered species take avoidance and minimization measures (AMMs) in the SSHCP.

VEGETATION AND HABITAT TYPES

Land cover types were identified through review of aerial imagery and verified during the reconnaissance-level survey conducted on August 25, 2021. The project site is flat with ruderal vegetation and developed land cover that consists of asphalt, concrete foundations, and gravel fill. There is no riparian or wetland habitat found on the project site. A freshwater pond approximately 75 feet east of the project site was observed during the reconnaissance-level survey.

Ruderal vegetation on the project site includes a variety of nonnative annual species, including yellow starthistle (*Centaurea solstitialis*), brome (*Bromus* spp.), oats (*Avena* sp.), barley (*Hordeum* spp.), stinkwort (*Dittrichia graveolens*), prickly lettuce (*Lactuca serriola*), and chicory (*Cichorium intybus*). The only native herbaceous species observed were spikeweed (*Centromadia fitchii*) and telegraph weed (*Heterotheca grandiflora*).

Trees on Project Site

Along the southern border of the project site there are three Chinese pistache (*Pistacia chinensis*) trees, one European hackberry (*Celtis australis*), and one valley oak (*Quercus lobata*). There are also two Chinese pistache trees located on the adjacent property at the northeast corner, and three sycamore trees (*Platanus* sp.) on the property to the east of the project site that could potentially serve as nesting habitat. The locations of the five trees identified on the project site are shown in Figure 3.4-1.

SPECIAL-STATUS SPECIES

Special-status species are plants and animals that are legally protected under the federal Endangered Species Act (ESA), California Endangered Species Act (CESA), California Fish and Game Code, or local plans, policies, and regulations or that are otherwise considered sensitive by federal, state, or local resource conservation agencies. For this IS/MND, special-status species are defined as:

- ▶ species listed or proposed for listing as threatened or endangered under the ESA;
- ▶ species designated as candidates for listing as threatened or endangered under the ESA;
- ▶ species listed, proposed for listing, or candidates for listing as threatened or endangered under CESA;
- ▶ species listed as fully protected under the California Fish and Game Code;
- ▶ animals identified by CDFW as species of special concern;
- ▶ plants considered by CDFW to be “rare, threatened or endangered in California” and assigned a California Rare Plant Rank of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California but more common elsewhere; and 2B, considered rare or endangered in California but more common elsewhere;
- ▶ species considered locally significant—that is, species that are not rare from a statewide perspective but are rare or uncommon in a local context, such as in a county or region (CEQA Section 15125[c]), or that are so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines Appendix G); and
- ▶ taxa (i.e., taxonomic categories or groups) that meet the criteria for listing even if they are not currently included on any list, as described in CCR Section 15380 of the State CEQA Guidelines.



Source: adapted by Ascent in 2021.

Figure 3.4-1 Existing Trees Within the Project Site

Based on a review of existing data sources (CNDDDB 2021; CNPS 2021; Sacramento County 2018), 46 special-status wildlife species and 13 special-status plant species have potential to occur in the project vicinity (Appendix B). Species ranges and habitat requirements were further evaluated to determine potential for occurrence on the project site. Because it is highly disturbed and contains no natural habitat, the project site does not contain suitable habitat for any of the special-status plant species. Out of the 46 special-status wildlife species, one species is considered likely to occur near the project site: Swainson's hawk (*Buteo swainsoni*). Refer to Appendix B for additional detail regarding special-status species in the project vicinity.

COMMON WILDLIFE SPECIES

There are many common wildlife species that use disturbed areas, such as the project site and surrounding area, for foraging, roosting, and/or nesting. These species include native animals that have adapted well to living close to humans, such as red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaidura macroura*), coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and western fence lizard (*Sceloporus occidentalis*), and tree swallow (*Hirundo rustica*), as well as nonnative species, such as house sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*). Common native and nonnative wildlife species could use the project area for breeding and are likely to move through the area on a regular basis while foraging.

3.4.2 Discussion

- 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 Wildlife or the U.S. Fish and Wildlife Service?**

Less-than-significant impact with mitigation incorporated. Ground disturbance associated with the project would occur within previously disturbed land, or existing developed roadways (e.g., for the sewer pipeline), and as explained above, no special-status plants are expected to occur on the site. Therefore, the project would have no impact on special-status plant species. The project has potential to adversely affect Swainson's hawk, other raptors (e.g., red-tailed hawk [*Buteo jamaicensis*], red-shouldered hawk [*Buteo lineatus*]) and common native nesting birds. Potential impacts on these species are addressed below.

Swainson's Hawk and Other Raptors

Most of the project site has been graded and is devoid of vegetation. Ruderal vegetation is intermittent within the previously graded project site, but may provide potential foraging habitat for raptors. The project would require tree removal that could result in direct loss of nests. Though no raptor nest structures were observed during the reconnaissance-level survey, the trees bordering the project site, which include five Chinese pistache (*Pistacia chinensis*) trees, one European hackberry (*Celtis australis*), and one valley oak (*Quercus lobata*), as well as the trees located east adjacent to the project site, may serve as nesting habitat for Swainson's Hawk and other raptor species.

Construction activities associated with the proposed project during the breeding season (defined as March 1 - September 15 for Swainson's hawk) could disturb Swainson's hawks or other raptors if they are nesting nearby. Construction activities could result in disturbance to active nests due to the visual stimulus and noise from vehicles, heavy equipment, and personnel, potentially resulting in nest abandonment, failure, and/or mortality of chicks or eggs. The closest known Swainson's hawk nests are within a 2.9-mile radius, northeast and southeast of the project site and have been active at some point within the last 12 years.

Although Swainson's hawk is the only state-listed raptor species expected to occur in the project vicinity, all raptor species and their nests are protected under California Fish and Game Code. Other raptors that could nest in the project vicinity include red-shouldered hawk, American kestrel, red-tailed hawk, great horned owl, and barn owl. Swainson's hawk is a covered species under the SSHCP.

The potential loss of Swainson's hawk and other raptor nests due to disturbance from construction activities would be a **potentially significant** impact.

Mitigation Measure 3.4-1: Avoid Disturbance to Swainson's Hawk and Other Raptor Nests

The applicant shall implement the following measures, which are consistent with the AMMs in the SSHCP:

- ▶ For project activities, that begin between March 1 and September 15, the applicant shall retain a qualified biologist to conduct preconstruction surveys for Swainson's hawk and other nesting raptors shall be conducted to identify active nests on and within 0.25 mile of the project site. Two surveys shall be conducted before the beginning of any construction activities between March 1 and September 15. The first survey shall be conducted within 30 days prior to ground disturbance activities, with a follow up survey 3 days prior to the start of ground disturbance activities.
- ▶ If active Swainson's hawk or other covered raptor species nest(s) are found within 0.25 mile of any project-related activity, the applicant shall establish a 0.25-mile no-disturbance buffer around the active nest until the young have fledged.
- ▶ If active nests of other raptors (other than Swainson's hawk or other covered raptor species) are found within 500 feet of any project-related activity, the applicant shall establish a no-disturbance buffer around the active nest until the young have fledged. Buffer size shall be determined by a qualified biologist. Factors to be considered for determining buffer location shall include presence of natural buffers provided by vegetation, buildings, or topography; nest height above ground; baseline levels of noise and human activity (e.g., roads, other nearby urban development); and species sensitivity.
- ▶ If Swainson's hawk are nesting within 0.25 mile of any project-related activity, the applicant shall retain a qualified biologist experienced with Swainson's hawk behavior to monitor the nest throughout the nesting season and determine when the young have fledged. The qualified biologist can reduce the disturbance buffer as long as reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk and 500-feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and the City determine that such an adjustment would not be likely to adversely affect the nest. The qualified biologist shall be on site daily while construction-related activities are taking place within the buffer. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the qualified biologist shall have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, and the City shall meet to determine the best course of action to avoid nest abandonment or take of individuals and shall consult CDFW, if necessary, to identify appropriate avoidance measures. The qualified biologist shall also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into the active construction zone.
- ▶ The applicant shall retain a qualified biologist to conduct a mandatory Worker Environmental Awareness Program for all construction workers, including contractors, prior to the commencement of construction activities. The training shall include how to identify special-status species and other species discussed in this section that might enter the construction site, relevant life history information and habitats, statutory requirements and the consequences of non-compliance, the boundaries of the construction area and permitted disturbance zones, litter control training and appropriate protocols if a special-status species is encountered. Supporting materials containing training information shall be prepared and distributed by the qualified biologist. When necessary, training and supporting materials shall also be provided in Spanish. Upon completion of training, construction personnel shall sign a form stating that they attended the training and understand all of the AMMs.
- ▶ Orange construction fencing shall be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint (i.e., the limit of project construction plus equipment staging areas and access roads). This fencing shall remain in place until project completion.

Significance after Mitigation

Implementing Mitigation Measure 3.4-1 would reduce project-related impacts to Swainson's hawk and other nesting raptors to a **less-than-significant** level because it would avoid potential disturbance or loss of active nests during project construction.

Common Native Nesting Birds

Common native nesting birds are protected by California Fish and Game Code and the federal Migratory Bird Treaty Act (MBTA). Nesting habitat potentially suitable for native bird species is present in the pond habitat located directly east of the project site, trees bordering the southern edge of the project site (Fig 3.4-1), and two Chinese pistache trees adjacent to the project site in the northeastern corner. Project activities could result in the disturbance of native nesting birds. Disturbance or loss of common native bird nests, if they are found to occur in or immediately adjacent to the project site in the future prior to construction, as a result of project construction would be a **potentially significant** impact.

Mitigation Measure 3.4-2: Avoid Disturbance of Common Native Birds

A preconstruction survey shall be required to determine if active nests of common native birds are present within 100 feet of the project site if construction activities shall occur during the breeding season (March 1 through September 15). A qualified biologist shall conduct preconstruction surveys within 14 days of ground-disturbing activities.

- ▶ If active nests of common native bird species are found, Tekin shall establish a temporary no-disturbance buffer; the size of which shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project construction activities. Generally, buffer size for common native bird species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment would not be likely to adversely affect the nest.

Significance after Mitigation

Implementation Mitigation Measure 3.4-2 would reduce project-related impacts on common native birds to a **less-than-significant** level because it would avoid the potential disturbance or loss of active nests during project construction and require a temporary no-disturbance buffer (size to-be-determined) for common native nesting birds during the nesting season, as long as the nest is occupied.

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

No impact. There are no sensitive natural communities and no riparian habitat on the project site. Therefore, there would be **no impact**.

- 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?**

No impact. The project area does not contain any aquatic habitat (i.e., wetlands, streams, canals, irrigation ditches). Project implementation would, therefore, not result in any impact on State-protected or federally protected wetlands. Therefore, there would be **no impact**.

- 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?**

Less than significant. The project site is located within the Pacific Flyway, which is a major north-south route for migratory birds along western North America. Large numbers of waterfowl, shorebirds, and cranes may move through the area seasonally and may congregate in wetlands, grasslands, and agricultural fields for winter or use them as

resting grounds during longer migrations from the Arctic to Central or South America. However, the project would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds. All of the proposed facilities would be built within a previously disturbed area, which is surrounded by development, industrial, and agricultural land. Because there is minimal suitable foraging habitat in the surrounding areas, and the project is located on a previously developed site surrounded by urban land uses, the relatively small amount of permanent and temporary disturbance associated with the proposed project would not result in substantial effects on wildlife movement patterns. Additionally, areas that would be affected by construction within the project site are not known to contain native wildlife nursery sites, such as colonial bird rookeries or bat roosts.

Project implementation would require tree removal and implementation of the project could adversely affect common migratory birds through disturbance during the breeding season. Loss of active nests of common species would be inconsistent with MBTA and California Fish and Game Commission, both of which include protections of many common species not otherwise protected under federal, state, or local laws. Although, potential loss of active nests of common species during project construction would be limited to those few nests that are present in proximity to noise or visual disturbances during construction and this loss would not substantially reduce the abundance of any species, nor cause any species to drop below self-sustaining levels. As such, potential adverse effects on common migratory birds and California Fish and Game Commission-protected birds would not alone constitute a significant impact. In addition, potential impacts to common nesting bird species would be addressed through implementation of Mitigation Measures 3.4-1 and 3.4-2. Therefore, impacts related to migratory species would be **less than significant**.

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

Less-than-significant impact with mitigation incorporated. Upon future annexation into the City of Sacramento, the project would then be subject to city ordinances. Project development would not affect riparian habitat or wetlands as none are present on the project site. The project has the potential to result in disturbance or habitat loss for sensitive species listed above; however, mitigation measures are identified above to reduce impacts on special-status species to a less-than-significant level. Project development would require removal of trees (Figure 3.4-1) along the southern border of the project site, which would conflict with the City of Sacramento Tree Preservation Ordinance and the City of Sacramento's General Plan. Therefore, this project would conflict with local policies or ordinances protecting biological resources, leading to **potentially significant** impacts from project construction.

City Trees and Private Protected Trees

There are five trees located on the project site (Figure 3.4-1). City trees are classified as any tree with a trunk partially on city property (e.g., sidewalk) (City of Sacramento 2015). Private protected trees (previously known as heritage trees) are classified as all trees with a DSH (diameter standard height) of 24 inches or greater and any native trees with a DSH of 12 inches or greater (City of Sacramento 2015). The valley oak on the project site is a native oak tree (Figure 3.4-1). All city and private protected trees in the City of Sacramento are subject to the policies of the City of Sacramento Tree Preservation Order. Removal of any city or private protected trees would conflict with Policy ER 3.1.3 of the City of Sacramento's General Plan and will require a permit (City of Sacramento 2015).

Mitigation Measure 3.4-3: Retain City/Private Protected Trees or Acquire Permit for Tree Removal and Participate in Remediation

The applicant shall retain a qualified arborist. The hired arborist must have either a certification through the International Society of Arboriculture (ISA) as well as active ISA certification number, be a registered consulting arborist with the American Society of Consulting Arborists (ASCA) or have five or more years of demonstrable professional arborist experience and willingness to sign a contract saying all work shall be in ANSI A300 standard compliance (Sacramento City Code 12.56).

- ▶ Survey all five trees on project site for trunk location and DSH.
- ▶ Determine if city and/or private protected trees (valley oak, Figure 3.4-1) are on project site.

- ▶ All trees on the project site should be retained when possible, during construction activities. Pursuant to the standards of the City of Sacramento Tree Preservation Order, if city or private protected trees are to be retained and if work is planned to occur within dripline, which is the ground underneath the outer circumference of branches, of the tree, a tree protection plan would be required.
- ▶ If retention of the city or private protected trees on site is not possible, and tree pruning and/or removal is planned, a tree removal permit would be required. Application for permit would include the submittal of a tree replacement plan.
- ▶ A tree replacement plan must consist of either on- or off-site replacement of a tree or payment of an in-lieu fee. For private protected tree removal, there is also an option to acquire credits for existing on-site trees smaller than private protected trees, subject to approval. A participant is required to choose one or more of these options that apply. The second two options are available if on- or off-site replacement is not feasible. If on- or off-site replacement is chosen, tree replacement must be the same species as tree being removed and have a ratio of one inch DSH for each inch DSH of tree being removed (City of Sacramento 2015).

Significance after Mitigation

Implementation of Mitigation Measure 3.4-3 would reduce project-related impacts on city and private protected trees to a **less-than-significant** level because it would avoid tree removal, when possible, and require permits for any tree removal that would occur as part of project implementation. This would satisfy the City of Sacramento's Tree Preservation Ordinance. Mitigation Measure 3.4-3 would also require tree replacement for any tree removal that occurs. If tree replacement is not possible, other remediation would be required including payment of an in-lieu fee or approval of credits for existing trees on property. This would satisfy the City of Sacramento General Plan's Trees of Significance Policy ER 3.1.3 (City of Sacramento 2015).

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?**

No impact. The project site is within the plan area of the SSHCP; however, upon annexation, the project site would be within the City of Sacramento, which is not a participant in the SSHCP (Sacramento County 2018). Although this project would then not be subject to SSHCP regulations, Mitigation Measures above were designed to comply with SSHCP requirements.

The SSHCP requires implementation of AMMs for Swainson's Hawk. Mitigation measures included are consistent with the covered species take AMMs from the SSHCP. Upon annexation into the City of Sacramento, the project site would no longer be included in the SSHCP area and therefore would not be subject to the SSHCP provisions. Regardless, Mitigation Measures 3.4-1 and 3.4-2 would be implemented, which would reduce impacts on Swainson's hawk to a less-than-significant level by requiring surveys and avoidance measures.

The SSHCP has modeled land cover on the project site as Cropland. Based on the biological reconnaissance-level survey conducted August 25, 2021, ruderal vegetation and developed land cover consisting of asphalt, concrete foundations, and gravel fill is present on the project site and there is no cropland present. The SSHCP has modeled the project site as containing habitat for Swainson's hawk, Cooper's hawk, western burrowing owl, loggerhead shrike, white-tailed kite, greater sandhill crane, and tricolored blackbird. Although it was found that Swainson's hawk may occur on the project site, aerial photographs of the project site and the reconnaissance-level survey found insufficient habitat for Cooper's hawk, loggerhead shrike, white-tailed kite, greater sandhill crane, and tricolored blackbirds on the project site. Burrowing owls are also not expected to occur on the project site as there are no burrows and no ground squirrels or other fossorial mammals were observed on the site during the reconnaissance-level survey.

Therefore, because the project site is not subject to the SSHCP upon approval of the project, there would be **no impact**.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the city, some in deeply buried contexts. One of the tools used to identify the potential for cultural resources to be present in the project area is the 2035 General Plan Background Report. Generalized areas of high sensitivity for cultural resources are located within close proximity to the Sacramento and American Rivers and moderate sensitivity was identified near other watercourses. The proposed project site is not adjacent to these high or moderate sensitivity units shown in the 2035 General Plan Background Report. The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive cultural resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today. Recent discoveries during infill construction in downtown Sacramento have shown that the downtown area is highly sensitive for both historic period archaeological - and pre-contact indigenous resources. Native American burials and artifacts were found in 2005 during construction of the New City Hall and historic period archaeological resources are abundant downtown due to the evolving development of the area and, in part, to the raising of the surface street level in the 1860s and 1870s, which created basements out of the first floors of many buildings.

A cultural resources report was prepared by Ascent in September 2021 for the project (see Appendix C). This report included the results of record searches, pedestrian survey, the historic context of the project site, and the archaeological sensitivity of the project site.

On August 16, 2021, a California Historical Resources Information System records search was conducted by the North Central Information Center (NCIC File No. SAC-21162) on the campus of California State University, Sacramento to determine whether prehistoric archaeological, historic-period archaeological, or built-environment historical resources have been previously recorded within the project site, the extent to which the project site has been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the project site. The results indicated that no cultural resources have been previously recorded within the project site, but that three historic-period archaeological features have been recorded within the 0.25-mile search radius. The results also indicated that one prior cultural resource study has been completed within a portion of the project site and that three additional studies have been completed outside the project site but within the 0.25-mile record search radius.

A pedestrian survey of the project area was conducted in August 2021, which resulted in the identification of two metal electrical cabinets and two concrete structure pads. These features were determined to be less than 45-years of

age and therefore do not meet the criteria guidance for evaluation under the California Register of Historical Resources and are not considered resources under CEQA. No other built environment elements and no archaeological deposits were observed.

The soils underlying the project site are associated with the Riverbank Formation. Based on the age of the Riverbank Formation (150,000 to 450,000 years ago) and results of past archaeological studies within the lower Sacramento Valley, the presence of buried archaeological deposits is unlikely. The County of Sacramento Cultural Resources Sensitivity Map also indicates that the project site is located in an area of low to no sensitivity for prehistoric, ethnohistoric, and historic period resources.

3.5.2 Discussion

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

No impact. No historical resources were identified at the project site as a result of either the NCIC record search, background research, pedestrian survey, or consultation effort. Therefore, there would be **no impact** to historical resources as a result of the project.

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

Less-than-significant impact with mitigation incorporated. No archaeological sites were identified within the project site as a result of the background research or pedestrian survey. Analysis of the geologic data, including the County of Sacramento Cultural Resources Sensitivity Map, and land-use history for the project site, i.e., over 100 years of agricultural use followed by grading and paving, conclude there is a low potential for archaeological resources. Nevertheless, the possibility remains that archaeological materials could be encountered during construction-related ground disturbing activities. This impact would be **potentially significant**.

Mitigation Measure 3.5-1: In the Event that Cultural Resources or Tribal Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources

If cultural resources or tribal cultural resources (such as structural features, midden soils, stone tools, chipped stone, baked clay, or concentrations of shell, bone, charcoal, glass, metal, or ceramics) are encountered in the project area during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative.

Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources and tribal cultural resources. This shall be accomplished, if feasible, by several alternative means, including:

- ▶ Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource 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 and tribal cultural resources shall be reviewed by the City representative, interested culturally affiliated Native American tribes and other 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 or tribal cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.

- ▶ Native American representatives from interested culturally affiliated Native American tribes shall be invited to review and comment on these analyses and shall have the opportunity to meet with the City 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 discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), shall install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource shall be determined in consultation with interested culturally affiliated Native American tribes and tribes shall be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing shall be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.
- ▶ The construction contractor(s) shall maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area shall be demarcated as an "Environmentally Sensitive Area."

If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources:

- ▶ Each resource shall be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable.

If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the CRHR, the damaging effects to the resource shall be avoided in accordance with California PRC Section 21084.3, if feasible. The applicant shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations shall be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed shall be provided in the project record.

Native American representatives from interested culturally affiliated Native American Tribes and the City representative shall also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation shall be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.

If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

- ▶ Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context to incorporate the resources with culturally appropriate protection and management criteria.
- ▶ Treat 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:

- Protect the cultural character and integrity of the resource.
- Protect the traditional use of the resource.
- Protect the confidentiality of the resource.
- Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- Protect the resource.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1 would reduce potential impacts to archaeological resources discovered during project construction activities to a **less-than-significant** level because the measures would require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources.

c) **Substantially disturb human remains, including those interred outside of formal cemeteries?**

Less-than-significant impact with mitigation incorporated. There are no known past cemeteries or burials within the project area. However, because earthmoving activities associated with project construction would occur, there is potential to encounter buried human remains or unknown cemeteries in areas with little or no previous disturbance. This impact would be **potentially significant**.

Mitigation Measure 3.5-2: Implement Protection Procedures in the Event of Inadvertent Discovery of Human Remains

If an inadvertent discovery of human remains is made at any time during project-related construction activities, the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City shall follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant, in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-2 would reduce potential impacts related to human remains to a **less-than-significant** level by requiring work to stop if suspected human remains are found, communication with the county coroner, and the proper identification and treatment of the remains consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act.

3.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy.				
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation of resources:

- ▶ **Petroleum:** Petroleum products (e.g., gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, which is responsible for almost 90 percent of the petroleum consumed in the state (EIA 2020). In 2015, a total of 15.1 billion gallons of gasoline were sold in California (CEC 2020). To meet CARB regulations, all gasoline and diesel fuel sold in California for motor vehicle is refined to be a specific blend of motor gasoline called California Reformulated Gasoline (EIA 2020).
- ▶ **Natural gas:** While the majority of natural gas consumers in California are residential and small commercial users, these users consume only about 35 percent of natural gas in the state. Larger volume gas consumers, such as utilities for electricity generation and industrial consumers, although fewer in number, consume the remaining 65 percent of natural gas used in the state (CPUC 2020).
- ▶ **Electricity and renewables:** In 2002, Senate Bill (SB) 1078 established a renewables portfolio standard (RPS) program. The program is jointly implemented by the California Public Utilities Commission and the California Energy Commission and requires all load-serving entities to procure 60 percent of their total electricity retail sale from renewable energy sources by 2030. Most retail sellers met or exceeded their 20-percent interim RPS target in 2018, including all large investor-owned utilities, which provide electricity to 72 percent of all utility customers (CPUC 2021).
- ▶ **Alternative fuels:** Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity). Use of alternative fuels is encouraged through various statewide regulation and plans (e.g., Low Carbon Fuel Standard, California’s 2017 Climate Change Scoping Plan [2017 Scoping Plan]).

3.6.2 Discussion

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

Less than significant. The project would result in energy consumption during construction and operation.

Construction

Energy would be consumed during project construction (i.e., gasoline and diesel fuel consumption) in order to operate and maintain construction equipment, operate haul trucks required to transport construction materials, and vehicle trips associated with commute trips by construction workers. Construction-related fuel consumption was calculated using equipment assumptions consistent with CalEEMod Version 2020.4.0 and fuel consumption factors derived from EMFAC 2011 (CAPCOA 2021). Construction of the project is estimated to require consumption of 48,558 gallons of diesel by off-road construction equipment and construction-related truck trips, and 78,483 gallons of gasoline associated with construction workers commuting to and from the construction site.

The one-time energy expenditure required to construct the convenience store, parking lot, car wash, gasoline pumps, and infrastructure associated with the project would be non-recoverable. However, energy needs for project construction would be temporary and would not require additional capacity or increase peak or base period demands for electricity or other forms of energy.

Operation

Building Energy

Energy would be required for operation of the project’s convenience store, gasoline pumps, car wash, and parking lot, that would be typical regarding the use of electricity for lighting, space and water, heating, appliances, and landscape maintenance activities. Indirect energy use would include electricity associated with pumping and treatment of indoor and outdoor water consumption for landscaping and the car wash, electricity associated with wastewater treatment, and fuel consumption associated with solid waste removal. Refer to Table 3.6-1 for an estimate of the project’s anticipated operational energy consumption.

Table 3.6-1 Operational Building Energy Consumption

Land Use	Energy Type	Energy Consumption	Units
Car Wash	Electricity	15,932	kWh/year
	Natural Gas	38,238	kBTU/year
Convenience Market w/ Gasoline Pumps	Electricity	46,563	kWh/year
	Natural Gas	22,286	kBTU/year
Parking Lot Lighting	Electricity	2,100	kWh/year
	Natural Gas	0	kBTU/year
Total (All Land Uses)	Electricity	64,595	kWh/year
	Natural Gas	60,523	kBTU/year

Notes: kWh/year = kilowatt-hours per year; kBTU/year = kilowatt British Thermal units per year

Source: Calculations by Ascent Environmental in 2021.

The project would be constructed in accordance with the current version of Title 24, Part 6 standards and would result in a more energy efficient project than if the project were to be developed under less stringent standards. The project would be consistent with general plan designations for retail land uses; therefore, would not increase energy demand over what was currently anticipated for the City of Sacramento.

The project’s energy consumption would be provided by the Sacramento Municipal Utility District (SMUD), which will progressively be supplied from cleaner, more fossil-fuel efficient sources during operations due to the RPS, which requires California utility companies (i.e., SMUD) to increase the use of renewables used to generate electricity for consumers (i.e., 52 percent of their energy production from renewables by 2027 (California Renewables Portfolio Standard Program [SB 100 of 2018]); 60 percent by 2030 [also SB 100 of 2018]; and 100 percent by 2045 [also SB 100 of 2018]). This would result in more renewable electricity generation supplying the project and therefore cleaner energy consumption at the project site compared to natural gas consumption. The project would also be beholden to

the mandatory requirements of the CalGreen code, which requires that a project of this size include, at a minimum, 1 EV capable charging space.

As mentioned previously, because of the RPS requirements, the electricity being consumed at the project site by electric vehicles would be generated by cleaner energy sources than gasoline-powered vehicles, and therefore, would not be considered a wasteful, inefficient, or unnecessary consumptions of energy.

Transportation Energy

Transportation-related energy consumption associated with project operation would result from vehicle trips to and from the gas station and car wash, employee commute trips, and other associated vehicle trips (e.g., delivery of fuel and supplies, maintenance trips). Operation of the project would require approximately 20 new employees. The project's estimated annual vehicle miles traveled (VMT) is 1,581,890, which is based on CalEEMod trip generation rates and trip distances, with the exception of the car wash which relies on trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, for a car wash. All trip modeling assumptions are included in Appendix A. Annual fuel demand of gasoline and diesel associated with the project-generated VMT is presented Table 3.6-2.

Table 3.6-2 Operational Transportation Fuel Consumption

Vehicle Category	Gasoline (gal/day)	Diesel (gal/day)
Passenger Vehicles	48,435	90
Trucks	15,234	6,504
Buses	362	269
Other Vehicles	931	153
Total (All Vehicle Types)	64,962	7,015

Notes: gal/year = gallons per year.

Source: Calculations by Ascent Environmental in 2021

The project would be located at the intersection of two roadways, Watt Avenue and Elder Creek Road, and would primarily serve existing vehicular traffic. The proximity of the project to an existing major regional roadway (i.e., Watt Avenue) would minimize travel distances, and associated fuel consumption, for vehicles accessing the project site.

Conclusion

The project would increase energy demand for temporary construction activities related to fuel consumption associated with vehicle use and material transport. However, construction activities would be relatively minor and would not increase long-term energy or fuel demand. Construction activities would consume the necessary amount of fuel and energy to complete work in an efficient and timely manner. The project facilities would meet the Title 24, Part 6 standards in effect at the time of construction, resulting in a more energy efficient project compared to development of the project under a less stringent energy code. Project energy consumption for construction, building operation, and transportation would not be considered wasteful, inefficient, or unnecessary. This impact would be **less than significant**, and no mitigation would be required.

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

Less than significant. As discussed under a) above, the project would be constructed in accordance with the current version of Title 24, Part 6 standards and would result in a more energy efficient project than if the project were to be developed under less stringent standards. Electricity serving the project would be supplied by SMUD, which is required to comply with SB 100, procuring at least 60 percent of their electricity supply from renewable sources and 100 percent carbon-free electricity by 2045. The project would not conflict with or obstruct a local plan for renewable energy or energy efficiency. Thus, this impact would be **less than significant**, and no mitigation would be required.

3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
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 California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

GEOLOGY

The project site is within California’s Central Valley and situated on Quaternary-age fluvial and alluvial deposits. The Sacramento Valley forms the northern half of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the southern Coast Ranges, and on the east by the Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with alluvium of Holocene

and Pleistocene age, composed primarily of sediments from the Sierra Nevada and the Coast Ranges that were carried by rivers and deposited on the valley floor. A geotechnical engineering report was prepared for the project site and determined that native materials at the project site consist of the Riverbank formation, which is a Pleistocene age (duration about 2.6 million years ago to 14,000 years ago) formation with sediments from the Sierra Nevada, underlying sediment formations such as terraces and alluvial fans (Terracon 2019).

The topography of the site is generally flat. Two concrete pads and asphalt pavement are located in the southeast and southwest corner of the project site. A geotechnical investigation was conducted for the project site: the site appears to have been previously graded, and that subsurface soil materials are "generally consistent with mapped geology (Terracon 2019a: 2)."

SEISMICITY

The Great Valley Fault Zone contains relatively few faults that have been active in the last 11,700 years. According to the California Geological Survey Earthquake Shaking Potential for California, the Sacramento region would experience lower levels of shaking less frequently (relative to other regions in the state), due to the Sacramento region's distance from known, active faults. There are no Alquist-Priolo Earthquake Fault Zones within Sacramento County (CGS 2021). However, very infrequent earthquakes could still cause strong shaking here (CGS 2003). The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento; the Great Valley fault, located 26 miles from Sacramento; Concord-Green Valley Fault, located approximately 38 miles from Sacramento; and the Hunting Creek-Berryessa Fault, located 38 miles from Sacramento.

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils or non-plastic fine-grained soils exist below groundwater. The California Geologic Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table. The project site is not located within a liquefaction hazard zone mapped by the CGS. Some loose sands were encountered near the surface, however, based on the clay content of the subsurface soils, density of subgrade soils, relative depth to groundwater and the age of the deposits, the potential for liquefaction at this site is low. Therefore, other seismically induced hazards, such as lateral spreading is, considered low (Terracon 2019).

SOILS

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) web soils survey, the project site contains San Joaquin silt loam, level, 0-1 percent slopes. This San Joaquin silt loam is alluvium deposit derived from granite (NRCS 2021). The geotechnical engineering report prepared for the project observed that subsurface soil material to consist of sand with silt/clay and lean clay varying in sand content. In regard to hazardous soil conditions, the geotechnical report prepared for the project indicated that the potential for liquefaction and lateral spreading is low, but expansive soils were found to be present at the site (Terracon 2019:7). Because the project site and surrounding areas are relatively flat, slope stability, landslide related hazards do not present substantial hazards to people and property. In addition, subsidence, the gradual caving or sinking of an area of land, has not been observed within Sacramento County, including the project site (DWR 2017).

PALEONTOLOGICAL RESOURCES

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources (SVP 2010). Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists and reflect the currently accepted standard practices. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on

paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates the following:

- ▶ Vertebrate fossils and fossiliferous (fossil-containing) deposits are considered significant nonrenewable paleontological resources and are afforded protection by federal, state, and local environmental laws and guidelines.
- ▶ A paleontological resource is considered to be older than recorded history, or 5,000 years before present, and is not to be confused with an archaeological resource.
- ▶ Invertebrate fossils are not significant paleontological resources unless they are present within an assemblage of vertebrate fossils or they provide undiscovered information on the origin and character of the plant species, past climatic conditions, or the age of the rock unit itself.
- ▶ A project paleontologist, special interest group, lead agency, or local government can designate certain plant or invertebrate fossils as significant.

In accordance with these principles, the SVP outlined criteria for screening the paleontological potential of rock units and established assessment and mitigation procedures tailored to such potential (SVP 2010). The paleontological potential for rock units to contain fossils as determined by SVP are as follows:

- ▶ High - Geologic units from which vertebrate or significant invertebrate or plant fossils have been recovered. Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant
- ▶ Undetermined - Geologic units for which little to no information is available.
- ▶ Low - Geologic units that are not known to have produced a substantial body of significant paleontological material (SVP 2010).

The project site is underlain by the Riverbank Formation (Davis 1981) The Riverbank Formation in Sacramento County has produced vertebrate and invertebrate fossils dating to the late Pleistocene (UCMP 2021). The fossils recovered to date from the Riverbank Formation are typically large, late Pleistocene vertebrates, although fish, frogs, snakes, turtles, and a few plants such as prune, sycamore, and willow are known as well. The typically large, Rancholabrean vertebrates include bison, horse, camel, mammoth, ground sloth, and wolf. The Rancholabrean fauna and flora are well known in California, and they typically include many more species than reported from Sacramento County. As a result, this formation has a high sensitivity rating.

3.7.2 Discussion

- 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 California Geological Survey Special Publication 42.)**
 - ii) **Strong seismic ground shaking?**
 - iii) **Seismic-related ground failure, including liquefaction?**

Less than significant. There are no Alquist-Priolo Earthquake Fault Zones within Sacramento County (CGS 2021). The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento. Surface ground rupture along faults is generally limited to linear zones, and faults within the

Sacramento region are generally inactive. In addition, liquefaction potentially on the site is considered to be low. This impact would be **less than significant**.

iv) Landslides?

Less than significant. Due to the relatively flat topography of the project site and adjacent regions, the occurrence of landslides at the project site highly unlikely. Therefore, the project would not result in additional risk of loss, injury, or death resulting from landslides. This impact would be **less than significant**.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant. The project would include development of a convenience store, fueling station, and car wash on a previously disturbed but vacant project site. Construction of the proposed project may involve activities such as grading, excavation, demolition, and removal of existing asphalt and concrete on site, and storage of fill material (stockpiling) that would result in potential for erosion impacts. Such construction activities would temporarily expose soils within the site that are currently protected from wind and water induced erosion by existing vegetation.

The applicant is required to submit for approval a Grading and Erosion and Sediment Control Plan to the City per Chapter 15.88 of the City's Code. In addition, the project must be developed in compliance with the State Water Resources Control Board (SWRCB) statewide General Permit (Order WQ 2009-0009-DWQ) for construction activities (Construction General Permit). In accordance with the requirements of the Construction General Permit, before construction of the proposed project, a risk assessment must be prepared and submitted to the Central Valley Regional Water Quality Control Board to determine the project's risk level and associated water quality control requirements. These requirements would, at a minimum, include the preparation and implementation of a storm water pollution prevention plan that identifies specific BMPs to be implemented and maintained on the site to comply with the applicable effluent standards. Compliance with the various requirements of the SWRCB statewide general permit for construction would reduce the potential for soil erosion and loss of topsoil to a less-than-significant level. This impact would be **less than significant**.

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?

Less than significant. As discussed above in Section 3.7.1, "Environmental Setting," the geotechnical report prepared for the project indicated that the potential for liquefaction and lateral spreading is low but indicated that expansive soils were found to be present at the site (Terracon 2019:7). Because the project site and surrounding areas are relatively flat, slope stability, landslide related hazards do not present substantial hazards to people and property. In addition, subsidence, the gradual caving or sinking of an area of land, has not been observed within Sacramento County, including the project site (DWR 2017). In addition, as part of the construction permitting process, the City requires completed reports of soil conditions at specific sites to identify unsuitable soil conditions, including the potential for liquefaction, settlement, subsidence, lateral spreading, and collapse. The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. Furthermore, the project must conform to the California Building Code (CBC) and Uniform Building Code (UBC), which provide standards for safe construction. Adherence to construction requirements would result in the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations. This impact would be **less than significant**.

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

Less than significant. As discussed in Section 3.7.1, "Environmental Setting," the project site contains expansive soils. Impacts of expansive soil to the proposed structures on the site may include cracking or stress in components of the proposed car wash facility or the convenience store building. However, these impacts may be minimized and accounted for through implementation of the recommended construction procedures, design standards, adherence to applicable design parameters, and by ensuring proper site drainage during project operation in order to reduce

excessive or unnecessary wetting and drying of soils on the project site. In addition, as discussed above under c), as part of the construction permitting process, the City requires completed reports of soil conditions at specific sites to identify unsuitable soil conditions. The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. Furthermore, the project must conform to the California Building Code and Uniform Building Code, which provide standards for safe construction. Adherence to construction requirements would result in the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations. This impact would be **less than significant**.

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?

No impact. The project does not include septic tanks. There would be **no impact**.

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

Less-than-significant impact with mitigation incorporated. Earthmoving activities could occur in formation that are sensitive for paleontological resources. The project site is located within the Riverbank formation, which is Pleistocene in age. Pleistocene-age alluvial deposits are sedimentary in nature; sedimentary alluvial deposits frequently contain fossils. Because numerous vertebrate fossils have been recovered from the Riverbank Formation in northern and central California, including within Sacramento County (UCMP 2021), this formation is considered to be paleontologically sensitive. Because a unique paleontological resource could be destroyed during project construction, this impact would be **potentially significant**.

Mitigation Measure 3.7-1

Before the start of any earthmoving activities, the applicant shall retain a qualified paleontologist to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. Training on paleontological resources shall also be provided to all other construction workers but may use videotape of the initial training and/or written materials rather than in-person training.

If any paleontological resources (fossils) are discovered during grading or construction activities within the project area, work shall be halted immediately within 50 feet of the discovery, and the City of Sacramento Community Development Department shall be immediately notified. The applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (SVP 2010). The recovery plan may include but is not limited to a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented by the applicant before construction activities resume in the area where the paleontological resources were discovered.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-1 would reduce or avoid potential impacts to paleontological resources. This would be reduced to a **less-than-significant** level.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions.				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

Greenhouse gases (GHGs) are gases in the Earth’s atmosphere that trap heat through a phenomenon called the greenhouse effect. Prominent GHGs that contribute to the greenhouse effect are carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The greenhouse effect occurs when solar radiation enters the Earth’s atmosphere and infrared radiation is absorbed by GHGs rather than being reflected back into space. This trapping of infrared radiation results in the warming of the atmosphere and is responsible for maintaining a habitable climate on Earth. However, GHG emissions from human activities have greatly increased GHG concentrations in the atmosphere and caused levels of warming far above natural levels, resulting in global climate change. According to the Sixth Assessment Report by the Intergovernmental Panel on Climate Change, there is scientific consensus that observed increases in atmospheric GHG concentrations and the consequential warming of Earth’s atmosphere, oceans, and lands have “unequivocally” been caused by human activities and influence (IPCC 2021). GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing activities, electricity generation and consumption, residential and commercial onsite fuel use, and agriculture and forestry.

Climate change is a global issue because GHGs are global pollutants, and even local GHG emissions contribute to global impacts. Many GHGs have long atmospheric lifetimes, from 1 year to several thousand years, and persist in the atmosphere for long enough durations to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with certainty, scientists have concluded that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestrations, resulting in an increase in atmospheric CO₂.

3.8.2 Regulatory Setting

GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006), which has been met by the state as of 2020, and to 40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order S-3-05 calls for reducing statewide GHG emissions to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 32 also delegates the authority for implementation to the CARB and directs CARB to enforce the statewide climate action plan. In accordance with AB 32, CARB prepared the Climate Change Scoping Plan for California, which was approved in 2008 and most recently updated in 2017. The 2017 revision to the Scoping Plan (i.e., 2017 Scoping Plan) updated the plan in compliance with SB 32. The Scoping Plan is updated by CARB every 5 years with the next update is anticipated to be released in 2022, which shall assess progress towards achieving the 2030 target and lay out a path to achieve carbon neutrality by mid-century.

SMAQMD is the primary agency responsible for addressing air quality concerns in Sacramento County—its role is discussed further in Section 3.3, “Air Quality.” SMAQMD has developed quantitative thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. For construction emissions generated by land development projects, SMAQMD’s recommended threshold is 1,100 metric tons per year of CO₂ equivalent (MTCO₂e). For operational emissions generated by land use development projects, SMAQMD recommends a tiered approach to evaluating the significance of operational emissions. All projects are required to implement the following tier 1 BMPs:

- ▶ BMP 1 – Projects shall be designed and constructed without natural gas infrastructure.
- ▶ BMP 2 – Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

Through implementing applicable BMPs, or equivalent onsite or off-site mitigation, project can show consistency with the 2017 Scoping Plan (SMAQMD 2021).

Projects can screen out by comparing to the SMAQMD’s operational screening levels table (equivalent to 1,100 MTCO₂e/year), including implementation of tier 1 BMPs. If the project emissions exceed the screening level, or the project fails to implement tier 1 BMPs, the project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation is required. Projects exceeding the screening level, must implement tier 1 and tier 2 BMPs, or provide equivalent onsite or off-site mitigation measures.

3.8.3 Discussion

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

Less-than-significant impact with mitigation incorporated. The levels of GHG emissions generated during project construction and project operations are discussed separately below.

Construction

GHG emissions associated with the project would be generated during construction and operation. Construction-generated GHG emissions would result from the use of heavy-duty off-road construction equipment, delivery trucks associated with materials transport, and worker commute trips.

GHG emissions associated with project construction and operation using CalEEMod, Version 2020.4.0 (CAPCOA 2021). See Appendix A for detailed input parameters and modeling results. Construction activities were assumed to last for 6-7 months. Emissions were quantified for the year of construction and first full year of operation (i.e., 2023). Modeling results are shown below in Table 3.8-1.

Based on modeling conducted, it is estimated that construction of the project would generate a total of 59 MTCO₂e over the duration of all construction activities. This one-time level of emissions would not exceed SMAQMD’s adopted mass emission threshold of 1,100 MTCO₂e/year for analyzing construction emissions (SMAQMD 2021). Construction-related GHG impacts would be **less than significant**.

Operation

Table 3.8-1 shows project-generated operational GHG emissions by emissions source. The project would generate operational GHG emissions of 693 MTCO₂e/year. Operation of the project would result in mobile-source GHG emissions associated with vehicle trips to and from the project, onsite natural gas combustion for space and water heating, onsite fuel consumption for landscaping equipment, and offsite emissions associated with electricity demand, water conveyance, wastewater treatment, and solid waste.

SMAQMD established a quantitative threshold of operational GHG emissions if projects implement SMAQMD’s tier 1 BMPs as components of project design. For projects that do implement tier 1 BMPs, operational emissions are compared to a threshold of 1,100 MTCO₂e/year. Table 3.8-1 summarizes the project’s operational GHG emissions in

2023. The emissions shown in Table 3.8-1 do not reflect the inclusion of SMAQMD's tier 1 BMPs, therefore, this level of emissions is considered **potentially significant**.

Table 3.8-1 Operational Greenhouse Gas Emissions by Emissions Source (2023)

Emissions Source	GHG Emissions (MTCO ₂ e/year)
Area	<1
Energy	14
Mobile	676
Waste	2
Water	1
Total Operational GHG Emissions	693

Notes: Totals may not sum exactly due to rounding. GHG = greenhouse gas; MTCO₂e = metric tons of carbon dioxide equivalent.

Source: Modeled by Ascent Environmental 2021.

MITIGATION MEASURES

Mitigation Measure 3.8-1: Implement SMAQMD's Tier 1 Best Management Practices for Reducing GHG Operational Emissions

The following tier 1 BMPs recommended by SMAQMD for the reduction of operational GHG emissions shall be implemented during project operation:

- ▶ BMP 1 – The project shall be designed and constructed without natural gas infrastructure.
- ▶ BMP 2 – The project shall meet the current CALGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

Implementation of Mitigation Measure 3.8-1 would prohibit the design and construction of natural gas infrastructure as part of the project thereby eliminating natural gas completely and reducing operational GHG emissions from buildings. Additionally, meeting the CALGreen Tier 2 standards would require EV ready spaces at the project site, reducing mobile-source GHG emissions by providing infrastructure for zero-emission vehicles. If a project implements these BMPs, it is then recommended that the project's emissions are evaluated against SMAQMD's operational limit of 1,100 MTCO₂e/year. If the project's operational emissions remain below this level, no additional BMPs are required. These BMPs are also considered to be consistent with the 2017 Scoping Plan.

As shown in Table 3.8-1, operational emissions associated with the project are anticipated to be 693 MTCO₂e/year. Implementation of the BMPs included in Mitigation Measure 3.8-1 would further reduce emissions well below SMAQMD's 1,100 MTCO₂e/year threshold following application of tier 1 BMPs.

Because the project's construction emissions would remain below 1,100 MTCO₂e/year, and the BMPs issued through implementation of Mitigation Measure 3.8-1 would reduce emissions below 1,100 MTCO₂e/year, the project's emissions would align with the 2017 Scoping Plan, the project's GHG emissions would not be a cumulatively considerable contribution to climate change. This impact would be reduced to **less than significant** with implementation of Mitigation Measure 3.8-1.

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

Less-than-significant impact with mitigation incorporated. Plans, policies, and regulations adopted for the purpose of reducing GHG emissions are developed with the purpose of reducing cumulative emissions related, primarily, to long-term operational emissions. As described previously, the project's construction-related GHG emissions would be finite and would not exceed SMAQMD's threshold for construction emissions, which were established in order to support statewide GHG emissions targets for 2030. As discussed above under Impact a), the project would not include

SMAQMD's tier 1 BMPs as project design features. Therefore, the project's operational emissions of 693 MTCO₂e/year in 2023 would be potentially significant and could conflict with the 2017 Scoping Plan. As such, this impact would be **potentially significant**.

MITIGATION MEASURES

Mitigation Measure 3.8-2: Implement Mitigation Measure 3.8-1

Implementation of Mitigation Measure 3.8-1 would require the project to include SMAQMD's BMPs to demonstrate consistency with the 2017 Scoping Plan and reduce the project's operational GHG emissions.

Through implementation of Mitigation Measure 3.8-1, the project would be consistent with the 2017 Scoping Plan, and therefore, statewide GHG emission reduction targets, would not exceed SMAQMD GHG emission thresholds, and would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. This impact would be **less than significant** with implementation of Mitigation Measure 3.8-2.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.9.1 Environmental Setting

Government Code Section 65962.5 requires that the California Department of Toxic Substances Control (DTSC) compile and maintain a list of hazardous waste facilities subject to corrective action, land designated as hazardous waste property, and hazardous waste disposals on public land. A search of the DTSC EnviroStor database indicated that there are no known hazardous conditions on the project site. The nearest listed hazardous materials site is the Safety-Kleen Systems, Inc., located at 6000 88th Street, Sacramento, CA, approximately 0.7 mile to the northwest of the project site. This site operates as a permitted hazardous waste facility. It is not currently subject to any corrective actions (DTSC 2021).

A Phase I Environmental Site Assessment (Phase I ESA) was prepared for the proposed project site. The site reconnaissance conducted as part of the Phase I ESA found an abandoned electrical transformer, municipal waste such as food wrappers, and demolition debris appearing to comprise of asphalt and concrete on the project site. The Phase I ESA noted the following historical land uses that occurred on the project site:

- ▶ Agricultural activities – appeared to occur between 1930s and 1950s.
- ▶ An asphalt sealing batch plant – September 1986 to June 1990.
- ▶ A concrete mixing operation – several months in the “mid 2000s.” (Terracon 2019: pp. 6 to 8)

Historical agriculture land uses may have used pesticides or herbicides at the project site. However, the ESA concluded that potential historical use of pesticides and herbicides does not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate government agency due to the short persistence of agricultural chemicals in the environment (Terracon 2019: 6). However, the report concluded that given historical industrial uses occurring at the project site during a time when records regarding use or release of hazardous materials into the environment were not well kept, the potential for contamination of soils by petroleum hydrocarbons and asphaltic hydrocarbons at the project site exists (Terracon 2019b: ii). The report concluded that this represented a Recognized Environmental Condition (REC). Soil contamination due to historical uses at the project site could result in the release of unspecified or undocumented contaminants into the air or into the environment during project construction. Release of these constituents could pose a health risk to construction workers and the general public in the vicinity of the project site during earth-moving activities (Terracon 2019: iii).

No schools were identified within one-quarter mile of the project site. The closest school found near the project site is the James Rutter Elementary School, which is located approximately 2.5 miles east of the project site. Camellia Elementary School is located approximately 2.8 miles southeast of the project site, approximately 2000 feet south of Florin Road and east of Power Inn Road.

The project site is not located within an airport land use plan. The nearest airport to the project site is the Mather Airport, located approximately 3.4 miles east of the project site at its closest point.

Elder Creek Road, in both the east and west directions, is identified as an evacuation route for the Elder Creek area by the City of Sacramento for known or recurrent emergency event types such as floods. (City of Sacramento 2005).

3.9.2 Regulatory Setting

Local, State, and federal regulations address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. Below are some examples of applicable federal and state regulations.

FEDERAL REGULATIONS

The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following federal laws:

- ▶ The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.
- ▶ The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal (“cradle to grave”).

- ▶ The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- ▶ The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

At the federal level, the transportation of hazardous materials is governed by the U.S. Department of Transportation (USDOT). The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States.

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

STATE REGULATIONS

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The corresponding state law is found in Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Emergency/Contingency Plan (HMBEP), which must include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The State of California has adopted USDOT regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

The California Fire Code is Part 9 of the CCR, Title 24, also referred to as the California Building Standards Code. Chapter 23, Motor Fuel-Dispensing Facilities and Repair Garages, sets forth regulations for motor fuel-dispensing stations and repair garages such as location of dispensing devices, emergency disconnect switches and shutoff valves, and spill control.

3.9.3 Discussion

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

Less than significant. Project activities may involve the transport, use, or disposal of hazardous materials during construction and during operation of the proposed facilities.

Hazardous materials involved in construction activities and used in construction equipment may include substances such as asphalt, fuels, lubricants, paints, and solvents. Relocation of the abandoned electrical equipment on site could involve the transport and disposal of electrical components containing polychlorinated biphenyl (PCBs).

Aspects of the project involving use, transport, storage, or disposal of hazardous materials includes the following: Operation of the proposed fueling station would involve vehicle refueling and fuel delivery by approximately one fuel

tanker per week; landscaping and maintenance may involve use of fertilizer, motorized equipment containing fuel, diesel, or batteries; and operation of the car wash facility would involve detergents and may involve lubricants or coolants associated with machinery maintenance. Operation of the convenience store may involve use of cleaning products similar to household hazardous waste. The fuel supplying the fueling station would be stored in two underground storage tanks (USTs) located approximately 10-12 feet below grade. The USTs would store vehicle fuel and diesel. The carwash facility constructed for the project would be one story and would consist of a car wash tunnel with various automated car washing equipment. One underground water clarifier/grease interceptor associated with the carwash facility would be located underground. Chemicals used in operation of the carwash facility would be bio-degradable, non-corrosive, and water-soluble.

The project would be subject to standard regulations related to the routine transportation, storage, and dispensing of gasoline. Fuel pump dispensers would be required to be equipped with automatic shutoffs and other safety device and signage, as required by Fire, Building, and Health codes. In accordance with Title 23, Section 2635(b) of the CCR, USTs would be required to have spill containment and overfill prevention systems. Fuel tank storage areas would be required to have appropriate safety design, equipment, and signage to protect public health and safety from leaks, fires, or spills involving vehicle fuel if any were to occur on the project site. As discussed in Section 3.7, "Geology and Soils," a SWPPP would be prepared and would include BMPs designed to prevent project-generated pollutants from entering stormwater and moving off-site into receiving waters throughout the construction and life of the project.

As described in Title 49 of the Code of Federal Regulations and implemented by Title 13 of the CCR, the USDOT Office of Hazardous Materials Safety has established strict regulations for the safe transportation of hazardous materials. Appropriate documentation for all hazardous waste that is transported in connection with project activities would be provided as required for compliance with existing hazardous materials regulations. Hazardous wastes produced on site are subject to requirements associated with accumulation time limits, proper storage locations and containers, and proper labeling. Additionally, for removal of hazardous waste from the site, hazardous waste generators are required to use a certified hazardous waste transportation company, which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal.

As previously stated, the State of California requires all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, to submit an HMBEP to its local CUPA. The HMBEP must include an inventory of the hazardous materials used in the facility, and emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. The HMBEP must also include the Material Safety Data Sheet for each hazardous and potentially hazardous substance used, which summarizes the physical and chemical properties of the substances and their health impacts. In the event of an accidental release of hazardous materials, the HMBEP requires immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information of all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

Compliance with applicable regulations would reduce risks associated with storage, transportation, and disposal of fuels, diesel, grease, and other hazardous materials used on site. Compliance with existing regulations, as described above, would require regular monitoring and reporting of underground storage tanks, and record keeping, public notification procedures, and monitoring and potential cleanup actions in the event of an accidental release or spill of hazardous materials. This impact would be **less than significant**.

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

Less-than-significant impact with mitigation incorporated. The Phase I ESA (Terracon 2019b) prepared for the proposed project involved a search of publicly available records (topographic maps, historical aerial photographs, and historical fire insurance maps dating back to as early as 1891) and an interview with the property owner regarding historical uses of the site. The Phase 1 ESA noted the following historical land uses that occurred on the project site:

- ▶ Agricultural activities – appeared to occur between 1930s and 1950s.
- ▶ An asphalt sealing batch plant – September 1986 to June 1990.
- ▶ A concrete mixing operation – several months in the “mid 2000s.” (Terracon 2019: pp. 6 to 8)

Historical agriculture land uses may have used pesticides or herbicides at the project site. However, the ESA concluded that potential historical use of pesticides and herbicides does not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate government agency due to the short persistence of agricultural chemicals in the environment (Terracon 2019: 6). However, the report concluded that given historical industrial uses occurring at the project site during a time when records regarding use or release of hazardous materials into the environment were not well kept, the potential for contamination of soils by petroleum hydrocarbons and asphaltic hydrocarbons at the project site exists (Terracon 2019: ii). Soil contamination due to historical uses at the project site could result in the release of unspecified or undocumented contaminants into the air or into the environment during project construction. Release of these constituents could pose a health risk to construction workers and the general public in the vicinity of the project site during earth-moving activities (Terracon 2019: iii). This impact would be **potentially significant**.

Mitigation Measure 3.9-1 Prepare and a Phase II Environmental Site Assessment and Implement Recommendations

Prior to the start of construction activities, the project applicant should submit a completed Phase II Environmental Site Assessment (Phase II ESA) prepared by a qualified professional, in accordance with procedures included in ASTM E1903 – 19, “Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process,” including soil sampling and laboratory analyses, and evaluation of potential remediation measures, if applicable. The construction contractor and applicant must implement all recommendations identified within the Phase II ESA prepared for the project. The construction contractor should implement all recommendation included in the Phase II ESA.

Significance after Mitigation

The potential to release hazardous materials during construction would be reduced to a less-than-significant level through implementation of Mitigation Measure 3.9-1 because further analysis of the project site would be conducted through preparation of a Phase II ESA. The Phase II ESA shall include actions to remove or otherwise address potentially hazardous conditions on the site. Because these actions would be implemented prior to the start of construction activities, the potential to release hazardous materials into the environment would be reduced to a **less-than-significant** level.

c) 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. No schools or day care facilities were identified within one-quarter mile of the project site. The nearest K-12 school identified is located approximately 2.5 miles away from the project site. The area surrounding the project site are industrial and commercial in nature, and no schools are proposed for construction within one-quarter mile of the proposed project site. Therefore, there would be **no impact**.

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

Less than significant. Government Code Section 65962.5 requires that DTSC compile and maintain a list of hazardous waste facilities subject to corrective action, land designated as hazardous waste property, and hazardous waste disposals on public land. The project site was not identified in the environmental regulatory databases. However, the Phase I ESA did identify potential for encounter of contaminated soil at the project site due to historical land uses at the project site. For a discussion of potential soil contamination at the project site, see the discussions under item b) above. As the site is not listed in any of the environmental databases, this impact would be **less than significant**.

- 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?

No impact. The project site is not located within an airport land use plan. The nearest airport to the project site is Mather Airport, which is located approximately 3.4 miles from the project site at its nearest point. Therefore, the project site therefore is not located within two miles of an airport, and employees of the proposed convenience store and carwash would not be subject to safety hazards or excessive noise from airports. The project would have **no impact**.

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

Less than significant. The project site is located adjacent to Elder Creek Road, which is identified as an evacuation route in both directions by the City of Sacramento in the City's Emergency Operations Response Plan. Full road closure would not be required as construction staging would likely occur within the project site, and no roadway improvements along main roadways adjacent to the project site are proposed as part of this project. In the event that partial road closure may be required during construction, emergency access would be maintained in accordance with standard construction best management practices. Any impacts to impacts to the evacuation route would be temporary over the duration of construction, would be limited in nature (i.e., no full road closures), and would comply with standard construction best management practices. Therefore, this impact would be **less than significant**.

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

No impact. The project site is located with an urban, developed area. The project site is not located within a Fire Hazard Severity Zone (FHSZ) per the State's Department of Forestry and Fire Protection FHSZ Viewer tool (CAL FIRE 2021). Given that the project is within a developed urban area, and is not identified to be within a FHSZ, the project site would not be subject to risk from wildland fires. Therefore, there would be **no impact**.

3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 on- or offsite erosion or siltation;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

SURFACE HYDROLOGY

The project site is located within the Morrison Creek Stream Group. The Morrison Creek Streams Group is a gently sloping region south of the American River, between Folsom Lake and the Sacramento River. The streams flow in a generally west-southwest direction, from their origins near the base of the Sierra Nevada foothills to near the Sacramento River. The streams are contained east of the Sacramento River levee system, and flows are conveyed south to a discharge into the Consumes River (Sacramento County 2010).

GROUNDWATER

The City overlies two subbasins of the Sacramento Valley Groundwater Subbasin, the North American and South American subbasins. The two subbasins are separated and recharged from the American River. The proposed project site is located within the North American Subbasin, which is bounded by Bear River to the north, Feather River to the west, the Sacramento and American Rivers to the south, and a north-south line extending from the Bear River to Folsom Lake to the east.

Groundwater levels in the western portion of the Sacramento Valley Groundwater Basin have been generally increasing since the 1980s despite a turn towards drier conditions and increasing population. The recent increase in groundwater levels has been largely attributed to a combination of conjunctive use projects (i.e., the combined use of groundwater and surface water sources), construction of the Freeport diversion facility and Vineyard surface water treatment plant, urban conservation plans, and changes in use of previous agricultural land. Groundwater levels in some areas of the eastern portion of the Sacramento Valley Groundwater Basin show decreases in groundwater levels despite the lack of significant changes in land or water use. The causes of these declines are not well understood but may be attributed to the combination of remediation activities at the Inactive Rancho Cordova Test Site, Aerojet Superfund Site, and Kiefer Landfill and the aquifer becoming thin and low-yielding in this area (NDGSA 2022).

The Sustainable Groundwater Management Act (SGMA), signed into law in 2014, provides a framework for long-term sustainable groundwater management across California. It requires that local and regional authorities in medium- and high-priority groundwater basins form a locally-controlled and governed Groundwater Sustainability Agency (GSA), which will prepare and implement a Groundwater Sustainability Plan (GSP). In accordance with SGMA, the Public Draft Report, South American Subbasin GSP was prepared and began public review on June 18, 2021. The Final GSP was approved in December 2021 (NDGSA 2022).

FLOOD CONDITIONS

The proposed project site is located within an area of minimum flood hazard (FEMA 2020).

3.10.2 Discussion

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

Less than significant. As discussed in Chapter 2, Project Description, the project would connect with existing drainage infrastructure located within Elder Creek Road and would include onsite stormwater facilities to treat and attenuate stormwater flows consistent with City requirements. Stormwater runoff generated by impervious areas would be captured by a series of new drain inlets and conveyed to onsite treatment facilities. Treated runoff would be routed through new underground stormwater pipes to the City's existing storm drains. There are no waterways on the project site. The project applicants would prepare a project specific drainage study meeting the criteria specified in the current Onsite Design Manual and/or the Design and Procedures Manual for review and approval by the Department of Utilities.

Construction

The project would comply with several regulations designed to reduce or eliminate construction-related water quality effects, including the National Pollutant Discharge Elimination System (NPDES) General Construction Permit, Stormwater Management and Discharge Control Code, Grading Ordinance, the *Stormwater Quality Design Manual for the Sacramento Region*, and the City's Stormwater Quality Improvement Plan (SQIP). Before initiation of any construction activities that would disturb one acre or more, an application for coverage under the General Construction Permit, as well as an erosion and sediment control plan, must be submitted to the City. Before construction may begin, a stormwater pollution prevention plan (SWPPP) would be developed and a notice of intent filed with the Central Valley Regional Water Quality Control Board. Following approvals of coverage under the

General Construction Permit, the erosion and sediment control plan, and the SWPPP are obtained, construction would begin and include all BMPs and Low Impact Development (LID) measures as detailed in the erosion and sediment control plan and SWPPP. BMPs and LID measures consist of a wide variety of measures to reduce pollutants in stormwater and other non-point source runoff.

Operation

Development of the site with a convenience store, car wash, fueling facilities, and paved parking areas would create impervious surfaces within the site. Fuel could be spilled while being dispensed to auto and trucks or during fuel deliveries. Oils, lubricants, heavy metals, and other water quality contaminants would create residue on the paved surfaces of the site, which could be carried in stormwater runoff during rain events and could reach surface or groundwaters. Additionally, a leak in an underground storage tank could continue for a long period undetected, resulting in the potential contamination of groundwater.

The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. It should be noted that the proposed project would comply with Section 13.08.145, mitigation of drainage impacts: design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code, which requires the following:

When property that contributes drainage to the storm drain system or combined sewer system is improved or developed, all stormwater and surface runoff drainage impacts resulting from the improvement or development shall be fully mitigated to ensure that the improvement or development does not affect the function of the storm drain system or combined sewer system, and that there is no increase in flooding or in water surface elevation that adversely affects individuals, streets, structures, infrastructure, or property.

Underground storage tanks are regulated through California Code of Regulations, Title 23, Water, Division 3, Chapter 16 (underground storage tank regulations). to protect water quality. The underground storage tank regulations require rigorous design, construction, testing, and monitoring for all underground storage tank systems. These regulations require reinforcement of tank areas that receive the greatest wear and an independent secondary containment system large enough to contain 150 percent of the volume of the largest tank, or 10 percent of the total volume of all tanks, whichever is greater. A leak interception and detection system is also required that prevents stored fuel from contacting groundwater. Additionally, the owners of all new underground storage tanks are required to develop a routine monitoring and reporting plan, and a response plan for any unauthorized release before the storage tank system is put into service.

Conclusion

Conformance with City and State regulations would ensure that a substantial degradation to water quality or violation of any water quality objectives due to increases in sediments and other contaminants generated by implementation of the proposed project would not occur. All on-site development would comply with LID treatment requirements associated with the City's MS4 permit. Therefore, no additional significant environmental effect would occur related to substantial degradation of water quality or violation of any water quality objectives set by the SWRCB, due to increases in sediments and other contaminants generated by buildout of the project site with commercial uses.

Construction and operation of the project would involve the use and transport of automotive fuels, lubricants, and other chemicals, which could be spilled or otherwise discharged and carried to surface or groundwaters. However, compliance with City requirements (erosion and sediment control ordinance and stormwater management and discharge control ordinance, SQIP, and NPDES Construction General Permit) state requirements related to underground storage tanks (CCR, Title 23, Water, Division 3, Chapter 16), and implementation of project features (e.g., hydrologically isolate drainage systems from fueling areas) would reduce potential adverse effects to water quality to a **less-than-significant** level.

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

Less than significant. The project would create less than one acre of new impervious surfaces, which could reduce the amount of precipitation that is able to infiltrate the soil and recharge groundwater reserves. However, the project incorporates large areas of landscaping, which would allow runoff from impervious surfaces to infiltrate into the soil and would preserve groundwater recharge. The project does not include groundwater wells and would receive water from the City of Sacramento municipal supply (For an analysis of the projects effects on water supply, see Section 3.19, "Utilities and Service Systems."). For these reasons, the proposed project would have a **less-than-significant** impact on groundwater supplies and groundwater recharge.

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 on- or offsite erosion or siltation;

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

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

iv) Impede or redirect flood flows?

Less than significant. As described in Chapter 2, "Project Description," the project would connect with existing drainage infrastructure located within South Watt Avenue and Elder Creek Road and would include onsite stormwater facilities to treat and attenuate stormwater flows consistent with City requirements. Stormwater runoff generated by impervious areas created by the proposed car wash site would be captured by a series of new drain inlets and conveyed to onsite treatment facilities. Treated runoff would be routed through new underground stormwater pipes to the City's existing storm drains. The project applicants would prepare a project specific drainage study meeting the criteria specified in the current Onsite Design Manual and/or the Design and Procedures Manual for review and approval by the Department of Utilities. This impact would be **less than significant**.

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

No impact. The project site is not located within a flood hazard, tsunami, or seiche zone. There would be **no impact**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant. As discussed above under a), the project would be consistent with City requirements, including erosion and sediment control ordinance and stormwater management and discharge control ordinance, SQIP, and NPDES Construction General Permit. The project would not conflict with projects or management actions included in the GSP. This impact would be **less than significant**.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 Environmental Setting

The project site is located on a vacant, previously developed parcel that is located within unincorporated Sacramento County and lies within the Sphere of Influence of the City of Sacramento. The site is designated in the Sacramento County General Plan as Intensive Industrial (INT IND) and zoned as light industrial (M-1) (Sacramento County 2021). Surrounding land uses consist primarily of industrial or commercial uses.

3.11.2 Discussion

For information regarding LAFCo’s statutory evaluation of open space resources, refer to Section 4, Reorganization, of this IS/MND.

a) Physically divide an established community?

No impact. The project site is located within an urbanized area primarily surrounded by commercial and industrial uses. There are no residential uses on the project site, and the area does not contain an established residential community. Develop of the project would not result in the physical division of an established community. There would be **no impact**.

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?

No impact. Project construction would occur within an area zoned by Sacramento County as M-1 Light Industrial. The project would include development of convenience store, fueling station, and car wash on a vacant, previously developed parcel. The project includes annexation of the project site into the City of Sacramento, and establishment of a land use designation and zoning district. Because the project would be consistent with the future land use designation and zoning district, the project would not result in any land use changes and would not conflict with any adopted plans, policies, or regulations adopted for avoiding or mitigating an environmental effect. Therefore, there would be **no impact**.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.12.1 Environmental Setting

Mineral resources in Sacramento County include sand, gravel, clay, gold, silver, peat, topsoil, lignite, natural gas and petroleum. The project site is located within mineral resources zone (MRZ)-2 for Portland cement concrete-grade aggregate (Sacramento County 2006: Plate GS-4). Zone MRZ-2 indicates that that the area is underlain by mineral deposits where geologic data indicate that substantial resources are present. However, the project site in not located within a State-designated Aggregate Resources Area (ARA) (Sacramento County 2006: Plate GS-6), and does not occur within a County Mineral Resource Area (MRA) (Sacramento County 2006: Plate GS-6).

3.12.2 Discussion

- 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?
- 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?

Less than significant. As discussed above in Section 3.12.1, the project site is located within an area that is underlain by substantial mineral deposits but is not located within a State-designated ARA or a County MRA. Implementation of the project would not affect the availability of the mineral resources. This impact would be **less than significant**.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise.				
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Non-auditory behavioral effects of noise on humans are primarily subjective effects, such as annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communication, sleep, and learning.

Noise is typically expressed in decibels (dB), which is a common measurement of sound energy. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The human ear is not equally sensitive to loudness at all frequencies (i.e., pitch) in the audible spectrum. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, and identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted noise levels. For this reason, the A-weighted sound levels are used to predict community response to noise from the environment and are expressed as A-weighted decibels. All sound levels discussed in this section are A-weighted decibels unless otherwise noted.

The intensity of environmental noise fluctuates over time, and several different descriptors of time-average noise levels are used. The noise descriptors used in this chapter include:

- ▶ **Equivalent Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq} , is the energy average of sound levels occurring during a 1-hour period.
- ▶ **Maximum Noise Level (L_{max}):** The highest instantaneous noise level during a specific time period (Caltrans 2013:2-48).
- ▶ **A-Weighted Decibels (dBA):** A measurement of sound energy used to predict community response to a noise from the environment based on how humans perceive sound levels.

Noise Generation and Attenuation

Noise can be generated by many sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and industrial operations. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on a variety of factors. Atmospheric conditions such as wind speed, wind direction, turbulence, temperature gradients, and humidity alter the propagation of noise and affect levels at a receiver.

The presence of a barrier (e.g., topographic feature, intervening building, and dense vegetation) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. Natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may function as noise barriers. To provide some context to noise levels described throughout this section, common sources of environmental noise and associate noise levels are presented in Table 3.13-1.

Table 3.13-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
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, Bedroom at night, Concert hall (background)
Quiet rural nighttime	20	Broadcast/Recording Studio
	10	
Threshold of Human Hearing	0	Threshold of Human Hearing

Notes: dB = A-weighted decibels; mph = miles per hour.

Source: Caltrans 2013.

Ground Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Ground-borne vibration is vibration of and through the ground. Sources of ground-borne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions).

NOISE AND VIBRATION REGULATIONS

Federal

To address the human response to ground vibration, the Federal Transit Authority (FTA) has guidelines for maximum-acceptable vibration impact criteria for different types of land uses. These guidelines are presented in Table 3.13-2.

Table 3.13-2 Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 microinch/second)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations	65 ⁴	65 ⁴	65 ⁴
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Notes: VdB re 1 microinch/second = vibration decibels referenced to 1 microinch/second and based on the root mean square velocity amplitude.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day.

² "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

³ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

⁴ This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

State

The California Department of Transportation's (Caltrans) Transportation and Construction Vibration Manual (Caltrans 2020) provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.13-3 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.13-3 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4–0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006–0.019	Vibration unlikely to cause damage of any type

Notes: in/sec = inches per second; PPV = peak particle velocity.

Source: Caltrans 2020.

Local

The project site is in unincorporated Sacramento County and would be annexed into the City of Sacramento as part of the project. Therefore, the City of Sacramento local policies pertaining to noise are applicable to the project. The City of Sacramento 2035 General Plan Environmental Constraints Element contains noise policies and standards (e.g., exterior and interior noise-level performance standards for new projects affected by or including non-transportation noise sources, and maximum allowable noise exposure levels for transportation noise sources (City of Sacramento 2015) and the Sacramento City Code contains noise limits for sensitive receptors that are considered relevant to the evaluation of potential noise impacts as a result of the project (City of Sacramento 2016). Applicable noise standards used in this analysis are summarized below.

Sacramento City Code

Section 8.68.060 Exterior Noise Standards of the City of Sacramento City Code states that a standard of 55 dBA is applied during the hours from 7:00 a.m. to 10:00 p.m., and a standard of 50 dBA is applied during the hours from 10:00 p.m. to 7:00 a.m. for residential and agricultural uses. These noise levels are then adjusted according to the cumulative duration of the intrusive sound. For example, if the cumulative period is 5 minutes per hour, then the standard is adjusted by 10 dBA to 65 dBA during daytime hours and 60 dBA during nighttime hours. If the cumulative period is 30 minutes per hour, no adjustments are made and the standard is 55 dBA during the daytime and 50 dBA during the nighttime, functionally similar to the average hourly noise level, or L_{eq} . The noise level that shall not be exceeded for any time per hour is 75 dBA during the day and 70 dBA during the night, functionally similar to a maximum noise level or L_{max} .

Section 8.68.080 Exemptions of the City of Sacramento City Code states that noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday are exempt from the City's noise standards. The exemptions includes that all project equipment engine must be equipped with suitable exhaust and intake silencers which are in good working order.

Sensitive Receptors

The project site is located in an urban area of Sacramento County, on the eastern edge of the City of Sacramento, and is primarily surrounded by commercial and industrial land uses to the north and west, and single-family residences to the southeast. Existing noise sources include roadway traffic from South Watt Avenue and Elder Creek Road.

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise level, and because of the potential for nighttime noise to result in sleep disruption. The nearest sensitive receptors to the project site include single family residences located approximately 220 feet and 440 feet to the southeast of the project site, along Elder Creek Road.

3.13.2 Discussion

- 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 in other applicable local, state, or federal standards?**

Less than significant. The temporary and permanent noise levels emitted during project construction and operation are discussed separately below.

Construction

The project would result in temporary increases in noise levels during construction as a result of heavy construction equipment and materials hauling. Construction of the project would occur over approximately 6–7 months. Typical construction activities would include earthwork such as grading excavation, trenching, backfilling, hauling, and compaction. Underground storage tanks, utilities, and underground water clarifier/grease interceptor would be installed. Paving, lighting, drainage, and reinforced structures, including new facilities (i.e., convenience store, fueling stations, car wash, and equipment room) would be constructed. Construction-related noise would result from the use of heavy-duty equipment for excavation, building construction, and material hauling. Construction noise would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent throughout the day during construction. Construction activities would occur between approximately 7:00 a.m. and 4:00 p.m., Monday through Friday, for most of project construction.

As described in the Project Description, construction equipment would vary day to day depending on the project phase and the activities occurring, and would involve operation of graders, a paddle wheel, bulldozers, compactors, backhoes, trenchers, water trucks, excavators, scrapers, tractors, forklifts, generator sets, pavers, paving equipment,

rollers, welders, and air compressors. No pile driving or blasting would be required during construction activities. Reference noise levels for some of these equipment types are shown in Table 3.13-4.

Table 3.13-4 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (dBA) L_{max} at 50 feet
Air Compressor	80
Compactor	83
Excavator	85
Bulldozer	85
Grader	85
Generator	82
Backhoe	80
Paving Equipment	80-85
Roller	85
Scraper	85
Trencher	82
Trucks	84
Tractor	84
Welder	40

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment. It was assumed a paddle wheel would have similar noise levels to a scraper (i.e., 85 dBA) and that a forklift would generate similar noise levels to other heavy duty construction equipment

¹Paving equipment assumes use of a paver, pavement scarifier, drum mixer, and cement pump.

Source: FTA 2018.

The loudest pieces of equipment that would be used during construction would include excavators, bulldozers, graders, paving equipment, rollers, and scrapers, all of which individually generate 85 dB L_{eq} at 50 feet (FHWA 2006:3). It was conservatively assumed that the loudest four pieces of equipment would be operating simultaneously in close proximity to each other, combining to generate a modeled maximum noise level from construction activity. Note that pieces of construction equipment move around a construction site and generally are not close to each other for safety reasons; thus, noise levels would fluctuate throughout the day, depending on the actual activity taking place and equipment used at any one location on the site.

Assuming simultaneous operation of a bulldozer, a grader, paving equipment, and a roller and accounting for typical use factors of individual pieces of equipment and activity types along with typical attenuation rates, on-site construction-related activities could result in hourly average noise levels of approximately 87 L_{eq} and 91 dB L_{max} at 50 feet.

As described above, the nearest sensitive land uses are residences located approximately 220 feet to the southeast of the project site. At this distance, noise from the use of heavy-duty equipment would attenuate, from distance alone, to 70 dBA L_{eq} and 74 dBA L_{max} . Noise levels at receptors located further than this would be even lower, due to increasing distance from the source. See modeling in Appendix D for details.

The City's Municipal Code Section 8.28.060 exempts certain activities, including construction, from the City's noise standards as long as the activities are limited to the hours of 7 a.m. to 6 p.m. on Monday through Saturday and 9 a.m. to 6 p.m. on Sunday. The exemption provides that construction equipment must include appropriately maintained exhaust and intake silencers. However, the City does not specify limits in terms of maximum noise levels that may occur during the allowable construction hours. No nighttime work is anticipated, and typical construction work hours would be Monday through Friday from 7:00 a.m. to 4:00 p.m., times when construction activity is exempt

and when noise impacts are less likely to effect sensitive receptors (e.g., day-time hours), thereby reducing construction noise impacts to nearby receptors. Additionally, construction activity and resulting noise would be temporary and would cease once construction is complete. Therefore, construction would not generate significant levels of noise in excess of adopted noise standards.

Operation

Stationary Noise Sources

The project would result in stationary noise sources as a result of operation of the car wash blower arches and vacuums, and the Heating, Ventilation, and Air Conditioning (HVAC) system associated with the convenience store. The convenience store and car wash would be operational 24 hours a day, 7 days a week, and 365 days a year.

The nearest existing sensitive receptors to the car wash location, which would be located at the northern edge of the project site, and to the convenience store, which would be located in the southwest corner of the project site, would be a single-family residence on Elder Creek Road located 480 feet to the south of both stationary noise sources (i.e., blowers and HVAC equipment). The project would result in a stationary noise source impact if the noise levels resulting from project operation would exceed the City's noise standards for exterior residential noise levels. As discussed previously, the City of Sacramento City Code states that a standard of 55 dBA is applied during the hours from 7:00 a.m. to 10:00 p.m., and a standard of 50 dBA is applied during the hours from 10:00 p.m. to 7:00 a.m. for residential and agricultural uses. Adjusting these noise levels according to a cumulative 30 minutes per hour duration of the noise source, the standard is 55 dBA during the daytime and 50 dBA during the nighttime, functionally similar to the average hourly noise level or L_{eq} , and the maximum noise level that shall not be exceeded for any time per hour is 75 dBA during the day and 70 dBA during the night, functionally similar to a maximum noise level or L_{max} .

The L_{max} associated with a typical carwash blower arch assembly at a distance of 50 feet is approximately 81 dBA (Sonny's Enterprises 2021). The blowers would run intermittently, servicing roughly 50 vehicles per day. Therefore, the blowers would not be a constant source of stationary noise, rather would generate high noise levels for short bursts of time (i.e., three minutes per vehicle), thus using the L_{max} unit of noise measurement and standard would be appropriate. The car wash is assumed to include two blower arches (i.e., one blower on each side of the tunnel). Accounting for a 3.0 dBA increase due to the combined noise from the two blower arches, the blower noise associated with the project would be approximately 84 dBA L_{max} at a distance of 50 feet. Assuming standard attenuation, car wash stationary noise levels would be approximately 66 dBA at the nearest sensitive receptor (i.e., 480 feet away), not accounting for any shielding provided by intervening buildings. In addition, because the car wash tunnel exit would face away from existing sensitive receptors and the blower equipment would be located within the car wash building, it is expected that modeled noise levels would be further reduced at nearby receptors. Nonetheless, modeled, worst-case levels would not exceed the City of Sacramento's daytime maximum noise standard (i.e., 75 dBA L_{max}) or nighttime maximum noise standard (i.e., 70 dBA L_{max}) at nearby sensitive receptors located 480 feet from the project site. It should be noted that in addition to noise from the car wash blowers, the project would generate noise associated with the use of the vacuum stalls located at the west side of the project site. However, because the vacuums would be contained within an enclosure, vacuum noise at the sensitive receptors would be negligible relative to blower noise.

The HVAC equipment associated with the convenience store is located approximately 480 feet from the nearest existing sensitive receptor. HVAC equipment could take the form of fans, pumps, air compressors, chillers, or cooling towers. Noise levels from HVAC equipment vary substantially depending on unit efficiency, size, and location, but generally range from 45 to 70 dBA L_{eq} at a distance of 50 feet (EPA 1971). The HVAC equipment would run continuously during operation of the project facilities (i.e., 365 days a year, 24 hours a day, 7 days a week) thus sound levels would vary throughout the year based on wind, surrounding roadway traffic noise, and other noise blocking sources throughout the day and night. Thus, the L_{eq} unit of noise measurement and standard would be appropriate. Assuming standard attenuation, HVAC equipment stationary noise levels would be approximately 41 dBA at the nearest sensitive receptor (i.e., 480 feet away). Because the convenience store building itself would provide a substantial amount of noise attenuation it is expected that modeled noise levels would be further reduced at nearby

receptors. Nonetheless, modeled, worst-case levels would not exceed exterior noise levels at the sensitive receptors to exceed the City's 55 dBA during the day and 50 dBA during the night, or L_{eq} .

Although the project would result in two sources of stationary noise during operation (i.e., car wash blowers and vacuums, and convenience store HVAC equipment), both stationary noise sources would not increase ambient noise levels at the sensitive receptors that would exceed the City of Sacramento's day or night exterior noise levels for residential uses. Therefore, the project would not result in stationary noise sources that increase ambient noise levels in excess of standards established in the local noise ordinance.

Transportation Noise

The project would result in operational traffic related noise sources from trips associated with customers, employees, maintenance and landscaping workers, fuel tanker deliveries, and vendor trucks delivering inventory coming to and from the project site.

The existing traffic volumes on South Watt Avenue at the intersection of Elder Creek Road, where the project site is located, is approximately 20,913 average daily trips (ADT)(Sacramento County 2021). As mentioned above, doubling the noise source (e.g., doubling the ADT on a road) increases the sound level by 3 dBA. Therefore, if the project would result in a doubling of the existing ADT on South Watt Avenue or Elder Creek Road, it would result in a 3 dBA increase in noise. It is generally accepted that a change of 3 dBA is barely perceptible, a change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice or half as loud to the average human ear (Caltrans 2013:6-5). Therefore, even if the project were to double the number of trips nearby roadways (i.e., South Watt Avenue and Elder Creek Road), the noise increase would be barely perceptible to any nearby receptors.

The project includes development of a convenience store, fueling stations, and car wash, which is not considered major trip generating land uses, that is, most trips associated with the project would primarily be from vehicles passing by or diverting of existing trips on local roads; although this may result in the shifting of cars on local roads, it would not generate substantial new trips. Operation of the convenience store and car wash would result in approximately 12 employee commute trips a day, fueling tanks and vendor trucks would come to and from the project site roughly four times a week delivering fuel and inventory, and maintenance and landscaping would intermittently travel to the site resulting in minimal weekly trips. Therefore, the project would not be expected to generate a substantial number of additional trips to existing nearby roadways.

Because the project is not a major trip generating land use, would primarily serve pass by and existing trips, and employee, fueling tanker, and vendor trips would be minimal, the project would not be expected to add an additional 20,913 trips on the nearby roadways and would not result in an increase in noise levels that would be perceptible to any nearby receptors. Therefore, the increase in noise levels from operational traffic noise sources would not be substantial.

Conclusion

As described in the project description, construction activities would occur during the daytime hours when construction noise is exempt and at time when noise impacts are less likely to impact sensitive receptors. Additionally, the project does not include land uses that would result in substantial operational noise from stationary (i.e., car wash blowers and HVAC system) or on-road mobile sources. Thus, implementation of the project would not generate a substantial temporary or permanent increase in ambient noise levels in excess of allowable standards in the vicinity of the project. The impact would be **less than significant**.

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

Less than significant. No major sources of vibration would be constructed within the project area, and project-related construction would not involve the use of ground vibration-intensive activities, such as pile driving or blasting that typically generate the highest vibration levels and are, therefore, of greatest concern when evaluating construction-related vibration impacts. Pieces of equipment that generate lower levels of ground vibration such as bulldozers, rollers, and haul and water trucks, would be used during construction, with rollers being associated with the maximum ground vibration levels during construction activities.

According to the FTA, vibratory rollers produce groundborne vibration levels that could result in 0.21 inches per second (in/sec) peak particle velocity (PPV) and 94 vibration decibels (VdB) within 25 feet of operational construction equipment (FTA 2018, Caltrans 2020). Caltrans recommends a level of 0.2 in/sec PPV with respect to structural damage for fragile buildings (i.e., nearby residential receptors). FTA guidance for maximum acceptable VdB levels are primarily concerned with sleep disturbance in residential areas and can be avoided by keeping exposures at or below 80 VdB during typical sleeping hours.

Vibration levels would exceed the Caltrans threshold for fragile buildings (i.e., 0.089 in/sec PPV) at a distance of 26 feet of construction activity and would exceed the FTA vibration threshold for sensitive uses (i.e., 80 VdB) within 73 feet. Construction activities would be located 220 feet away from the nearest receptor and structure, south of the project site. Thus, on-site construction activities would occur beyond 26 feet from any existing structure and 73 feet from sensitive land use and therefore would not result in any potential for structural damage or annoyance to nearby receptors.

Further, project construction activities would occur during typical daytime hours when people are generally awake and less sensitive to noise and vibration levels (i.e., construction would occur only between 7 a.m. and 4 p.m. on Monday through Friday), reducing the exposure of existing sensitive off-site receptors to excessive ground vibration.

Therefore, because no pile driving or blasting would occur during project construction and construction would take place during daytime hours when people are less sensitive to noise or vibration effects, construction-generated vibration would not result in adverse excessive ground borne vibration effects to off-site receptors, buildings, or infrastructure. Additionally, the project would not result in land uses that would generate operational sources of ground borne vibration and would not locate any new sensitive receptors near existing major sources of vibration. Therefore, this impact would be **less than significant**.

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?

No impact. There are no private airstrips or airports within two miles of the project site. The nearest airport to the project site is the Sacramento Mather Airport, a county-owned public-use airport, located approximately 3.5 miles northeast of the project site. Sacramento Executive Airport is the next closest airport and is located approximately 6.1 miles west of the project site. The project would not include any new land uses where people would live or work that would expose receptors to airport noise activity. Therefore, the project would not result in the exposure of people to excessive noise levels associated with airport activity. Thus, the project would have **no impact** regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels, and no mitigation would be required.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 Environmental Setting

The project site is 2.5 acres in size, located on the northeast corner at the intersection of South Watt and Elder Creek Road, west of and adjacent to Turner Road. Land uses surrounding the project site are generally light industrial in nature and do not contain houses or any other residential land use. The previously disturbed project site is currently vacant and does not contain any housing.

The most recently available data (2019) indicates that the population of Sacramento County is 1,552,058 people, 513,620 of which live within the City of Sacramento (DOF 2021a).

3.14.2 Discussion

- 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)?**

Less than significant. The project would include development of convenience store, fueling station, and car wash within the project site. The project would not involve construction of new housing and thus would not directly induce population growth. There would be no extension of roads or other infrastructure related to project development. A small construction crew of 20 workers would be required for development of project, which would occur over a short period (approximately 6-7 months). Operation of the project would require up to 20 new employees. This increase in employees would not be considered substantial compared to the overall County population. This impact would be **less than significant**.

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

No impact. No persons or homes would be displaced as a result of project construction or operation. Therefore, the project would have **no impact**.

3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services.				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

The project site is currently served by the Sacramento Metropolitan Fire Department (Metro Fire). Once annexed, the project site would be served by the City of Sacramento Fire Department.

The Sacramento County Sheriff’s Department is responsible for law enforcement in Sacramento County. The Sacramento Police Department (SPD) serves the City.

3.15.2 Discussion

For information regarding LAFCo’s statutory evaluation of effects on attached and detached service providers, refer to Section 4, Reorganization, of this IS/MND.

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?

Less than significant. The project site is located within the Metro Fire district boundary. It is also provided fire service by SFD through a mutual aid agreement. Once annexed, the project site would be within the SFD service area and would be served by SFD. Mutual aid agreements would remain in place. Thus, fire protection services to the site would be maintained and service would be provided by existing SFD staff. In addition, the project would contribute funding for fire services through its Property Tax Exchange Agreement. Because existing SFD staff would continue to

serve the site and funding of services going forward would be provide through the Property Tax Exchange Agreement, this impact would be **less than significant**.

Police protection?

Less than significant. The project site is currently served by the Sacramento Sherriff Department. Once annexed, the project site would be served by SPD. The project would contribute to the need for facility improvements and equipment needs that would be addressed through its payment of impact fees and funding through its Property Tax Exchange Agreement. This impact would be **less than significant**.

Schools?

No impact. The project would not provide any new housing; thus, it would not generate new students in the community or result in an increase in employment opportunities that could indirectly contribute new students to the local school district. There would be **no impact**.

Parks?

No impact. The project would not provide any new structures that could result in additional residents or employees or necessitate new or expanded park facilities. Therefore, there would be **no impact**.

Other public facilities?

No impact. No other public facilities in the project area could be affected by implementation of the project. Therefore, there would be **no impact**.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 Environmental Setting

The project site is located on a previously developed vacant parcel, surrounded by existing commercial and industrial development. The nearest recreation facilities to the project site is the Don and Brenda Nottoli Community Park, a located 2.0 miles to the southeast. Other nearby parks include: Primrose Park, 1.8 miles to the north; Danny Nunn Park, 2.2 miles to the southwest; George Sim Park, 2.4 miles to the west; and, Max Baer Park, located 2.4 miles to the northwest.

3.16.2 Discussion

For information regarding LAFCo’s statutory evaluation of effects on attached and detached recreation facility providers, refer to Section 4, Reorganization, of this IS/MND.

- a) **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?**

No impact. The project does not include any new development that could increase the use of existing parks or recreational facilities. Therefore, there would be **no impact**.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

No impact. The project does not include any new development that could necessitate new or expanded recreational facilities. Therefore, there would be **no impact**.

3.17 TRANSPORTATION

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

3.17.1 Environmental Setting

The roadway network within the City and County consists of a combination of Federal interstates, a United States highway, California State highways, and city streets (arterial, collector, and local streets). This roadway network is used extensively for personal vehicle travel.

The City adopted a *Pedestrian Master Plan* in 2006. This document complements prior City documents and programs such as the Pedestrian Safety Guidelines and the Neighborhood Traffic Management Program. South Watt Avenue and Elder Creek Road are designated as Pedestrian Street Corridors under the Pedestrian Master Plan (City of Sacramento 2006).

Sacramento Regional Transit (RT) is the primary transit service provider in the city with fixed route bus and light rail transit service and demand responsive paratransit services. There are no transit services along Elder Creek Road or South Watt Avenue near the project site.

The City adopted the 2010 *Sacramento City/County Bikeway Master Plan* in 1995, with several amendments after 1995 to include North and South Natomas as well as Delta Shores. The Bicycle Master Plan was updated most recently in 2016. The Bicycle Master Plan indicates that there is a low density of bike facility in areas near the project site. Class II Bike Lanes (i.e., pavement striping and signage to delineate portion of the roadway designated to bicycles) are available along South Watt Avenue, adjacent to the project site (City of Sacramento 2016).

The project site is located adjacent to Elder Creek Road, which is identified as an evacuation route in both directions by the City of Sacramento in the City’s Emergency Operations Response Plan.

3.17.2 Discussion

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

Less than significant. The project involves development of a gas station, convenience store, and car wash on a vacant parcel that was previously developed. The project does not require the construction, redesign, or alteration of any

roadways. Because the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, this impact would be **less than significant**.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

Less than significant. The project involves development of a gas station, convenience store, and car wash that would be located at the corner of South Watt Avenue and Elder Creek Road. This area generally contains industrial and commercial uses in the immediate vicinity, to the north and to the west, and rural residential uses approximately 0.3 miles to the south and east. As detailed above, the project would consist of a convenience store (approximately 4,150 sf building), a car wash facility (an approximately 775-sf building), and a six-position passenger vehicle fueling station, all intended to serve the surrounding area. Guidance provided in the OPR Technical Advisory notes that retail development including stores larger than 50,000 sf might be considered regional serving. The largest building within the proposed project is the convenience store which would be 4,150 sf in total. Additionally, none of the proposed uses are destination-retail uses or unique in nature such that they would attract a substantial number of long-distance trips. Therefore, the project would not be considered regional-serving retail; and thus, would not result in the substitution of longer trips for shorter ones.

All proposed land uses are common throughout the general project area; and thus, would be one of many options in the general vicinity for fueling, car washing, and purchasing of convenience store goods. Therefore, the project would add retail opportunities into the urban fabric, thereby improving retail destination proximity. Finally, the project would contribute to the diversity of land uses in the area, which currently consists of industrial, commercial, and residential land uses. For these reasons, the proposed project would be considered locally serving retail due to its size (under 50,000 sf), function (not regional-serving), and surrounding land use context; and would be consistent with the intent of SB 743 and PRC 21099 as it relates to the provision of a diversity of land uses.

For all the reasons outlined above, the proposed project would be considered local-serving retail. The OPR Technical Advisory states that lead agencies generally may presume that local-serving retail development would result in a less-than-significant VMT impact. Therefore, it is presumed that the project would not result in a net increase in total VMT; and thus, would not conflict with CEQA Guidelines section 15064.3, subdivision (b). This impact would be **less than significant**.

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

No impact. The project does not involve any changes in road geometry or new uses. There would be no impact.

d) Result in inadequate emergency access?

Less than significant. The project site is located adjacent to Elder Creek Road, which is identified as an evacuation route in both directions by the City of Sacramento in the City's Emergency Operations Response Plan. While specific construction activities are not available at this time, full road closure would not be required as construction staging would likely occur within the project site. There are no roadway improvements along main roadways adjacent to the project site, however, a new underground sewage conveyance pipeline is proposed as part of the project. This new pipeline would connect to the project site at the northeastern corner, travel south along Turner Drive, then west along Elder Creek Road to connect to the main sewer line at the intersections of Elder Creek Road and South Watt Avenue. This connection would involve the installation of sanitary sewer manholes, a 6-inch pipeline to connect to the site, an 8-inch pipeline along Turner Drive, and an 18-inch pipeline along Elder Creek Road. In the event that partial road closure may be required during construction, emergency access would be maintained in accordance with standard construction best management practices. Any impacts to impacts to the evacuation route would be temporary over the duration of construction, would be limited in nature (i.e., no full road closures), and would comply with standard construction best management practices. Therefore, this impact would be **less than significant**.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	<input type="checkbox"/> Yes			<input checked="" type="checkbox"/> No
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

Please reference the Cultural Resources Chapter for the Ethnohistory of the historic Indigenous groups that occupied the region. This section focuses on the contemporary tribal communities and tribal cultural resources as they pertain to AB52. This section analyzes and evaluates the potential impacts of the project on Tribal cultural resources, both identified and undiscovered. Tribal cultural resources, as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code (PRC) Section 21074, are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a Tribe. A Tribal cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

The unanticipated find of Native American human remains would also be considered a Tribal cultural resource, and are therefore analyzed in this section. The proposed project area is situated within the lands traditionally occupied by the Valley Nisenan, or Southern Maidu. Many descendants of Valley Nisenan throughout the larger Sacramento region belong to the United Auburn Indian Community, Shingle Springs, Lone Band, Colfax-Todds Valley, and Wilton Rancheria Tribes. The Tribes actively participate in the identification, evaluation, preservation, and restoration of Tribal Cultural Resources.

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "tribal cultural resources," defined in PRC Section 21074. Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration.

On July 23, 2021, the City of Sacramento sent notification letters that the project was being addressed under CEQA, as required by PRC 21080.3.1, to the Native American tribes that had previously requested such notifications. Notifications were sent to United Auburn Indian Community (UAIC), Wilton Rancheria, Shingle Springs Band of Miwok Indians, and Buena Vista Rancheria. UAIC responded on August 3, 2021 requesting that the unanticipated discovery mitigation measure be included in the environmental document, but declined to consult.

In response to the City's notification of the project to UAIC, UAIC conducted a records search for the identification of Tribal Cultural Resources for this project which included a review of pertinent literature and historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the California Historic Resources Information System Center (CHRIS) as well as historic resources and survey data. After UAIC reviewed the project, project location and past cultural studies that include the project area and UAIC did not show any areas of concern. Subsequently, UAIC declined to consult on this project but requested that the unanticipated discoveries measure be included in the TCR chapter.

The Buena Vista Rancheria responded on August 9, 2021 declining to consult. No other tribes requested consultation, and there are no known resources within the project area considered to be tribal cultural resources as defined in PRC Section 21074.

The cultural resources report (Appendix C) prepared for the proposed project included a request for an NAHC Sacred Lands File search. The results were positive for the presence of Native American cultural resources in the project vicinity.

3.18.2 Discussion

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)?**

No impact. The NCIC records search and pedestrian survey failed to identify any resources, including tribal cultural resources that are listed or eligible for listing in the CRHR, or in a local register of historical resources, within the project site. Therefore, there would be **no impact**.

- 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

Less-than-significant impact with mitigation incorporated. No tribes requested consultation pursuant to PRC Section 21080.3.1, and no tribal cultural resources have been identified in the project site. In addition, the sensitivity of the project area for buried cultural resources is considered low, as described above in Section 3.5. Nevertheless, due to the positive results of the Sacred Lands File search, the possibility remains that tribal cultural resources could be encountered during construction-related ground disturbing activities. This impact is **potentially significant**.

The project applicant shall implement the following mitigation:

Mitigation Measure 3.18-1: Implement Mitigation Measure 3.5-1 (see Cultural Resources)

Mitigation Measure 3.18-2: Implement Mitigation Measure 3.5-2 (see Cultural Resources)

Significance after Mitigation

Implementation of Mitigation Measures 3.18-1 and 3.18-2 would reduce impacts to tribal cultural resources to a **less-than-significant** level by requiring appropriate treatment (including options for data recovery, mapping, capping, or avoidance) and proper care of significant tribal cultural resources.

3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.19.1 Environmental Setting

WASTEWATER SERVICE

Wastewater collection and conveyance to Regional San facilities would be provided by the Sacramento Area Sewer District (SASD). SASD provides wastewater collection and conveyance to the urbanized, unincorporated areas of Sacramento County, the cities of Citrus Heights, Elk Grove, and Rancho Cordova, portions of the cities of Sacramento and Folsom, and the delta communities of Freeport, Courtland, and Walnut Grove. The project site is located within SASD’s existing service area (SASD 2020).

Wastewater treatment services for the project would be provided by the Sacramento Regional County Sanitation District (Regional San). Regional San provides wastewater conveyance and treatment services to more than 1.6 million residents in the Sacramento region, including the cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Rancho Cordova, West Sacramento, and unincorporated Sacramento County. Wastewater travels through 169 miles of interceptor pipelines to the Sacramento Regional Wastewater Treatment Plant (SRWTP) near Elk Grove. There, approximately 135 million gallons per day (mgd) of wastewater are treated. The SRWTP has a permitted capacity of 181 mgd (Regional San 2020). The City’s Department of Utilities is responsible for providing and maintain water and sewer services for residents and businesses within city limits. The project site does not currently contain wastewater pipelines.

WATER SUPPLY SERVICE

The project site is vacant. Water service for the proposed project would be provided by the City of Sacramento. The City of Sacramento uses surface water from the Sacramento and American rivers to meet the majority of its water demands. To meet the City's water demand, the City uses surface water from the Sacramento and American rivers, and groundwater pumped from the North American and South American Subbasins.

SOLID WASTE SERVICE

The City of Sacramento does not provide commercial solid waste collection services. Rather, commercial garbage, recycling or yard waste services are provided by a franchised hauler authorized by the Sacramento Solid Waste Authority to collect commercial garbage and commingled recycling within the City. Kiefer Landfill, located at 12701 Kiefer Boulevard in Sloughhouse, California, is the primary location for the disposal of waste by the City of Sacramento. As of 2019, the most recent available information, Kiefer Landfill has a remaining capacity of 95,733,512 cubic yards (County of Sacramento 2020). The landfill accepts 2,702 tons per day on average. Capacity to accept waste is expected to be available to 2064 (CalRecycle 2022).

ELECTRICITY AND NATURAL GAS

Electricity is provided to the site vicinity from the Sacramento Municipal Utility District (SMUD); gas is provided by the Pacific Gas and Electric Company.

3.19.2 Discussion

For information regarding LAFCo's statutory evaluation of effects on attached and detached utilities and service providers, refer to Section 4, Reorganization, of this IS/MND.

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

Less than significant. Roadways that provide access to the project site are public rights of way that include on-street drainage and dry utility infrastructure that would be available to serve the project site. While water supply pipelines and storm drainage facilities would be accommodated through connections to existing lines, the project includes construction of a sewage conveyance pipeline to connect to SASD sewer service. This new pipeline would connect to the project site at the northeastern corner, travel south along Turner Drive, then west along Elder Creek Road to connect to the main sewer line at the intersections of Elder Creek Road and South Watt Avenue. This connection would involve the installation of sanitary sewer manholes, a 6-inch pipeline to connect to the site, an 8-inch pipeline along Turner Drive, and an 18-inch pipeline along Elder Creek Road. Connections to the water conveyance infrastructure would be expected to occur within new onsite driveways and paved areas and would be limited to areas within the project site. The impacts related to these connections are discussed throughout this initial in the relevant resources sections as it is part of the grading and construction phase of the project. No additional utility infrastructure would be needed offsite to adequately serve the proposed project. This impact would be **less than significant**.

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

Less than significant. Implementation of the project would increase water demand at the project site due to use of the car wash and convenience store. As discussed in Chapter 2, "Project Description," the car wash would demand approximately 16 gallons of fresh water per car (the remaining demand of approximately 24 gallons coming from

onsite recycled water). Assuming that there would be an average of 50 cars washed per day, the car wash would demand approximately 800 gallons per day or 0.9 acre feet per year (afy) (50 cars x 16 gallons/car). In regards to the convenience store, the City of Sacramento Water Study Design Manual water use factors for commercial uses assumes 1.5 afy per acre (afy/ac) (City of Sacramento 2018). Given this water use demand factor, the project would require approximately 0.15 acre foot of water per year for the convenience store (0.1 acres of commercial space x 1.5 afy/ac). Overall, demand for the site would be 1.05 afy.

The project includes annexation into the City, which would allow for access to the City's retail water supply. The City of Sacramento recently completed the 2020 Urban Water Management Plan (UWMP), which helps water suppliers assess the availability and reliability of their water supplies and current and projected water use to help ensure reliable water service under different conditions. According to the City's 2020 UWMP, retail supply would be in excess of demand during normal, dry, and multiple dry years through 2045, as shown in Table 3.19-1.

Table 3.19-1 City of Sacramento Retail Water Supply and Demand 2025-2045

	2025	2030	2035	2040	2045
Normal Year					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	108,432	114,809	121,187	127,564	133,942
Difference	224,769	235,391	229,014	222,636	216,258
Single Dry Year					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	108,432	114,809	121,189	127,564	133,942
Difference	224,769	235,391	229,014	222,636	216,258
Multiple Dry Year – Year 1					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	108,432	114,809	121,189	127,564	133,942
Difference	224,769	235,391	229,014	222,636	216,258
Multiple Dry Year – Year 2					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	109,707	116,085	122,462	128,840	138,397
Difference	223,493	234,116	227,738	221,360	211,803
Multiple Dry Year – Year 3					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	110,983	117,360	123,738	130,115	142,853
Difference	222,218	232,840	226,463	220,085	207,347
Multiple Dry Year – Year 4					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	112,258	118,636	125,013	131,391	147,308
Difference	220,942	231,565	225,187	218,809	202,892
Multiple Dry Year – Year 5					
Supply Total	333,200	350,200	350,200	350,200	350,200
Demand Total	113,534	119,911	126,289	132,666	151,764
Difference	219,667	230,289	223,912	217,534	198,436

As shown above in Table 3.19-1, retail water supplies associated with the City are in surplus conditions during normal, dry, and multiple dry year at a range of 198,436 to 235,391 afy. As discussed above, the project would require approximately 1.05 afy, which would be a small portion (approximately 0.0005 percent or less) of the amount of excess water available to retail water user. This impact would be **less than significant** because water supplies would be available to the project during normal, dry, and multiple dry water years.

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

Less than significant. The project would increase sanitary sewer flows. As discussed in Chapter 2, “Project Description,” approximately 12-15 gallons of dirtied water would be discharged to the City’s wastewater system for each car washed. Assuming that there would be an average of 50 cars washed per day, the car wash would generate up to 750 gallons per day (gpd) of wastewater. In addition, the gas station and convenience store would generate wastewater associated with bathrooms and food preparation areas. The City of Sacramento Design Standards for sewer generation rates (Section 9 – Sanitary Sewer Design Standards dated 7/24/18) contain average daily flow rates and factors for residential and nonresidential uses. The standard for sewer generation is 310 gpd per equivalent single-family dwelling (ESD). As shown in Table 3.19-2, based on the project components, a factor of 1.7375 ESD would apply to the project, which would result in a wastewater generation rate of approximately 539 gpd. Overall, the project would generate 1,289 gpd of wastewater.

Table 3.19-2 Wastewater Generation

Project Component	Wastewater Generation Ratio	Project Component	ESD
Commercial/Retail Stores: General	0.25 per 1,000 sq ft	4,150 sq ft	1.0375
Gas Station: 4 Bays Max	0.1 per each Service Bay	1 Service Bay	.1
Gas Station: Self Service	0.3 per urinal or Water Closet	2 water closets	0.6
		Total ESD	1.7375

Notes: sf=square feet; ESD=equivalent single-family dwelling

Source: City of Sacramento 2018.

As discussed above, the SRWTP has a permitted capacity of 181 mgd and currently treats approximately 135 mgd. The projected 1,289 gpd of wastewater flows associated with the project would be accommodated within the remaining approximately 46 mgd of capacity remaining at SRWTP.

As discussed above, under a), the project includes construction of a new sewage conveyance pipeline that would connect the project site to SASD facilities. The proposed pipeline has been sized to accommodate the project site, and plans have been approved by SASD. Thus, there is adequate capacity to provide the project with sewer collection, conveyance, and treatment from SASD and Regional San. This impact would be **less than significant**.

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?

Less than significant. The project involves development of a gas station, convenience store, and car wash. According to data presented by CalRecycle, a service station produces approximately 0.9 pounds (lbs) per 100 square feet (sf) per day of solid waste. Based on this generation rate, the approximately 26,000 sf service station would produce approximately 234 lbs of solid waste per day (CalRecycle 2022). As discussed above, in Section 3.19.1, “Environmental Setting,” 112,900,000 cubic yards of capacity are available through 2064. The addition of 234 lbs (0.117 tons) of solid waste per day would be minimal in comparison to the accepted quantity of 2,702 tons per day. Because the landfill has capacity to serve the project, this impact would be **less than significant**.

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

Less than significant. The project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. For these reasons, impacts related to solid waste are considered **less than significant**.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.20.1 Environmental Setting

No impact. The project is not located within or near a state responsibility area or lands classified as very high fire hazard severity zones. There would be **no impact**.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. Mandatory Findings of Significance.				
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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.21.1 Discussion

- 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

Less-than-significant impact with mitigation incorporated. As discussed in Section 3.4, “Biological Resources,” of this IS/MND, ground disturbance associated with the project would occur within previously disturbed land, and as explained in Section 3.4, “Biological Resources,” the project has potential to adversely affect Swainson’s hawk and other nesting birds. Potentially significant impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 and 3.4-2 because they require avoidance of a potential disturbance or loss of active nests during project construction and require a temporary no-disturbance buffer (size to-be-determined) for common native nesting birds during the nesting season, as long as the nest is occupied.

As discussed in Section 3.5, “Cultural Resources,” no historic or archaeological resources occur on the project site. However, there is potential for accidental discovery of archaeological materials that could be encountered during construction-related ground disturbing activities. Mitigation Measure 3.5-1 would reduce potential impacts to archaeological resources discovered during project construction activities to a less-than-significant level because the

measures would require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources.

- 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.)**

Less-than-significant impact with mitigation incorporated. Project impacts would be individually limited and not cumulatively considerable due to the site-specific nature of the potential impacts. The potentially significant impacts to biological resources and cultural resources can be reduced to a less-than-significant level with implementation of recommended mitigation measures. These impacts would primarily be related to construction activities, would be temporary in nature, and would not substantially contribute to any potential cumulative impacts associated with these topics.

Potentially significant biological resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 and 3.4-2. Potentially significant cultural resources impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures 3.5-1 and 3.5-2. Potentially significant impacts to paleontological resources would be reduced to a less-than-significant level with implementation of Mitigation Measure 3.7-1. Potentially significant hazard and hazardous materials impacts would be reduced to a less-than-significant level with implementation of 3.9-1. Potentially significant tribal cultural resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.18-1 and 3.18-2.

The project would have no impact or less-than-significant impacts to the following environmental areas: aesthetics, agriculture and forestry resources, air quality, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. Therefore, the project would not substantially contribute to any potential cumulative impacts for these topics. All environmental impacts that could occur as a result of the project would be reduced to a less-than-significant level through the implementation of the mitigation measures recommended in this document. Implementation of these measures would ensure that the impacts of the project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of project implementation. Therefore, upon implementation of mitigation measures included in this Initial Study, this impact would be **less than significant**.

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

Less-than-significant impact with mitigation incorporated. The project would have potentially significant impacts related to biological resources, cultural resources, hazards and hazardous materials, and tribal cultural resources. However, all of these impacts would be reduced to less-than-significant levels with incorporation of the mitigation measures included in the respective section discussions above. No other direct or indirect impacts on human beings were identified in this IS/MND. Therefore, upon implementation of mitigation measures included in this Initial Study, this impact would be **less than significant**.

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4 REORGANIZATION

4.1 INTRODUCTION

The Reorganization chapter of the IS/MND summarizes setting information and identifies potential impacts related to reorganization of the project specific to the Sacramento Local Agency Formation Commission's (LAFCo) policies and standards related to the environment. A reorganization is defined as two or more changes of organization. Reorganization of the project site consists of annexation of the project area to the City of Sacramento (City) and detachment from affected special districts. The project and cumulative environmental impacts of the conversion of the project area from undeveloped/vacant land to commercial development are addressed in Sections 4.1 through 4.14 of this IS/MND.

Materials utilized to prepare this chapter include the Sacramento LAFCo *Policy, Standards, and Procedures Manual*, the *City of Sacramento 2035 General Plan*, Section 3.11, "Land Use and Planning," Section 3.2, "Agricultural Resources," Section 3.10, "Hydrology and Water Quality," and Section 3.15, "Public Service."

4.2 ENVIRONMENTAL SETTING

4.2.1 Overview of Annexation Request

The project would involve the annexation of 2.49 acres (project site) within the City's Sphere of Influence. The project site is located in unincorporated Sacramento County at the northeast corner of South Watt Avenue and Elder Creek Road. In addition to the proposed annexation, this reorganization would involve detachment of the 2.49 acres from the following service districts:

- ▶ detachment from Southgate Recreation and Park District;
- ▶ detachment from Sacramento Metropolitan Fire District;
- ▶ detachment from Sacramento County Water Maintenance District Zones 11, 12, 13, 40 and 41 (water supply and drainage planning services); and
- ▶ detachment from County Service Areas No. 1 and 11.

4.2.2 Affordable Housing

The project site consists of a single parcel surrounded by industrial and commercial uses. Remnants of previous development occur on the site; however the site is vacant and does not contain any residential uses. No affordable housing exists on the site, and the project site is not identified in the City of Sacramento or Sacramento County housing elements as a potential site for affordable housing (City of Sacramento 2021, Sacramento County 2022).

4.2.3 Parks and Recreation

SOUTHGATE RECREATION & PARK DISTRICT

The project area is currently located within the Southgate Recreation and Park District (SRPD). SRPD is an independent special district as authorized through California State Public Resources Code Section 5780, and governed by an elected five-member Board of Directors. It is a local government agency established to serve the residents of South Sacramento. SRPD encompasses a 52-square mile area of unincorporated South Sacramento

County, where it maintains 47 parks, 6 community centers, 2 aquatic facilities and numerous landscape corridors and nature preserves.

There are no recreation facilities within the project area, the closest SRPD facility Fletcher Farms Community Center located approximately 1.4 miles southwest of the project site.

The SRPD has an overall park service goal of five acres for every 1,000 residents in its planning area. As of December 2012, SRPD maintains over 700 acres serving a population of 119,133 (5.9 acres per 1,000 residents). The District has a current dedication requirement for new development of five acres per 1,000 residents (Sacramento LAFCo 2012).

CITY OF SACRAMENTO DEPARTMENT OF PARKS AND RECREATION

The City of Sacramento Parks and Recreation Department (SPRD) oversees and manages park and recreation resources within the city limits. The City currently contains 222 developed and undeveloped park sites, 88 miles of road bikeways and trails, 21 lakes/ponds or beaches, over 20 aquatic facilities, and extensive recreation facilities in the City parks. The 222 parks comprise 3,108 acres. Of these, 1,573 acres are neighborhood and community parks and the remaining are city and non-city regional parks. The City currently provides approximately 3.4 acres of neighborhood and community park per 1,000 persons citywide (City of Sacramento 2014).

4.2.4 Fire Protection

SACRAMENTO METROPOLITAN FIRE DISTRICT

The project area is currently located within the boundaries of the Sacramento Metropolitan Fire District (Metro Fire). The Metro Fire service area consists of 358 square miles east current Sacramento City incorporated areas. Metro Fire is comprised of three branches - Operations, Administration, and Support Services. Operations includes Fire & Rescue, Emergency Medical, Training & Safety, Special Operations, Homeland Security, Fire Investigation, and Health & Wellness Divisions. Metro Fire is a combination of 16 smaller fire departments that, over the years, merged to create this California Special District. The last merger was in December 2000 when American River Fire Department and Sacramento County Fire Protection District merged to form the Sacramento Metropolitan Fire District, pursuant to Government Code Section 56839. As a special district, Metro Fire is governed by a Board of Directors; each member is elected by the voters within a geographical area, or division, of Metro Fire's operational area.

CITY OF SACRAMENTO FIRE DEPARTMENT

The City of Sacramento Fire Department (SFD) provides fire protection services to a 146.3-square-mile service area including the entire City as well as some unincorporated areas of County and holds jurisdiction over fire code compliance, monitoring and enforcement. These services include fire suppression, emergency medical services, fire prevention and investigation, hazardous materials response, search and rescue, and extrication within the city. Contracted areas within the SFD's jurisdiction include the NFPD and the Pacific Fruitridge Fire Protection District (PFFPD), both of which provide service outside of the City.

The SFD has 24 active stations within its service area. The project area is currently served and, with project implementation, would continue to be served by Fire Stations 60. Fire Station 60 is located south of Del Paso Road, approximately 3 miles from the project site, at 3301 Julliard Drive. The station is equipped with a Type I Engine and two battalions.

At full staff, SFD has 173 personnel on duty for fire and EMS first responder emergencies; 34 of these personnel are on duty for emergency ambulance transportation daily. In 2016, the SFD responded to approximately 86,957 calls with the majority of calls for emergency medical service. SFD has a goal to have its first responding company, which provides for fire suppression and paramedic services, arrive within four minutes (City of Sacramento 2020).

The SFD maintains automatic aid agreements with all its neighboring agencies including the Sacramento Metropolitan Fire District and Cosumnes Fire. Under these automatic aid agreements, all related emergency calls are routed through a central dispatch center and the nearest apparatus are dispatched to emergency incidents, regardless of political jurisdiction.

4.2.5 Drainage

SEWER/STORM DRAIN

The Sacramento County Department of Water Resources is the organization primarily responsible for drainage and flood control within the urbanized and urbanizing portions of unincorporated Sacramento County. The drainage and flood control system operated and maintained by Sacramento County consists of 1,443 miles of storm drain pipe, 400 miles of creeks and open channels, 33 pump stations, and 18 detention basins.

In general, drainage in the project area trends east to west, in conformance with local topographic conditions, with the exception of lateral storm drains, interceptor canals, and outfalls. Drainage facilities on the project area include storm drains along South Watt Avenue and Elder Creek Road.

SACRAMENTO COUNTY WATER AGENCY, DRAINAGE DIVISION

The Sacramento County Water Agency is authorized to perform drainage, water supply and flood control. Zones 11 of the Sacramento County Water Agency was established in 1987 to perform studies related to water supply, drainage and flood control affecting all or part of the unincorporated areas of Sacramento (including the project area) and the City of Citrus Heights.

CITY OF SACRAMENTO DEPARTMENT OF UTILITIES

The City of Sacramento Department of Utilities provides storm drainage service to more than 125,000 customers throughout the city by using drain inlets, pumps and canals to move water off Sacramento streets directly to local creeks, streams and rivers to help limit street flooding.

4.2.6 Natural Resources

The project site has previously been developed but is currently vacant. The project site is flat with ruderal vegetation and developed land cover that consists of asphalt, concrete foundations, and gravel fill. There is no riparian or wetland habitat found on the project site. It is located adjacent to developed, industrial areas.

4.2.7 Agricultural Lands

LAFCos are required to use unique criteria to identify and evaluate "prime agricultural land." Cortese-Knox-Hertzberg defines "prime agricultural land" as an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications (California Government Code Section 56064):

- a. Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- b. Land that qualifies for rating 80 through 100 Storie Index Rating.
- c. Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.

- d. Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- e. Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

The project site is not irrigated; does not support livestock; is not planted with fruit or nut-bearing trees, vines, bushes or crops; and has not been in agricultural production in the past five calendar years. According to USDA's NRCS web soil survey, the site contains San Joaquin silt loam, leveled, 0 to 1 percent slopes, with a Grade 4 – Poor rating (revised Storie index of 21-40) (NRCS 2022). Thus, the project site does not meet prime agricultural land qualifications defined by California Government Code Section 56064.

4.2.8 Environmental Justice

Government Code Section 65040.12 (e) defines environmental justice as: "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies." The Cortese-Knox-Hertzberg Local Government Reorganization Act Section 56668(o) further defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services. Environmental justice addresses issues concerning whether an activity could expose minority or disadvantaged populations to proportionately greater impacts compared with those borne by other individuals.

CALIFORNIA COMMUNITIES ENVIRONMENTAL HEALTH SCREENING TOOL

CalEnviroScreen is a mapping tool developed by the Office of Environmental Health Hazards Assessment to help identify low-income census tracts in California that are disproportionately burdened by and vulnerable to multiple sources of pollution. It uses environmental, health, and socioeconomic information based on data sets available from state and federal government sources to produce scores for every census tract in the state. Scores are generated using 21 statewide indicators that fall into four categories: exposures, environmental effects, sensitive populations, and socioeconomic factors. The exposures and environmental effects categories characterize the pollution burden that a community faces, whereas the sensitive populations and socioeconomic factors categories define population characteristics.

CalEnviroScreen prioritizes census tracts based on their combined pollution burden and population characteristics score, from low to high. A percentile for the overall score is then calculated from the ordered values. The California Environmental Protection Agency has designated the top 25 percent of highest scoring tracts in CalEnviroScreen (i.e., those that fall in or above the 75th percentile) as a disadvantaged community (DAC)s, which are targeted for investment proceeds under SB 535, the state's cap-and-trade program.

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH'S 2020 UPDATED EJ ELEMENT GUIDELINES

OPR published updated General Plan Guidelines in June 2020 that include revised EJ guidance in response to SB 1000. OPR has also published example policy language in an appendix document along with several case studies to highlight EJ-related policies and initiatives that can be considered by other jurisdictions. Section 4.8 of the General Plan Guidelines contains the EJ guidance. The guidelines offer recommendations for identifying vulnerable communities and reducing pollution exposure related to health conditions, air quality, project siting, water quality, and land use compatibility related to industrial and large-scale agricultural operations, childcare facilities, and schools, among other things. It provides many useful resources, including links to research, tools, reports, and sample general plans.

SENSITIVITY OF PROJECT LOCATION

As part of its Sustainable Communities Initiative, the Sacramento Municipal Utility District (SMUD) created and maintains the Sustainable Communities Resource Priorities Map,¹ which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities. One of the key components of the map is the California Communities Environmental Health Screening Tool (CalEnviroScreen Version 3.0), which identifies communities facing socioeconomic disadvantages or health disadvantages such as multiple sources of pollution. (Note that the CalEnviroScreen has been updated and Version 4.0 is now available. Data presented in this discussion reflects the updated data from CalEnviroScreen Version 4.0.) The Sustainable Communities Resource Priorities map provides an analysis of current data sets to indicate areas ranging from low to high sensitivity and can be used to describe the relevant socioeconomic characteristics and current environmental burdens of the project area can be described.

The proposed project is located in a medium-high sensitivity area per the Sustainable Communities Resource Priorities Map (SMUD 2022). The project area is a medium-high sensitivity area because the project area was designated as an Opportunity Zone, as a Disadvantaged Communities by state Senate Bill 535, and as a medically underserved area/population. The project is located in a census tract with a CalEnviroScreen 4.0 percentile score of 70, a pollution burden percentile score of 87, and a population characteristics percentile of 52. The high CalEnviroScreen score is driven by environmental conditions such as multiple potential exposures to pollutants and adverse environmental conditions caused by pollution, and high health and socioeconomic vulnerability to pollution. The pollution burden of the census tract is from a high exposure rating related to pesticides, drinking water contaminants, groundwater threats, hazardous materials cleanup sites, hazardous waste facilities, and solid waste facilities (OEHHA 2021).

4.3 REGULATORY SETTING

The following are provisions that apply to the reorganization request. The reader is referred to Sections 5.8, "Hydrology and Water Quality," 5.10, "Public Services and Recreation," and 5.13, "Utilities," for regulations regarding public service provisions.

4.3.1 Sacramento Local Agency Formation Commission

Reorganization of the project area is subject to Sacramento LAFCo's *Policy, Standards and Procedures Manual*. The following provisions are applicable to the project.

GENERAL POLICIES

1. CEQA requires that LAFCo assess the environmental consequences of its actions and decisions, and take actions to avoid or minimize a project's adverse environmental impacts, if feasible, or approve a project despite significant effects because it finds overriding considerations exist. To comply with CEQA, LAFCo will take one or more of the following actions:
 - a. At its discretion, approve a project without changes if environmental impacts are insignificant;
 - b. Require an applicant to modify a project;
 - c. Establish mitigating measures as a condition of its approval of the proposal, (note the Commission may also impose terms and conditions of project approval other than CEQA identified mitigation measures.);
 - d. Modify and approve to avoid or lessen environmental impacts, or disapprove the proposal because of unacceptable adverse environmental impacts;
 - e. Approve the project despite its significant effects by making findings of overriding concern.

¹ The Sustainable Communities Resource Priorities Map is available at https://usage.smud.org/SustainableCommunities/?_ga=2.223364443.1927542179.1598288052-1197903775.1589235097.

2. LAFCo will favorably consider those applications that do not shift the cost for services and infrastructure benefits to other service areas.
3. LAFCo encourages the use of service providers which are governed by officials elected by the citizens.
4. Community needs are met most efficiently and effectively by governmental agencies which:
 - ▶ are already in existence;
 - ▶ are capable of coordinating service delivery over a relatively large area;
 - ▶ provide more than one type of service to the territory which they serve.

GENERAL STANDARDS

B. Conformance with applicable general and specific plans

1. LAFCo will approve changes of organization or reorganization only if the proposal is consistent with the General Plan and applicable Specific Plans of the applicable planning jurisdiction.
2. For purposes of the above policy, the applicable planning jurisdiction is as follows:
 - a. For annexations to a city, the applicable jurisdiction is the city to which annexation is proposed;
 - b. For applications for annexation to or detachment from a district all of whose territory lies within an adopted Sphere of Influence of a city, the General Plan of the city;
 - c. For an application for annexation to a special district for lands outside an adopted city Sphere of Influence, the Sacramento County General Plan;
 - d. For an application for annexation or detachment from a district whose territory lies in both the city and the unincorporated area of the county, the General Plan of the city unless the project lies outside of the city's Sphere of Influence; and
 - e. For applications for incorporations, this standard is inapplicable.
3. For purposes of this standard, the proposal shall be deemed consistent if the proposed use is consistent with the applicable General Plan designation and text, the applicable General Plan is legally adequate and internally consistent and the anticipated types of services to be provided are appropriate to the land use designated for the area.
4. The governing body of the applicable planning jurisdiction shall recommend by resolution whether the proposal meets all applicable consistency requirements of state law, including internal consistency. LAFCo shall retain jurisdiction to determine consistency pursuant to its jurisdiction to approve, disapprove or condition changes of organization or reorganization and may require additional information if necessary.

C. Boundaries

1. LAFCo will not approve applications within boundaries which:
 - a. Result in islands, corridors or peninsulas or incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries;
2. LAFCo will make exceptions to the requirements of this standard only if the exception:
 - a. Is rendered necessary because of unique circumstances;
 - b. Results in improved quality or lower cost of service available to the affected parties; or
 - c. There exists no feasible and logical alternative.

E. Agricultural Land Conservation

LAFCo will exercise its powers to conserve agricultural land pursuant to the following standards:

1. LAFCo will approve a change of organization or reorganization which will result in the conversion of prime agricultural land in open space use to other uses only if the Commission finds that the proposal will lead to the planned, orderly and efficient development of an area. For purposes of this standard, a proposal leads to the planned, orderly and efficient development of an area only if all of the following criteria are met:
 - a. The land subject to the change of organization or reorganization is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.
 - b. The proposed development of the subject lands is consistent with the Spheres of Influence Plan, including the Master Services Element (Municipal Services Review) of the affected agency or agencies.
 - c. Development of all or a substantial portion of the subject land is likely to occur within five years. In the case of very large developments, annexation should be phased whenever feasible. If the Commission finds phasing infeasible for the specific reasons, it may approve annexation if all or a substantial portion of the subject land is likely to develop within a reasonable period of time.
 - d. Insufficient vacant non-prime lands exists within the applicable Spheres of Influence that are planned, accessible, and developable for the same general type of use.
 - e. The proposal will have no significant adverse effect on the physical and economic integrity of other agricultural lands. In making this determination, LAFCo will consider the following factors:
 - (1) The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region.
 - (2) The use of the subject and the adjacent areas.
 - (3) Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of adjacent or nearby agricultural land, or will be extended through or adjacent to, any other agricultural lands which lie between the project site and existing facilities.
 - (4) Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural land from the effects of the proposed development.
 - (5) Applicable provisions of the General Plan open space and land use elements, applicable growth management policies, or other statutory provisions designed to protect agriculture.
2. LAFCo will not make the affirmative findings that the proposed development of the subject lands is consistent with the Spheres of Influence in the absence of an approved Sphere of Influence Plan. LAFCo will not make the affirmative findings that insufficient vacant non- prime land exists within the Spheres of Influence Plan unless the applicable jurisdiction has:
 - a. Identified within its Spheres of Influence all "prime agricultural land" as defined herein.
 - b. Enacted measures to preserve prime agricultural land identified within its Sphere of Influence for agricultural use.
 - c. Adopted as part of its General Plan specific measures to facilitate and encourage in-fill development as an alternative to the development of agricultural lands.

SPECIFIC STANDARDS BY TYPE OF ACTION

A. Annexation to Cities

1. LAFCo will utilize Spheres of Influence through application of the following standards:
 - a. LAFCo will approve an application for annexation only if the proposal conforms to and lies wholly within the approved Spheres of Influence boundary for the affected agency;
 - b. LAFCo generally will not allow Spheres of Influence to be amended concurrently with annexation proposals;
 - c. LAFCo will favorably consider proposals that are a part of an orderly, phased annexation program by an agency for territory within its Sphere of Influence;
 - d. An annexation must be consistent with a city's Master Services Plan Element of its Sphere of Influence Plan; and
 - e. LAFCo encourages the annexation to each city of all islands of unincorporated territory and all substantially surrounded unincorporated areas located within the city's Sphere of Influence.
2. LAFCo will not approve proposals in which boundaries are not contiguous with the existing boundaries of the city to which the territory will be annexed, unless the area meets all of the following requirements:
 - a. Does not exceed 300 acres;
 - b. Is owned by the city;
 - c. Is used for municipal purposes; and
 - d. Is located within the same county as the city.
3. LAFCo will favorably consider proposals to annex streets where adjacent municipal lands will generate additional traffic and where there are isolated sections of county road that will result from an annexation proposal. Cities shall annex a roadway portion when 50 percent of the property on either or both sides of the street is within the city.
4. LAFCo will favorably consider annexations with boundary lines located so that all streets and rights-of-way will be placed within the same city as the properties which either abut thereon or for the benefit of which such streets and rights-of-way are intended.
5. An annexation may not result in islands of incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries unless it is determined that the annexation as proposed is necessary for orderly growth, and cannot be annexed to another city or incorporated as a new city. Annexations of territory must be contiguous to the annexing city. Territory is not contiguous if its only connection is a strip of land more than 300 feet long and less than 200 feet wide.
6. LAFCo opposes extension of services by a city without annexation, unless such extension is by contract with another governmental entity or a private utility.

G. Reorganization

LAFCo will evaluate each component organizational change which makes up a reorganization proposal independently. In so doing, LAFCo will follow the standards presented below:

1. LAFCo will strive to ensure that each separate territory included in the proposal, as well as affected neighboring residents, tenants, and landowners, receive services of an acceptable quality from the most efficient and effective service provider after the reorganization is complete.
2. The service quality, efficiency and effectiveness available prior to reorganization shall constitute a benchmark for determining significant adverse effects upon an interested party. LAFCo will approve a proposal for reorganization which results in this type of significant adverse effects only if effective measures are included in the proposal.

4.3.2 Open Space

STATE

Cortese-Knox-Hertzberg Local Government Reorganization Act

Cortese-Knox-Hertzberg Local Government Reorganization Act Section 56059 defines “open space” as any parcel or area of land or water which is substantially unimproved and devoted to an open-space use, as defined in Government Code Section 65560.

Government Code Section 65560 defines open space in the following manner:

(b)"Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

(5) Open space in support of the mission of military installations that comprises areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands.

(6) Open space for the protection of places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

LOCAL

City of Sacramento 2035 General Plan

The project site is part of a “Special Study Area” in the City of Sacramento 2035 General Plan. For areas designated as Special Study Areas, the City requires that regional and community benefits be achieved as the result of annexations and development approvals. Projects must also be developed consistent with the General Plan’s vision and guiding principles and obtain a General Plan Amendment to designate the area consistent with the proposed project using the appropriate designations contained in the Land Use and Urban Design Element.

The project site is located within the East Study Area (a component of the General Plan). The East Study Area encompasses approximately 9,191 acres and is located east of Sacramento’s city limits, south of Highway 50, and west

of the city of Rancho Cordova. The area is roughly bounded on the north by the American River, on the south by Elder Creek Road, on the east by Bradshaw Road and Excelsior Road, and on the west by the Sacramento city limits. The middle and southern parts of the East Study Area, where the project site is located, are comprised of exhausted aggregate mining sites undergoing reclamation for future reuse and urbanization, as well as open space areas and some scattered industrial uses. These sites could accommodate substantial new growth through a master planned mining reuse and infill project that is consistent with the 2035 General Plan Vision & Guiding Principles and could serve as a national model for the reuse of exhausted mining sites. Mixed-use development in the area could include transit-oriented retail, housing, and office; complete neighborhoods with a diverse range of housing types, densities, and affordability ranges; and preserved and enhanced open space areas.

4.3.3 Environmental Justice

STATE

California legislation, state agency programs, and guidance have been issued in recent years that aim to more comprehensively address EJ issues, including SB 1000 (2016), SB 535 (2012) and Assembly Bill (AB) 1550 (2016), AB 617 (2017), the California Department of Justice Bureau of Environmental Justice, the California Communities Environmental Health Screening Tool (CalEnviroScreen), and the Governor's Office of Planning and Research's (OPR's) 2020 General Plan Guidelines, Environmental Justice Element. These other bills have also provided the necessary policy direction to address EJ under CEQA.

SENATE BILL 1000

SB 1000, which was enacted in 2016, amended California Government Code Section 65302 to require that general plans include an EJ element or EJ-related goals, policies, and objectives in other elements of general plans with respect to disadvantaged communities (DACs) beginning in 2018. The EJ policies are required when a city or county adopts or revises two or more general plan elements and the city or county contains a DAC. EJ-related policies must aim to reduce the disproportionate health risks in DACs, promote civic engagement in the public decision-making process, and prioritize improvements that address the needs of DACs (California Government Code Section 65302[h]). Policies should focus on improving the health and overall well-being of vulnerable and at-risk communities through reductions in pollution exposure, increased access to healthy foods and homes, improved air quality, and increased physical activity.

SENATE BILL 535 AND ASSEMBLY BILL 1550

Authorized by the California Global Warming Solutions Act of 2006 (AB 32), the cap-and-trade program is one of several strategies that California uses to reduce greenhouse gases (GHGs) that cause climate change. The state's portion of the cap-and-trade auction proceeds are deposited in the Greenhouse Gas Reduction Fund (GGRF) and used to further the objectives of AB 32. In 2012, the California Legislature passed SB 535 (de Leon), directing that 25 percent of the proceeds from the GGRF go to projects that provide a benefit to DACs. In 2016, the legislature passed AB 1550 (Gomez), which now requires that 25 percent of proceeds from the GGRF be spent on projects located in DACs. The law requires the investment plan to allocate (1) a minimum of 25 percent of the available moneys in the fund to projects located within and benefiting individuals living in DACs; (2) an additional minimum of 5 percent to projects that benefit low-income households or to projects located within, and benefiting individuals living in, low-income communities located anywhere in the state; and (3) an additional minimum of 5 percent either to projects that benefit low-income households that are outside of, but within 0.5 mile of, DACs, or to projects located within the boundaries of, and benefiting individuals living in, low-income communities that are outside of, but within 0.5 mile of, DACs.

ASSEMBLY BILL 617

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the state's cap-and-trade program for GHG emissions. AB 617 imposes a new state-mandated local program to address nonvehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and toxic air contaminants. The bill requires the California Air Resources Board (CARB) to identify high-pollution areas and directs air districts to focus air quality improvement efforts through the adoption of community emission reduction programs in these identified areas. Currently, air districts review individual stationary sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring communitywide air quality assessment and emission reduction planning, called a community risk reduction plan in some jurisdictions. CARB has developed a statewide blueprint that outlines the process for identifying affected communities, statewide strategies to reduce emissions of criteria air pollutants and toxic air contaminants, and criteria for developing community emissions reduction programs and community air monitoring plans.

CALIFORNIA DEPARTMENT OF JUSTICE'S BUREAU OF ENVIRONMENTAL JUSTICE

In February 2018, California Attorney General Xavier Becerra announced the establishment of a Bureau of Environmental Justice within the Environmental Section at the California Department of Justice. The purpose of the bureau is to enforce environmental laws, including CEQA, to protect communities disproportionately burdened by pollution and contamination. The bureau accomplishes this through oversight and investigation and by using the law enforcement powers of the Attorney General's Office to identify and pursue matters affecting vulnerable communities.

In 2012, then Attorney General Kamala Harris published a fact sheet titled, "Environmental Justice at the Local and Regional Level," highlighting existing provisions in the California Government Code and CEQA principles that provide for the consideration of EJ in local planning efforts and CEQA. Attorney General Becerra cites the fact sheet on his web page, indicating its continued relevance.

Governor's Office of Planning and Research's 2020 Updated EJ Element Guidelines

OPR published updated General Plan Guidelines in June 2020 that include revised EJ guidance in response to SB 1000. OPR has also published example policy language in an appendix document along with several case studies to highlight EJ-related policies and initiatives that can be considered by other jurisdictions. Section 4.8 of the General Plan Guidelines contains the EJ guidance. The guidelines offer recommendations for identifying vulnerable communities and reducing pollution exposure related to health conditions, air quality, project siting, water quality, and land use compatibility related to industrial and large-scale agricultural operations, childcare facilities, and schools, among other things. It provides many useful resources, including links to research, tools, reports, and sample general plans.

State California Environmental Quality Act Guidelines Section 15131

State CEQA Section 15131 provides that economic or social information may be included in an EIR, but those economic or social effects shall not be considered significant effects on the environment. In an EIR, the lead agency is responsible for researching economic or social changes resulting from a project, which may eventually lead to physical changes in the environment. These economic or social changes can be used to determine the significance of physical changes on the environment.

Government Code Section 65040.12

Government Code Section 65040.12 (e) defines environmental justice as: "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies."

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act Section 56668(o) defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services.

4.4 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Impacts related to reorganization of the project would be considered significant if the project would result in conflicts with Sacramento LAFCo policies and standards related to public service provision and the environment for any of the following:

- ▶ affordable housing;
- ▶ fire protection services;
- ▶ parks and recreation;
- ▶ drainage service;
- ▶ transportation and lighting services;
- ▶ loss of prime agricultural lands (as defined by Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act); or
- ▶ loss of open space (as defined in Government Code Section 65560).

In addition, impacts related to the reorganization of the project area would be considered significant if the reorganization would result in adverse effects or impacts that are appreciably more severe in magnitude or are predominately borne by any segment of the population, for example, household population with low income or a minority population in comparison with a population that is not low income or minority (i.e., environmental justice impacts).

METHODS AND ASSUMPTIONS

As noted above, the analysis below is focused on impacts related to reorganization of the project specific to the Sacramento LAFCo policies and standards for public services and the environment. The City and County must adopt a tax exchange agreement prior to the Sacramento Local Agency Formation Commission (LAFCo) public hearings on the annexation proposal. The proposed tax exchange agreement will enable the City to proceed with the annexation request to LAFCo. The tax exchange agreement specifies post-annexation sharing of municipal property tax revenue and, in certain circumstances, sales tax and transient occupancy tax revenues within the annexation area to allow for agreed-upon fair sharing between the City and County.

IMPACTS AND MITIGATION MEASURES

Impact 4-1: Loss of Affordable Housing

The project site consists of previously developed, vacant land that would be developed to include a gas station, convenience store, and car wash. The project site does not support any housing. Therefore, the project would have **no impact** involving the loss of affordable housing.

No impact. No affordable housing exists in within the project site. The project does not include development of any housing and is not designated as affordable housing in the City of Sacramento or Sacramento County housing

elements (City of Sacramento 2021, Sacramento County 2022). Therefore, the project would have **no impact** involving the loss of affordable housing.

Mitigation Measures

No mitigation is required.

Impact 4-2: Impacts to Sacramento Metropolitan Fire Department

Detachment of the project area from Metro Fire would not result in significant service impacts to Metro Fire because the detachment would only result in a minor reduction of service area and a Property Tax Exchange Agreement would be established to address payment of impact feeds and funding. Therefore, project's impacts to Metro would be **less than significant**.

Less than significant. While the proposed annexation of the project area would involve the detachment of 2.49 acres from Metro Fire and annexation to the City, and would be served by the SFD, this detachment would only result in a minor reduction Metro Fire's service area by approximately 0.7 percent. The project would contribute to the need for facility improvements and equipment needs that would be addressed through its payment of impact fees and funding through its Property Tax Exchange Agreement. The project site is located within the Metro Fire district boundary. It is also provided fire service by SFD through a mutual aid agreement. Once annexed, the project site would annexed into the SFD service area and would be served by SFD. The existing mutual aid agreement between Metro Fire and SFD would continue upon annexation to SFD. As a result, the detachment of the project site from Metro Fire would be a **less-than-significant** impact and would not create new or altered service impacts.

Mitigation Measures

No mitigation is required.

Impact 4-3: Impacts Related to an Increase in Demand for Fire Protection Services in the City

The proposed annexation of the project area would involve the detachment of 2.49 acres from Metro Fire and annexation to SFD. This detachment would only result in a minor increase to SFD's service area by approximately 1.7 percent, and would not change the level of service demanded by the SFD because it already provides services to the project site through a mutual aid agreement with Metro Fire. The mutual aid agreement between Metro Fire and SFD would continue upon annexation to SFD. In addition, a Property Tax Exchange Agreement would be established to address funding for City fire protection services. Therefore, the project's impacts to City fire protection services would be **less than significant**.

Less than significant. Development would also be required to comply with state and local fire regulations, as outlined in the California Health and Safety Code and the City Code and fire prevention code. Compliance with these mandatory regulations would ensure that fire and other emergency service providers would have adequate access to all properties within the project area in the event of a fire emergency. Compliance would also support fire suppression and decrease the likelihood of fire spreading through preventative measures such as fire sprinklers and appropriate fire-safe vegetation choices and clearing requirements, and through the use of fire-safe building materials, building plans, emergency access details and site plans.

The proposed annexation of the project area would involve the detachment of 2.49 acres from Metro Fire and annexation to SFD. This detachment would only result in a minor increase to SFD's service area by approximately 1.7 percent, and would not change the level of service demanded by the SFD because it already provides services to the project site through a mutual aid agreement with Metro Fire. The mutual aid agreement between Metro Fire and SFD would continue upon annexation to SFD. In addition, a Property Tax Exchange Agreement would be established to address funding for City fire protection services. As a result, the annexation of the project site to SFD would be a **less-than-significant** impact and would not create new or altered service impacts.

Mitigation Measures

No mitigation is required.

Impact 4-4: Impacts to the Southgate Recreation and Park District

Detachment of the project area from the SRPD would not result in significant service impacts to SRPD because this area does not currently contain any park facilities or residents that generate demand and revenue to SRPD. Therefore, project's impacts to the SRPD would be **less than significant**.

Less than significant. A majority of the project's land area is vacant. The proposed annexation of the project area would involve the detachment of 2.49 acres from the SRPD and annexation to the City. This detachment would result in a reduction SRPD service area by approximately 0.007 percent, of the total approximately 52 square miles (33,280 acres). The project site does not contain any on-site park facilities maintained by the SRPD. The detachment of the project area from the SRPD would not alter park demands for park facilities or result in the loss of park facilities. In regard to decreased funding of SRPD, the project site contributes a small amount toward the overall property tax revenue in the County and thus generates a minor contribution toward SRPD funding. Thus, project's impact to the SRPD would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4-5: Impacts Related to an Increase in Demand for Park and Recreation Services Provided by the City

Annexation of the project would not result in an increase in the demand for park and recreation facilities provided by the City. Therefore, the project would have **no impact** on recreation facility demands.

No impact. The project involves development of a gas station, convenience store, and car wash facility. It would not increase population levels or otherwise create a condition that would affect demand for park and recreation facilities provided by the City. Therefore, the project would not result in substantial deterioration or other physical impacts to existing recreation facilities in the City. This impact would **no impact**.

Mitigation Measures

No mitigation is required.

Impact 4-6: Impacts to Sacramento County Water Agency Zone 13

Detachment of the project area from Sacramento County Water Agency Zone 13 would not result in significant drainage service impacts because Zone 13 was established for the funding of water supply and drainage studies and does not include the maintenance of drainage facilities. Therefore, project's impacts to Sacramento County Water Agency Zone 13 would be **less than significant**.

Less than significant. Zone 13 of the Sacramento County Water Agency was established in 1987 to perform studies related to water supply, drainage and flood control affecting all or part of the unincorporated areas of Sacramento and the City of Citrus Heights. In regards to decreased funding of Zone 13, the project site contributes a small amount toward the overall property tax revenue in the County and thus generates a minor contribution toward Zone 13 funding. Thus, project's impact to Zone 13 of the Sacramento County Water Agency would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4-7: Impacts to Sacramento County Service Areas No. 1 and 11

Detachment of the project area from Sacramento County Service Area No.1 (street and highway lighting) and No. 10 (extended police service) would not affect service impacts because the project area is undeveloped and currently generates no demands for these services. In regards to decreased funding of Sacramento County Service Areas, the project site contributes a small amount toward the overall property tax revenue in the County and thus generates a minor contribution toward Sacramento County Service Area funding. Therefore, project's impacts to Sacramento County Service Areas No. 1 and 11 would be **less than significant**.

Less than significant. Sacramento County Service Area No. 1 was formed in 1986 to consolidate all street and highway safety lighting services into one countywide district and to provide a financing mechanism for the portion of those services not otherwise financed by property taxes. Sacramento County Service Area No. 11 was established on October 19, 2004 to provide extended police services for the urbanized unincorporated areas of Sacramento County. The project area is undeveloped and currently generates no demands for these services. In regards to decreased funding of Sacramento County Service Areas, the project site contributes a small amount toward the overall property tax revenue in the County and thus generates a minor contribution toward Sacramento County Service Area funding. Thus, the project's impact to Sacramento County Service Area No. 1 and 11 would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4-8: Impacts Related to an Increase in Demand for Drainage Provided by the City

Annexation of the project would result in an increase in the drainage and flood control activity by the City. The project would connect with existing drainage infrastructure located within Elder Creek Road and would include onsite stormwater facilities to treat and attenuate stormwater flows consistent with City requirements. The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. The proposed project would comply with Section 13.08.145 Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code. Therefore, the project's impacts on drainage facilities would be **less than significant**.

Less than significant. As described in Section 3.10, "Hydrology and Water Quality," the project would connect with existing drainage infrastructure located within Elder Creek Road and would include onsite stormwater facilities to treat and attenuate stormwater flows consistent with City requirements. Stormwater runoff generated by impervious areas created by the proposed car wash site would be captured by a series of new drain inlets and conveyed to onsite stormwater treatment facilities within the site. Treated runoff would be routed through new underground stormwater pipes to the City's existing storm drains. The City Department of Utilities would review the Improvement Plans for the proposed project prior to approval to ensure that adequate water quality control facilities are incorporated. The proposed project would comply with Section 13.08.145, Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities, of the City of Sacramento Municipal Code. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4-9: Loss of Prime Agricultural Lands

The project site is not located on prime agricultural lands, as defined by California Government Code Section 56064. Therefore, there would be **no impact**.

No impact. As described in Section 4.2.7, "Agricultural Lands," the project site is not meet prime agricultural land qualifications defined by California Government Code Section 56064. Thus, because implementation of the project would not affect agricultural land, there would be **no impact**.

Mitigation Measures

No mitigation is required.

Impact 4-10: Loss of Open Space Land Uses

The project site is not located on open space land. Therefore, there would be **no impact**.

No impact. The project parcel is currently zoned as M-1 Light Industrial per the Sacramento County General Plan. Because implementation of the project would not affect lands designated as open space, there would be **no impact**.

Mitigation Measures

No mitigation is required.

Impact 4-11: Impacts Related to Environmental Justice

The project would consist of a gas station, 7-Eleven convenience store, and car wash. Upon implementation of mitigation measures included in Chapter 4 of this IS/MND, there would be no significant environmental effects. Therefore, no existing environmental justice conditions would be worsened as a result of the project and impacts to environmental justice would be **less than significant**.

Less than significant. The project site is located in a medium-high sensitivity area (SMUD 2022), due in part to the project area's designation as an Opportunity Zone and as a Disadvantaged Community by state Senate Bill 535. However, the project involves development of a gas station, convenience store, and car wash facility, which would enhance economic activity in the area. Upon implementation of all included mitigation measures, development of the site would not result in significant impacts to the environment as discussed in Chapters 3 and 4 of this IS/MND. As a result, the project does not have the potential to further affect the community and/or worsen existing adverse environmental conditions. Therefore, no existing environmental justice conditions would be worsened as a result of the project. Impacts related to environmental justice would be **less than significant**.

Mitigation Measures

No mitigation is required.

5 REPORT PREPARERS

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2 Project Description

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3 Environmental Checklist

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Appendix A

Air Quality, Greenhouse Gas Emissions,
and Energy Analysis Data

CalEEMod Input Assumptions

Total size of project size	Acres
Net land area (+/-)	1.9437

Land Use Type	CalEEMod LU Type	Size	Unit	Demolition Material	Units	Material Imported	Units	Material Exported	Units
7-11 Market and MPDs	Convenience market w/ gas pumps		4150 sq ft						
Total pumps	^^		12 pumps						
Car wash + equipment room	Automobile care center		1075 sq ft						
Surface Parking	Parking lot		15 spaces (cars)						
Underground storage tank	n/a								

99.02 cubic/y:

**Source <https://www.sanjo>

Operations	Amount	Unit
Employees	20	total employees
Deliveries	4	per day
# of cars serviced		per day
Gas through put	2,000,000	gallons/year
Start of construction	2022	
First operational year	2023	first full year of operation

Carbon Sequestration	
# of trees removed	0
# of trees added	

**Vacant land, no trees removed. From client

Operations	
Weekly garbage collection	
Collection per week	2
Collections per year	208

**Source: client

Mobile trip rates	Weekday	Weekend	Annual VMT
ITE Trip rate for self service car wash (trips/wash)	108	138.2	
Car wash (daily VMT) - CalEEMod output	189	232.4	173,638

**Source Trip rates: email per Z. Miller 9/17/21 using ITE daily trip rate for self service car wash. Used caleemod output for daily and annual VMT based on trip rates.

Water demand	Gal/car wash(trip)	Gal/year
Car wash	30	547,500

** Source International Car Wash Association (pg C-1) https://www.carwash.org/docs/default-source/2018-water-study/ica---water-quality.pdf?sfvrsn=c271db4b_2

Unit Conversion for UTS	
Gallon	201.974
Cubic Yard	1



Indoor water demand	unit	Wastewater generated	unit	Title-24 Electricity Intensity	unit	Non Title-24 Electricity Intensity	unit	Lighting Intensity	unit
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gal/
547,500 year

ards
seca.gov/home/showdocument?id=25771

Air Quality

Table 3.3-2 Summary of Maximum Daily Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction (2021)				
Maximum Daily Emissions - Construction				
Construction activity	Emissions (lbs/day)			
	ROG	NOX	PM10	PM2.5
Project	3.8562	12.2498	6.0070	3.0933
Threshold of Significance	None	85.00	Zero (80)	Zero (82)
Exceed Significance Threshold?	No	No	Yes	Yes

Table 3.3-3 Summary of Annual Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2021)				
Maximum Daily Emissions - Operations				
Emission Sector	Emissions (lbs/day)			
	ROG	NOX	PM10	PM2.5
Area	0.1279	3.0000e-005	1.0000e-005	1.0000e-005
Energy	1.7900e-003	0.0163	1.2400e-003	1.2400e-003
Mobile	14.175	4.682	3.377	0.927
Total	14.304	4.699	3.378	0.928
Threshold of Significance	65	65	Zero (80)	Zero (82)
Exceed Significance Threshold?	No	No	Yes	Yes

GHG

Table X Project-Generated Greenhouse Gas Emissions	
Emission Source	GHG Emissions
Construction GHG Emissions	
Construction Activity	61.3710
Operational GHG Emissions	
Area	7.4000e-004
Energy	13.7967
Mobile	676.02
Waste	2.0569
Water	1.0397
Total Operational GHG	670.3859
Total Project Annual GHG Emissions (Construction + Operational)	731.76

Energy

Table Operational Energy Consumption		
Land Use/Energy Type	Electricity Consumption (kwh/yr)	Natural Gas (BTU/year)
Convenience store w/ pumps	46563	22285.5
Car wash	15931.5	38237.8
Parking lot	2100	0
Total	64,594.50	60,523.30

Table Gasoline and Diesel Consumption in 2022		
Project Fuel Consumption - Construction		
Vehicle Category	Gasoline (gal/year)	Diesel (gal/year)
Off-road construction equipment	0	43,044
On-road worker vehicles	78483	0
On-road haul trucks	0	5,579
Total	78483	48623.73
Project Fuel Consumption - Operation		
Vehicle Category	Gasoline (gal/year)	Diesel (gal/year)
Passenger Vehicles	48,435	90
Trucks	15,234	6,504
Buses	362	269
Other vehicles	931	153
Total (All Vehicle Types)	64,962	7,015
Total Project fuel consumption	208,407	62,654

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Watt & Elder 7 Eleven
Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	15.00	Space	0.13	6,000.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	4,150.00	0
Automobile Care Center	1.08	1000sqft	0.02	1,075.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6	Operational Year		2023	
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	357.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description and client. Assume 6 MPD w/ 2 pumps each. Updated sqft of convenience store based on PD = 4,150 sq ft. Assume car wash + equipment room sq ft (775+300 sq ft = 1,075 sqft), car wash land use assumed Automobile care center

Construction Phase - No demolition

Construction mobilization (site prep) = 4 days

Grading & trenching = 10 days

Development of convenience store, gas station, car wash = 4 months

Installation of utilities, underground storage tanks, water clarifier = 14 days (added to building construction phase)

Paving = 7 days

Parking area striping and landscaping = 14 days

Off-road Equipment - No demolition

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No cranes included in PD

Off-road Equipment -

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Grading - Material exported per underground storage tank. 2 tanks assumed to be 10,000 gallons, 20,000 gallons converted to cubic yards = 99.02 cubic yards.

Trips and VMT - 20 worker crew per PD

Vehicle Trips - Approx. 50 cars expected to use car wash each day per PD.

Water And Wastewater - Indoor water use from car wash expected to be 30 gal/car, 50 car/day

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	1.00	4.00
tblConstructionPhase	PhaseEndDate	6/22/2022	7/22/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	6/23/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	12/31/2021
tblConstructionPhase	PhaseEndDate	1/19/2022	2/3/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	7/4/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/20/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	2/4/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/21/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	6/24/2022
tblGrading	MaterialExported	0.00	99.02
tblLandUse	LandUseSquareFeet	1,694.10	4,150.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	4.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	100,666.78	547,500.00

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	12/31/2021	5	0	
2	Site Preparation	Site Preparation	1/15/2022	1/20/2022	5	4	
3	Grading	Grading	1/21/2022	2/3/2022	5	10	
4	Building Construction	Building Construction	2/4/2022	6/23/2022	5	100	
5	Paving	Paving	6/24/2022	7/4/2022	5	7	
6	Architectural Coating	Architectural Coating	7/5/2022	7/22/2022	5	14	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,838; Non-Residential Outdoor: 2,613; Striped Parking Area: 360

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	20.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

3.4 Grading - 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					5.3140	0.0000	5.3140	2.5689	0.0000	2.5689			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	1.0832	12.0046	5.9360	0.0141	5.3140	0.5173	5.8313	2.5689	0.4759	3.0448		1,364.8198	1,364.8198	0.4414		1,375.8551

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.9800e-003	0.2086	0.0410	7.8000e-004	0.0209	1.8000e-003	0.0227	5.7300e-003	1.7200e-003	7.4500e-003		85.0008	85.0008	3.4100e-003	0.0135	89.1012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0774	0.2452	0.6317	2.2200e-003	0.1731	2.6200e-003	0.1757	0.0461	2.4800e-003	0.0486		230.2117	230.2117	7.7500e-003	0.0173	235.5461

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					5.3140	0.0000	5.3140	2.5689	0.0000	2.5689			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	1.0832	12.0046	5.9360	0.0141	5.3140	0.5173	5.8313	2.5689	0.4759	3.0448	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551

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	4.9800e-003	0.2086	0.0410	7.8000e-004	0.0209	1.8000e-003	0.0227	5.7300e-003	1.7200e-003	7.4500e-003		85.0008	85.0008	3.4100e-003	0.0135	89.1012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0774	0.2452	0.6317	2.2200e-003	0.1731	2.6200e-003	0.1757	0.0461	2.4800e-003	0.0486		230.2117	230.2117	7.7500e-003	0.0173	235.5461

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667			831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667			831.1908

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	0.0000	0.0000
Vendor	4.3300e-003	0.1089	0.0328	3.9000e-004	0.0121	1.0600e-003	0.0131	3.4700e-003	1.0100e-003	4.4800e-003		42.3238	42.3238	1.1100e-003	6.2000e-003		44.1985
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003		146.4449
Total	0.0768	0.1455	0.6235	1.8300e-003	0.1642	1.8800e-003	0.1661	0.0438	1.7700e-003	0.0456		187.5348	187.5348	5.4500e-003	9.9800e-003		190.6434

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	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623	0.0000	824.5241	824.5241	0.2667			831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623	0.0000	824.5241	824.5241	0.2667			831.1908

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000
Vendor	4.3300e-003	0.1089	0.0328	3.9000e-004	0.0121	1.0600e-003	0.0131	3.4700e-003	1.0100e-003	4.4800e-003		42.3238	42.3238	1.1100e-003	6.2000e-003	44.1985
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0768	0.1455	0.6235	1.8300e-003	0.1642	1.8800e-003	0.1661	0.0438	1.7700e-003	0.0456		187.5348	187.5348	5.4500e-003	9.9800e-003	190.6434

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6956	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017			1,043.3677
Paving	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	0.6956	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017			1,043.3677

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	3.7838	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

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	3.5792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	3.7838	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.7231	4,065.7231	0.6116	0.3666	4,190.2595
Unmitigated	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.7231	4,065.7231	0.6116	0.3666	4,190.2595

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	53.75	53.75	53.75	46,341	46,341
Convenience Market with Gas Pumps	3,870.00	3,870.00	3,870.00	1,535,549	1,535,549
Parking Lot	0.00	0.00	0.00		
Total	3,923.75	3,923.75	3,923.75	1,581,890	1,581,890

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Convenience Market with Gas Pumps	10.00	5.00	6.50	0.80	80.20	19.00	14	21	65
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Convenience Market with Gas Pumps	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238
NaturalGas Unmitigated	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238

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					
Automobile Care Center	104.761	1.1300e-003	0.0103	8.6300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004		12.3248	12.3248	2.4000e-004	2.3000e-004	12.3981
Convenience Market with Gas	61.0562	6.6000e-004	5.9900e-003	5.0300e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		7.1831	7.1831	1.4000e-004	1.3000e-004	7.2258
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.7900e-003	0.0163	0.0137	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003		19.5079	19.5079	3.8000e-004	3.6000e-004	19.6238

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					
Automobile Care Center	0.104761	1.1300e-003	0.0103	8.6300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004		12.3248	12.3248	2.4000e-004	2.3000e-004	12.3981
Convenience Market with Gas	0.0610562	6.6000e-004	5.9900e-003	5.0300e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		7.1831	7.1831	1.4000e-004	1.3000e-004	7.2258
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.7900e-003	0.0163	0.0137	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003		19.5079	19.5079	3.8000e-004	3.6000e-004	19.6238

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Unmitigated	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Total	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Total	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	15.00	Space	0.13	6,000.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	4,150.00	0
Automobile Care Center	1.08	1000sqft	0.02	1,075.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description and client. Assume 6 MPD w/ 2 pumps each. Updated sqft of convenience store based on PD = 4,150 sq ft. Assume car wash + equipment room sq ft (775+300 sq ft = 1,075 sqft), car wash land use assumed Automobile care center

Construction Phase - No demolition

Construction mobilization (site prep) = 4 days

Grading & trenching = 10 days

Development of convenience store, gas station, car wash = 4 months

Installation of utilities, underground storage tanks, water clarifier = 14 days (added to building construction phase)

Paving = 7 days

Parking area striping and landscaping = 14 days

Off-road Equipment - No demolition

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No cranes included in PD

Off-road Equipment -

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Off-road Equipment -

Grading - Material exported per underground storage tank. 2 tanks assumed to be 10,000 gallons, 20,000 gallons converted to cubic yards = 99.02 cubic yards.

Trips and VMT - 20 worker crew per PD

Vehicle Trips - Approx. 50 cars expected to use car wash each day per PD.

Water And Wastewater - Indoor water use from car wash expected to be 30 gal/car, 50 car/day

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	1.00	4.00
tblConstructionPhase	PhaseEndDate	6/22/2022	7/22/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	6/23/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	12/31/2021
tblConstructionPhase	PhaseEndDate	1/19/2022	2/3/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	7/4/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/20/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	2/4/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/21/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	6/24/2022
tblGrading	MaterialExported	0.00	99.02
tblLandUse	LandUseSquareFeet	1,694.10	4,150.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	4.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	100,666.78	547,500.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2022	0.0649	0.3607	0.4211	6.9000e-004	0.0382	0.0191	0.0573	0.0158	0.0176	0.0334	0.0000	60.7940	60.7940	0.0161	5.9000e-004	61.3710
Maximum	0.0649	0.3607	0.4211	6.9000e-004	0.0382	0.0191	0.0573	0.0158	0.0176	0.0334	0.0000	60.7940	60.7940	0.0161	5.9000e-004	61.3710

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					
2022	0.0649	0.3607	0.4211	6.9000e-004	0.0382	0.0191	0.0573	0.0158	0.0176	0.0334	0.0000	60.7939	60.7939	0.0161	5.9000e-004	61.3710
Maximum	0.0649	0.3607	0.4211	6.9000e-004	0.0382	0.0191	0.0573	0.0158	0.0176	0.0334	0.0000	60.7939	60.7939	0.0161	5.9000e-004	61.3710

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.1967	0.1967
2	4-1-2022	6-30-2022	0.1865	0.1865
3	7-1-2022	9-30-2022	0.0437	0.0437
		Highest	0.1967	0.1967

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	12/31/2021	5	0	
2	Site Preparation	Site Preparation	1/15/2022	1/20/2022	5	4	
3	Grading	Grading	1/21/2022	2/3/2022	5	10	
4	Building Construction	Building Construction	2/4/2022	6/23/2022	5	100	
5	Paving	Paving	6/24/2022	7/4/2022	5	7	
6	Architectural Coating	Architectural Coating	7/5/2022	7/22/2022	5	14	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,838; Non-Residential Outdoor: 2,613; Striped Parking Area: 360 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	20.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 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					1.0600e-003	0.0000	1.0600e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	0.0139	7.9200e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239
Total	1.1600e-003	0.0139	7.9200e-003	2.0000e-005	1.0600e-003	5.1000e-004	1.5700e-003	1.1000e-004	4.7000e-004	5.8000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427
Total	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427

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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					1.0600e-003	0.0000	1.0600e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	0.0139	7.9200e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239
Total	1.1600e-003	0.0139	7.9200e-003	2.0000e-005	1.0600e-003	5.1000e-004	1.5700e-003	1.1000e-004	4.7000e-004	5.8000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427
Total	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427

3.4 Grading - 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					0.0266	0.0000	0.0266	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	5.4200e-003	0.0600	0.0297	7.0000e-005	0.0266	2.5900e-003	0.0292	0.0128	2.3800e-003	0.0152	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
Total	3.3000e-004	1.3000e-003	2.7300e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9865	0.9865	4.0000e-005	8.0000e-005	1.0110

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					0.0266	0.0000	0.0266	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	5.4200e-003	0.0600	0.0297	7.0000e-005	0.0266	2.5900e-003	0.0292	0.0128	2.3800e-003	0.0152	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408

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	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
Total	3.3000e-004	1.3000e-003	2.7300e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9865	0.9865	4.0000e-005	8.0000e-005	1.0110

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3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3998	37.3998	0.0121	0.0000	37.7022
Total	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3998	37.3998	0.0121	0.0000	37.7022

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	2.1000e-004	5.7400e-003	1.6700e-003	2.0000e-005	5.9000e-004	5.0000e-005	6.4000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.9197	1.9197	5.0000e-005	2.8000e-004	2.0048
Worker	3.0800e-003	2.0100e-003	0.0252	7.0000e-005	7.3400e-003	4.0000e-005	7.3900e-003	1.9500e-003	4.0000e-005	1.9900e-003	0.0000	6.0089	6.0089	2.1000e-004	1.8000e-004	6.0683
Total	3.2900e-003	7.7500e-003	0.0269	9.0000e-005	7.9300e-003	9.0000e-005	8.0300e-003	2.1200e-003	9.0000e-005	2.2100e-003	0.0000	7.9285	7.9285	2.6000e-004	4.6000e-004	8.0731

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	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3997	37.3997	0.0121	0.0000	37.7021
Total	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3997	37.3997	0.0121	0.0000	37.7021

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	2.1000e-004	5.7400e-003	1.6700e-003	2.0000e-005	5.9000e-004	5.0000e-005	6.4000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.9197	1.9197	5.0000e-005	2.8000e-004	2.0048
Worker	3.0800e-003	2.0100e-003	0.0252	7.0000e-005	7.3400e-003	4.0000e-005	7.3900e-003	1.9500e-003	4.0000e-005	1.9900e-003	0.0000	6.0089	6.0089	2.1000e-004	1.8000e-004	6.0683
Total	3.2900e-003	7.7500e-003	0.0269	9.0000e-005	7.9300e-003	9.0000e-005	8.0300e-003	2.1200e-003	9.0000e-005	2.2100e-003	0.0000	7.9285	7.9285	2.6000e-004	4.6000e-004	8.0731

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2600e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3129
Paving	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4300e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3129

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	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248
Total	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248

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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	2.2600e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3128
Paving	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4300e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3128

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	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248
Total	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
Total	0.0265	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496
Total	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496

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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
Total	0.0265	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902

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	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496
Total	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919
Unmitigated	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	53.75	53.75	53.75	46,341	46,341
Convenience Market with Gas Pumps	3,870.00	3,870.00	3,870.00	1,535,549	1,535,549
Parking Lot	0.00	0.00	0.00		
Total	3,923.75	3,923.75	3,923.75	1,581,890	1,581,890

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	14	21	65
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Convenience Market with Gas Pumps	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

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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	10.4887	10.4887	9.7000e-004	1.2000e-004	10.5478
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.4887	10.4887	9.7000e-004	1.2000e-004	10.5478
NaturalGas Mitigated	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2489
NaturalGas Unmitigated	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2489

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					
Automobile Care Center	38237.8	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0405	2.0405	4.0000e-005	4.0000e-005	2.0526
Convenience Market with Gas	22285.5	1.2000e-004	1.0900e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1892	1.1892	2.0000e-005	2.0000e-005	1.1963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.3000e-004	2.9600e-003	2.4900e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2490

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					
Automobile Care Center	38237.8	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0405	2.0405	4.0000e-005	4.0000e-005	2.0526
Convenience Market with Gas	22285.5	1.2000e-004	1.0900e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1892	1.1892	2.0000e-005	2.0000e-005	1.1963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.3000e-004	2.9600e-003	2.4900e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2490

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	15931.5	2.5869	2.4000e-004	3.0000e-005	2.6015
Convenience Market with Gas	46563	7.5608	7.0000e-004	8.0000e-005	7.6034
Parking Lot	2100	0.3410	3.0000e-005	0.0000	0.3429
Total		10.4887	9.7000e-004	1.1000e-004	10.5478

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	15931.5	2.5869	2.4000e-004	3.0000e-005	2.6015
Convenience Market with Gas	46563	7.5608	7.0000e-004	8.0000e-005	7.6034
Parking Lot	2100	0.3410	3.0000e-005	0.0000	0.3429
Total		10.4887	9.7000e-004	1.1000e-004	10.5478

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Unmitigated	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

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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	2.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Total	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Total	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8614	8.8000e-004	5.2000e-004	1.0397
Unmitigated	0.8614	8.8000e-004	5.2000e-004	1.0397

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.5475 / 0.061699	0.6717	7.1000e-004	4.3000e-004	0.8166
Convenience Market with Gas	0.125486 / 0.0769109	0.1896	1.7000e-004	1.0000e-004	0.2230
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8614	8.8000e-004	5.3000e-004	1.0397

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.5475 / 0.061699	0.6717	7.1000e-004	4.3000e-004	0.8166
Convenience Market with Gas	0.125486 / 0.0769109	0.1896	1.7000e-004	1.0000e-004	0.2230
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8614	8.8000e-004	5.3000e-004	1.0397

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.8302	0.0491	0.0000	2.0569
Unmitigated	0.8302	0.0491	0.0000	2.0569

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	4.09	0.8302	0.0491	0.0000	2.0569
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.8302	0.0491	0.0000	2.0569

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	4.09	0.8302	0.0491	0.0000	2.0569
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.8302	0.0491	0.0000	2.0569

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Mobile Source Emissions Summary

	ROG (lbs/day)	NOX (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	CO2e (MT/year)
Off-gassing	4.619178082				
Vehicles	9.5555	4.6823	3.3767	0.9271	676.0203
Total	14.17467808	4.6823	3.3767	0.9271	676.0203

ROG Off-Gassing Emissions (lbs/day)

Spillage, Hose Permeation, Transfer Loss, Pressure Driven Loss	2.32 lb ROG/day
Phase II Fueling - Non-ORVR Vehicles	0.60 lb ROG/day
Phase II Fueling - ORVR Vehicles	1.70 lb ROG/day
Total	4.62 lb ROG/day

Emission Factors

Category	
Phase II Fueling - Non-ORVR Vehicles	0.42 lb ROG/kgal
Phase II Fueling - ORVR Vehicles	0.021 lb ROG/kgal
Phase II Fueling - Spillage	0.24 lb ROG/kgal
Gasoline Dispensing Hose Permeation	0.009 lb ROG/kgal
Phase I Bulk Transfer Losses	0.15 lb ROG/kgal
Pressure Driven Losses	0.024 lb ROG/kgal

Source: CARB 2013 <https://ww3.arb.ca.gov/vapor/gdf-emisfactor/gdfumbrella.pdf>

Assumptions

2,000 kgal gasoline/year	**From client, anticipated gasoline throughput/day
5.48 kgal/day	
74% gasoline dispensed to ORVR vehicles	

ORVR is **onboard refueling vapor recovery** piece of newer cars that reduce ROG off gassing

i. Phase II Fueling - Non-ORVR Vehicles: When dispensing gasoline to vehicles not equipped with ORVR, the rising liquid level in the vehicle fuel tank displaces gasoline vapors back through the fill-pipe where they are captured by a Phase II vapor recovery system. Vapors not captured by the Phase II vapor recovery system are emitted to the atmosphere.

ii. Phase I Bulk Transfer Losses: During transfer of gasoline from cargo tank trucks to a GDF UST, emissions are generated when gasoline vapors in an UST are displaced to the atmosphere by the rising level of the gasoline being loaded into an UST. Emissions are controlled with a Phase I vapor recovery system.

iii. Pressure Driven (Breathing) Losses: Emissions are generated when gasoline vapors are displaced to the atmosphere during the day to day operation of a given GDF. During periods when there is either no dispensing or when there is a significant slowdown in the dispensing of fuel to vehicles, such as overnight periods, gasoline in an UST evaporates into the headspace above the liquid fuel. The vapor growth caused by this evaporation increases UST static pressure and results in pressure driven emissions. Pressure driven emissions are currently controlled by a processing unit that includes either a bladder tank, membrane separator, carbon canister or thermal oxidizer.

iv. Phase II Fueling - Spillage: Emissions are generated from dispensing nozzle spillage of liquid gasoline during the act of vehicle fueling, including pre-fueling, fueling and post-fueling spillage.

v. Phase II Fueling - ORVR Vehicles: These emissions occur at the vehicle fill-pipe during dispensing of gasoline to ORVR vehicles. ORVR systems were phased in beginning with 1998 model year passenger vehicles, and are now installed on all passenger, light-duty, and medium-duty vehicles manufactured since the 2006 model year. When an ORVR vehicle is fueled, almost all the gasoline vapor displaced from the fuel tank is routed to a carbon canister in the vehicle fuel system. At the start of dispensing, a small portion of the vapor in the vehicle fuel tank may escape through the fill-pipe before the onboard system is fully engaged. Uncontrolled fill-pipe emissions from ORVR vehicles are approximately two orders of magnitude lower than the same emissions from vehicles without ORVR, and are easily captured by Phase II vapor recovery systems.

vi. Gasoline Dispensing Hose Permeation: These emissions are caused by the migration of liquid gasoline through the outer GDF hose material and to the atmosphere through permeation. This condition primarily occurs at GDFs equipped with vacuum assist Phase II vapor recovery systems or no Phase II vapor recovery system.

Energy Calculations Summary

Operational Fuel Use Summary

Vehicle Class	Diesel Gallons	Gasoline Gallons
Passenger	90	48,435
Truck	6,504	15,234
Bus	269	362
Other	153	931
Total	7,015	64,962

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2017.
3. Annual VMT calculated based on daily VMT

Operational Natural Gas Use Summary

Total	Amount	Unit
	60,523	KBTU/year

Operational Electricity Use Summary

	Amount	Unit
Total	64,595	kWh/year
	64.59	MWh/year

Operational Diesel Consumption Summary

	Amount	Unit
Total		gal/year

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
1	43044.32	78483.72	5579.41	48623.73
TOTAL	43044.32	78483.72	5579.41	48623.73

Total Gasoline	78,484	gallons
Total Diesel	48,624	gallons

Phase 1 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Average Daily Factor	Diesel Fuel Usage
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	1	0.6	9
Site Preparation	Graders	1	8	187	0.41	1	0.6	18
Grading	Tractors/Loaders/Backhoes	1	7	97	0.37	2	0.6	15
Grading	Rubber Tired Dozers	1	6	247	0.4	2	0.6	36
Grading	Graders	1	6	187	0.41	2	0.6	28
Building Construction	Forklifts	2	6.00	89	0.20	100	0.6	641
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37	100	0.6	1,723
Architectural Coating	Air Compressor	1	6.00	78	0.48	5	0.6	34
Paving	Cement and Mortar Mixers	4	6.00	9	0.56	5	0.6	18
Paving	Pavers	1	7.00	130	0.42	5	0.6	57
Paving	Rollers	1	7.00	80	0.38	5	0.6	32
Paving	Tractors/Loaders/Backhoes	1	7.00	97	397.00	5	0.6	40,434
TOTAL								43,044

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Days	Total Worker Trips	Total Vendor Trips	Total Hauling Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Hauling Trip Length (miles)	Average Daily Factor (worker, vendor, haul)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	20	0	1	20	0	0	10.00	6.50	20.00	200	0	0	0.6	3,042	0
Grading	20	0	2	40	0	12	10.00	6.50	20.00	400	0	240	0.6	2,434	870
Building Construction	20	2	100	2,000	200	0	10.00	6.50	20.00	20,000	1,300	0	0.6	304,200	4,710
Architectural Coating	20	0	5	100	0	0	10.00	6.50	20.00	1,000	0	0	0.6	15,210	0
Paving	20	0	5	100	0	0	10.00	6.50	20.00	1,000	0	0	0.6	15,210	0
TOTAL													78,484	5,579	

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Sacramento

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel gas	Population	Total VMT	Trips	Fuel Consumption	Fuel diesel	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
				miles/hr		Vehicles	miles/day	trips/day	kgal/day	kgal/day			
Sacramento	2022	LDA	Aggregate	Aggregate	Gasoline	498,280	6,217,350,154	796,678,111	223,654.38	-	27.80	TOTAL	
Sacramento	2022	LDT1	Aggregate	Aggregate	Gasoline	53,385	580,893,267	81,203,520	24,728.93	-	23.49	25.35	6.038320557
Sacramento	2022	LDT2	Aggregate	Aggregate	Gasoline	223,889	2,852,316,382	360,820,101	127,838.41	-	22.31		
Sacramento	2023	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	875	72842	12709	0	12.06	6.038		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Sacramento

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT miles/year	Total VMT miles/day	% of vehicle class EMFAC	% CalEEMod vehicle class	% project vehicle class	VMT by project vehicle class (mi/yr)	Gallons of fuel	Trips	Fuel Consumption 1000 gal/year	Fuel Consumption gal/day	MPG	
Sacramento	2022	HHDT	Truck	Aggregate	Aggregate	Gasoline	15.84	104785.15	287.08	0.000382	0.00931	0.00000	5.62	1.81	103631.87	33.79	92.58	3.10
Sacramento	2022	HHDT	Truck	Aggregate	Aggregate	Diesel	9211.06	274451652.66	751922.34	0.999618	0.00931	0.00930	14715.45	2668.25	30800133.62	49764.48	136341.05	5.52
Sacramento	2022	LDA	Passenger	Aggregate	Aggregate	Gasoline	498280.32	6217350153.98	17033836.04	0.997034	0.53835	0.53676	849088.98	30543.96	796678110.55	223654.38	612751.73	27.80
Sacramento	2022	LDA	Passenger	Aggregate	Aggregate	Diesel	1868.86	18498126.34	50679.80	0.002966	0.53835	0.00160	2526.25	59.84	2752551.72	438.20	1200.55	42.21
Sacramento	2022	LDT1	Passenger	Aggregate	Aggregate	Gasoline	53385.05	580893267.32	1591488.40	0.999850	0.05697	0.05696	90111.48	3836.09	81203520.46	24728.93	67750.49	23.49
Sacramento	2022	LDT1	Passenger	Aggregate	Aggregate	Diesel	24.93	87295.01	239.16	0.000150	0.05697	0.00001	13.54	0.57	25846.71	3.68	10.07	23.74
Sacramento	2022	LDT2	Passenger	Aggregate	Aggregate	Gasoline	223889.13	2852316381.65	7814565.43	0.996889	0.18408	0.18351	290289.89	13010.55	360820101.22	127838.41	350242.21	22.31
Sacramento	2022	LDT2	Passenger	Aggregate	Aggregate	Diesel	643.21	8902188.05	24389.56	0.003111	0.18408	0.00057	906.01	29.12	1065972.60	286.08	783.78	31.12
Sacramento	2022	LHDT1	Truck	Aggregate	Aggregate	Gasoline	22657.64	264750847.70	725344.79	0.603524	0.02658	0.01604	25371.39	2758.21	110383793.52	28781.98	78854.75	9.20
Sacramento	2022	LHDT1	Truck	Aggregate	Aggregate	Diesel	14920.58	173923903.02	476503.84	0.396476	0.02658	0.01054	16667.34	1050.15	61372067.71	10958.29	30022.70	15.87
Sacramento	2022	LHDT2	Truck	Aggregate	Aggregate	Gasoline	3110.11	37431448.33	102551.91	0.360097	0.00609	0.00219	3470.78	413.99	15151888.37	4464.75	12232.18	8.38
Sacramento	2022	LHDT2	Truck	Aggregate	Aggregate	Diesel	5309.14	66516782.12	182237.76	0.639903	0.00609	0.00390	6167.68	473.76	21837819.57	5109.36	13998.25	13.02
Sacramento	2022	MCV	Passenger	Aggregate	Aggregate	Gasoline	26436.97	49753398.28	136310.68	1.000000	0.02614	0.02614	41342.70	1044.35	18347260.42	1256.81	3443.31	39.59
Sacramento	2022	MDV	Truck	Aggregate	Aggregate	Gasoline	152620.79	1799273288.55	4929515.86	0.981633	0.13325	0.13080	206909.18	11346.77	240947514.19	98671.01	270331.53	18.24
Sacramento	2022	MDV	Truck	Aggregate	Aggregate	Diesel	2494.89	33664937.92	92232.71	0.018367	0.13325	0.00245	3871.33	161.80	4115690.87	1407.02	3854.85	23.93
Sacramento	2022	MH	Other	Aggregate	Aggregate	Gasoline	3202.75	9277442.87	25417.65	0.740080	0.00351	0.00260	4105.73	931.04	104771.85	2103.80	5763.84	4.41
Sacramento	2022	MH	Other	Aggregate	Aggregate	Diesel	1099.12	3258285.74	8926.81	0.259920	0.00351	0.00091	1441.95	153.28	35941.18	346.35	948.91	9.41
Sacramento	2022	MHDT	Truck	Aggregate	Aggregate	Gasoline	2330.96	35401318.84	96989.91	0.154301	0.01324	0.00204	3230.49	714.86	15250586.70	7833.75	21462.33	4.52
Sacramento	2022	MHDT	Truck	Aggregate	Aggregate	Diesel	14238.79	194029436.80	531587.50	0.845699	0.01324	0.01119	17705.83	2149.69	45108968.67	23557.35	64540.68	8.24
Sacramento	2022	OBUS	Bus	Aggregate	Aggregate	Gasoline	613.50	9073264.82	24858.26	0.457945	0.00094	0.00043	682.40	146.69	4013881.88	1950.39	5343.55	4.65
Sacramento	2022	OBUS	Bus	Aggregate	Aggregate	Diesel	536.74	10739739.54	29423.94	0.542055	0.00094	0.00051	807.74	111.80	1760369.32	1486.56	4072.77	7.22
Sacramento	2022	SBUS	Bus	Aggregate	Aggregate	Gasoline	118.91	2003097.19	5487.94	0.219702	0.00101	0.00022	349.63	35.33	155532.35	202.40	554.51	9.90
Sacramento	2022	SBUS	Bus	Aggregate	Aggregate	Diesel	966.21	7114227.20	19491.03	0.780298	0.00101	0.00078	1241.75	154.61	4574961.75	885.79	2426.81	8.03
Sacramento	2022	UBUS	Bus	Aggregate	Aggregate	Gasoline	169.48	4204126.69	11518.16	0.976550	0.00055	0.00054	846.55	180.18	221678.32	894.81	2451.54	4.70
Sacramento	2022	UBUS	Bus	Aggregate	Aggregate	Diesel	6.41	100953.95	276.59	0.023450	0.00055	0.00001	20.33	2.13	8381.54	10.58	28.98	9.55

Project VMT (mi/yr) 1,581,890
 Project Mobile Emissions (MT/yr) 653.4919

Gasoline Sum	64,963.81	per day
Diesel Sum	7,015.00	per day

	Gas (gal)	Diesel (gal)
Passenger	48434.9428	89.529657
Truck	15233.8236	6503.6461
Bus	362.197035	268.54372
Other	931.037738	153.27842
Total	64962.0012	7014.9979

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Watt & Elder 7 Eleven
Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	15.00	Space	0.13	6,000.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	4,150.00	0
Automobile Care Center	1.08	1000sqft	0.02	1,075.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6	Operational Year		2023	
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	357.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description and client. Assume 6 MPD w/ 2 pumps each. Updated sqft of convenience store based on PD = 4,150 sq ft.

Assume car wash + equipment room sq ft (775+300 sq ft = 1,075 sqft), car wash land use assumed Automobile care center

Construction Phase - No demolition

Construction mobilization (site prep) = 4 days

Grading & trenching = 10 days

Development of convenience store, gas station, car wash = 4 months

Installation of utilities, underground storage tanks, water clarifier = 14 days (added to building construction phase)

Paving = 7 days

Parking area striping and landscaping = 14 days

Off-road Equipment - No demolition

Off-road Equipment -

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - No cranes included in PD

Off-road Equipment -

Off-road Equipment -

Grading - Material exported per underground storage tank. 2 tanks assumed to be 10,000 gallons, 20,000 gallons converted to cubic yards = 99.02 cubic yards.

Trips and VMT - 20 worker crew per PD

Vehicle Trips - Approx. 50 cars expected to use car wash each day per PD.

Water And Wastewater - Indoor water use from car wash expected to be 30 gal/car, 50 car/day

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	1.00	4.00
tblConstructionPhase	PhaseEndDate	6/22/2022	7/22/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	6/23/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	12/31/2021
tblConstructionPhase	PhaseEndDate	1/19/2022	2/3/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	7/4/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/20/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	2/4/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/21/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	6/24/2022
tblGrading	MaterialExported	0.00	99.02
tblLandUse	LandUseSquareFeet	1,694.10	4,150.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	4.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	100,666.78	547,500.00

2.0 Emissions Summary

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Energy	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238
Mobile	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.7231	4,065.7231	0.6116	0.3666	4,190.2595
Total	9.6852	4.6986	33.4670	0.0400	3.3364	0.0415	3.3780	0.8896	0.0387	0.9284		4,085.2371	4,085.2371	0.6120	0.3670	4,209.8899

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Energy	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238
Mobile	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.7231	4,065.7231	0.6116	0.3666	4,190.2595
Total	9.6852	4.6986	33.4670	0.0400	3.3364	0.0415	3.3780	0.8896	0.0387	0.9284		4,085.2371	4,085.2371	0.6120	0.3670	4,209.8899

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	12/31/2021	5	0	
2	Site Preparation	Site Preparation	1/15/2022	1/20/2022	5	4	
3	Grading	Grading	1/21/2022	2/3/2022	5	10	
4	Building Construction	Building Construction	2/4/2022	6/23/2022	5	100	
5	Paving	Paving	6/24/2022	7/4/2022	5	7	
6	Architectural Coating	Architectural Coating	7/5/2022	7/22/2022	5	14	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,838; Non-Residential Outdoor: 2,613; Striped Parking Area: 360 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	20.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940		942.5179	942.5179	0.3048		950.1386

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	0.5797	6.9332	3.9597	9.7300e-003	0.5303	0.2573	0.7876	0.0573	0.2367	0.2940	0.0000	942.5179	942.5179	0.3048		950.1386

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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					5.3140	0.0000	5.3140	2.5689	0.0000	2.5689			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	1.0832	12.0046	5.9360	0.0141	5.3140	0.5173	5.8313	2.5689	0.4759	3.0448		1,364.8198	1,364.8198	0.4414		1,375.8551

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	4.9800e-003	0.2086	0.0410	7.8000e-004	0.0209	1.8000e-003	0.0227	5.7300e-003	1.7200e-003	7.4500e-003		85.0008	85.0008	3.4100e-003	0.0135	89.1012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0774	0.2452	0.6317	2.2200e-003	0.1731	2.6200e-003	0.1757	0.0461	2.4800e-003	0.0486		230.2117	230.2117	7.7500e-003	0.0173	235.5461

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

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					5.3140	0.0000	5.3140	2.5689	0.0000	2.5689			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	1.0832	12.0046	5.9360	0.0141	5.3140	0.5173	5.8313	2.5689	0.4759	3.0448	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551

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	4.9800e-003	0.2086	0.0410	7.8000e-004	0.0209	1.8000e-003	0.0227	5.7300e-003	1.7200e-003	7.4500e-003		85.0008	85.0008	3.4100e-003	0.0135	89.1012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0774	0.2452	0.6317	2.2200e-003	0.1731	2.6200e-003	0.1757	0.0461	2.4800e-003	0.0486		230.2117	230.2117	7.7500e-003	0.0173	235.5461

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908

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	0.0000
Vendor	4.3300e-003	0.1089	0.0328	3.9000e-004	0.0121	1.0600e-003	0.0131	3.4700e-003	1.0100e-003	4.4800e-003		42.3238	42.3238	1.1100e-003	6.2000e-003	44.1985
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0768	0.1455	0.6235	1.8300e-003	0.1642	1.8800e-003	0.1661	0.0438	1.7700e-003	0.0456		187.5348	187.5348	5.4500e-003	9.9800e-003	190.6434

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

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	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623	0.0000	824.5241	824.5241	0.2667		831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623	0.0000	824.5241	824.5241	0.2667		831.1908

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	0.0000
Vendor	4.3300e-003	0.1089	0.0328	3.9000e-004	0.0121	1.0600e-003	0.0131	3.4700e-003	1.0100e-003	4.4800e-003		42.3238	42.3238	1.1100e-003	6.2000e-003	44.1985
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0768	0.1455	0.6235	1.8300e-003	0.1642	1.8800e-003	0.1661	0.0438	1.7700e-003	0.0456		187.5348	187.5348	5.4500e-003	9.9800e-003	190.6434

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6956	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6956	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.5792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	3.7838	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2022

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	3.5792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	3.7838	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449
Total	0.0724	0.0366	0.5907	1.4400e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		145.2109	145.2109	4.3400e-003	3.7800e-003	146.4449

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.723 1	4,065.723 1	0.6116	0.3666	4,190.259 5
Unmitigated	9.5555	4.6823	33.4505	0.0399	3.3364	0.0403	3.3767	0.8896	0.0375	0.9271		4,065.723 1	4,065.723 1	0.6116	0.3666	4,190.259 5

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	53.75	53.75	53.75	46,341	46,341
Convenience Market with Gas Pumps	3,870.00	3,870.00	3,870.00	1,535,549	1,535,549
Parking Lot	0.00	0.00	0.00		
Total	3,923.75	3,923.75	3,923.75	1,581,890	1,581,890

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	14	21	65
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Convenience Market with Gas Pumps	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

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	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238
NaturalGas Unmitigated	1.7900e-003	0.0163	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.5079	19.5079	3.7000e-004	3.6000e-004	19.6238

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	104.761	1.1300e-003	0.0103	8.6300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004		12.3248	12.3248	2.4000e-004	2.3000e-004	12.3981
Convenience Market with Gas Pumps	61.0562	6.6000e-004	5.9900e-003	5.0300e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		7.1831	7.1831	1.4000e-004	1.3000e-004	7.2258
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.7900e-003	0.0163	0.0137	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003		19.5079	19.5079	3.8000e-004	3.6000e-004	19.6238

Watt & Elder 7 Eleven - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
Automobile Care Center	0.104761	1.1300e-003	0.0103	8.6300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004		12.3248	12.3248	2.4000e-004	2.3000e-004	12.3981
Convenience Market with Gas Pumps	0.0610562	6.6000e-004	5.9900e-003	5.0300e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004		7.1831	7.1831	1.4000e-004	1.3000e-004	7.2258
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		1.7900e-003	0.0163	0.0137	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003		19.5079	19.5079	3.8000e-004	3.6000e-004	19.6238

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Unmitigated	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003
Total	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1400e-003	6.1400e-003	2.0000e-005		6.5500e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0137					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7000e-004	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			6.1400e-003	6.1400e-003	2.0000e-005	6.5500e-003
Total	0.1279	3.0000e-005	2.8700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			6.1400e-003	6.1400e-003	2.0000e-005	6.5500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Equipment Type	Number
----------------	--------

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Watt & Elder 7 Eleven
Sacramento County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	15.00	Space	0.13	6,000.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	4,150.00	0
Automobile Care Center	1.08	1000sqft	0.02	1,075.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - from project description and client. Assume 6 MPD w/ 2 pumps each. Updated sqft of convenience store based on PD = 4,150 sq ft.

Assume car wash + equipment room sq ft (775+300 sq ft = 1,075 sqft), car wash land use assumed Automobile care center

Construction Phase - No demolition

Construction mobilization (site prep) = 4 days

Grading & trenching = 10 days

Development of convenience store, gas station, car wash = 4 months

Installation of utilities, underground storage tanks, water clarifier = 14 days (added to building construction phase)

Paving = 7 days

Parking area striping and landscaping = 14 days

Off-road Equipment - No demolition

Off-road Equipment -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - No cranes included in PD

Off-road Equipment -

Off-road Equipment -

Grading - Material exported per underground storage tank. 2 tanks assumed to be 10,000 gallons, 20,000 gallons converted to cubic yards = 99.02 cubic yards.

Trips and VMT - 20 worker crew per PD

Vehicle Trips - Approx. 50 cars expected to use car wash each day per PD.

Water And Wastewater - Indoor water use from car wash expected to be 30 gal/car, 50 car/day

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	7.00
tblConstructionPhase	NumDays	1.00	4.00
tblConstructionPhase	PhaseEndDate	6/22/2022	7/22/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	6/23/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	12/31/2021
tblConstructionPhase	PhaseEndDate	1/19/2022	2/3/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	7/4/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/20/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	2/4/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/21/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	6/24/2022
tblGrading	MaterialExported	0.00	99.02
tblLandUse	LandUseSquareFeet	1,694.10	4,150.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	4.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	100,666.78	547,500.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.1967	0.1967
2	4-1-2022	6-30-2022	0.1865	0.1865
3	7-1-2022	9-30-2022	0.0437	0.0437
		Highest	0.1967	0.1967

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Energy	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	13.7184	13.7184	1.0300e-003	1.8000e-004	13.7967
Mobile	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919
Waste						0.0000	0.0000		0.0000	0.0000	0.8302	0.0000	0.8302	0.0491	0.0000	2.0569
Water						0.0000	0.0000		0.0000	0.0000	0.2381	0.6233	0.8614	8.8000e-004	5.2000e-004	1.0397
Total	1.3086	0.9122	6.4296	6.8500e-003	0.5865	7.5700e-003	0.5940	0.1568	7.0600e-003	0.1639	1.0683	646.1480	647.2163	0.1663	0.0638	670.3859

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Energy	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	13.7184	13.7184	1.0300e-003	1.8000e-004	13.7967
Mobile	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919
Waste						0.0000	0.0000		0.0000	0.0000	0.8302	0.0000	0.8302	0.0491	0.0000	2.0569
Water						0.0000	0.0000		0.0000	0.0000	0.2381	0.6233	0.8614	8.8000e-004	5.2000e-004	1.0397
Total	1.3086	0.9122	6.4296	6.8500e-003	0.5865	7.5700e-003	0.5940	0.1568	7.0600e-003	0.1639	1.0683	646.1480	647.2163	0.1663	0.0638	670.3859

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	12/31/2021	5	0	
2	Site Preparation	Site Preparation	1/15/2022	1/20/2022	5	4	
3	Grading	Grading	1/21/2022	2/3/2022	5	10	

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4	Building Construction	Building Construction	2/4/2022	6/23/2022	5	100
5	Paving	Paving	6/24/2022	7/4/2022	5	7
6	Architectural Coating	Architectural Coating	7/5/2022	7/22/2022	5	14

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 0.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,838; Non-Residential Outdoor: 2,613; Striped Parking Area: 360 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	20.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 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					1.0600e-003	0.0000	1.0600e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	0.0139	7.9200e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239
Total	1.1600e-003	0.0139	7.9200e-003	2.0000e-005	1.0600e-003	5.1000e-004	1.5700e-003	1.1000e-004	4.7000e-004	5.8000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239

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3.3 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	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427
Total	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427

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					1.0600e-003	0.0000	1.0600e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	0.0139	7.9200e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239
Total	1.1600e-003	0.0139	7.9200e-003	2.0000e-005	1.0600e-003	5.1000e-004	1.5700e-003	1.1000e-004	4.7000e-004	5.8000e-004	0.0000	1.7101	1.7101	5.5000e-004	0.0000	1.7239

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427
Total	1.2000e-004	8.0000e-005	1.0100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2404	0.2404	1.0000e-005	1.0000e-005	0.2427

3.4 Grading - 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					0.0266	0.0000	0.0266	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	5.4200e-003	0.0600	0.0297	7.0000e-005	0.0266	2.5900e-003	0.0292	0.0128	2.3800e-003	0.0152	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
Total	3.3000e-004	1.3000e-003	2.7300e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9865	0.9865	4.0000e-005	8.0000e-005	1.0110

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					0.0266	0.0000	0.0266	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4200e-003	0.0600	0.0297	7.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408
Total	5.4200e-003	0.0600	0.0297	7.0000e-005	0.0266	2.5900e-003	0.0292	0.0128	2.3800e-003	0.0152	0.0000	6.1907	6.1907	2.0000e-003	0.0000	6.2408

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3.4 Grading - 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	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
Total	3.3000e-004	1.3000e-003	2.7300e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.9865	0.9865	4.0000e-005	8.0000e-005	1.0110

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3998	37.3998	0.0121	0.0000	37.7022
Total	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3998	37.3998	0.0121	0.0000	37.7022

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3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	5.7400e-003	1.6700e-003	2.0000e-005	5.9000e-004	5.0000e-005	6.4000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.9197	1.9197	5.0000e-005	2.8000e-004	2.0048
Worker	3.0800e-003	2.0100e-003	0.0252	7.0000e-005	7.3400e-003	4.0000e-005	7.3900e-003	1.9500e-003	4.0000e-005	1.9900e-003	0.0000	6.0089	6.0089	2.1000e-004	1.8000e-004	6.0683
Total	3.2900e-003	7.7500e-003	0.0269	9.0000e-005	7.9300e-003	9.0000e-005	8.0300e-003	2.1200e-003	9.0000e-005	2.2100e-003	0.0000	7.9285	7.9285	2.6000e-004	4.6000e-004	8.0731

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	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3997	37.3997	0.0121	0.0000	37.7021
Total	0.0250	0.2467	0.3103	4.3000e-004		0.0143	0.0143		0.0131	0.0131	0.0000	37.3997	37.3997	0.0121	0.0000	37.7021

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3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	5.7400e-003	1.6700e-003	2.0000e-005	5.9000e-004	5.0000e-005	6.4000e-004	1.7000e-004	5.0000e-005	2.2000e-004	0.0000	1.9197	1.9197	5.0000e-005	2.8000e-004	2.0048
Worker	3.0800e-003	2.0100e-003	0.0252	7.0000e-005	7.3400e-003	4.0000e-005	7.3900e-003	1.9500e-003	4.0000e-005	1.9900e-003	0.0000	6.0089	6.0089	2.1000e-004	1.8000e-004	6.0683
Total	3.2900e-003	7.7500e-003	0.0269	9.0000e-005	7.9300e-003	9.0000e-005	8.0300e-003	2.1200e-003	9.0000e-005	2.2100e-003	0.0000	7.9285	7.9285	2.6000e-004	4.6000e-004	8.0731

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2600e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3129
Paving	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4300e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3129

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248
Total	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248

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	2.2600e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3128
Paving	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.4300e-003	0.0207	0.0246	4.0000e-005		1.0400e-003	1.0400e-003		9.7000e-004	9.7000e-004	0.0000	3.2889	3.2889	9.6000e-004	0.0000	3.3128

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3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248
Total	2.2000e-004	1.4000e-004	1.7600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4206	0.4206	1.0000e-005	1.0000e-005	0.4248

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
Total	0.0265	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902

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3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496
Total	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496

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	0.0251					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902
Total	0.0265	9.8600e-003	0.0127	2.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	1.7873	1.7873	1.2000e-004	0.0000	1.7902

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3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496
Total	4.3000e-004	2.8000e-004	3.5300e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.8412	0.8412	3.0000e-005	3.0000e-005	0.8496

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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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
Category	tons/yr										MT/yr					
Mitigated	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919
Unmitigated	1.2849	0.9092	6.4267	6.8300e-003	0.5865	7.3400e-003	0.5938	0.1568	6.8300e-003	0.1636	0.0000	631.8056	631.8056	0.1153	0.0631	653.4919

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	53.75	53.75	53.75	46,341	46,341
Convenience Market with Gas Pumps	3,870.00	3,870.00	3,870.00	1,535,549	1,535,549
Parking Lot	0.00	0.00	0.00		
Total	3,923.75	3,923.75	3,923.75	1,581,890	1,581,890

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	10.00	5.00	6.50	33.00	48.00	19.00	21	51	28
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	14	21	65
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
Convenience Market with Gas Pumps	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507

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Parking Lot	0.538353	0.056973	0.184081	0.133246	0.026575	0.006093	0.013235	0.009306	0.000942	0.000548	0.026135	0.001006	0.003507
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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	10.4887	10.4887	9.7000e-004	1.2000e-004	10.5478
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.4887	10.4887	9.7000e-004	1.2000e-004	10.5478
Natural Gas Mitigated	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2489
Natural Gas Unmitigated	3.3000e-004	2.9700e-003	2.4900e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2489

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5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	38237.8	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0405	2.0405	4.0000e-005	4.0000e-005	2.0526
Convenience Market with Gas Pumps	22285.5	1.2000e-004	1.0900e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1892	1.1892	2.0000e-005	2.0000e-005	1.1963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.3000e-004	2.9600e-003	2.4900e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2490

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	38237.8	2.1000e-004	1.8700e-003	1.5700e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0405	2.0405	4.0000e-005	4.0000e-005	2.0526
Convenience Market with Gas Pumps	22285.5	1.2000e-004	1.0900e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1892	1.1892	2.0000e-005	2.0000e-005	1.1963
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.3000e-004	2.9600e-003	2.4900e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.2298	3.2298	6.0000e-005	6.0000e-005	3.2490

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	15931.5	2.5869	2.4000e-004	3.0000e-005	2.6015
Convenience Market with Gas Pumps	46563	7.5608	7.0000e-004	8.0000e-005	7.6034
Parking Lot	2100	0.3410	3.0000e-005	0.0000	0.3429
Total		10.4887	9.7000e-004	1.1000e-004	10.5478

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	15931.5	2.5869	2.4000e-004	3.0000e-005	2.6015
Convenience Market with Gas Pumps	46563	7.5608	7.0000e-004	8.0000e-005	7.6034
Parking Lot	2100	0.3410	3.0000e-005	0.0000	0.3429
Total		10.4887	9.7000e-004	1.1000e-004	10.5478

6.0 Area Detail

6.1 Mitigation Measures Area

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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
Category	tons/yr										MT/yr					
Mitigated	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Unmitigated	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Total	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

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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	2.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004
Total	0.0233	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-004	7.0000e-004	0.0000	0.0000	7.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8614	8.8000e-004	5.2000e-004	1.0397
Unmitigated	0.8614	8.8000e-004	5.2000e-004	1.0397

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.5475 / 0.061699	0.6717	7.1000e-004	4.3000e-004	0.8166
Convenience Market with Gas Pumps	0.125486 / 0.0769109	0.1896	1.7000e-004	1.0000e-004	0.2230
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8614	8.8000e-004	5.3000e-004	1.0397

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.5475 / 0.061699	0.6717	7.1000e-004	4.3000e-004	0.8166
Convenience Market with Gas Pumps	0.125486 / 0.0769109	0.1896	1.7000e-004	1.0000e-004	0.2230
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.8614	8.8000e-004	5.3000e-004	1.0397

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.8302	0.0491	0.0000	2.0569
Unmitigated	0.8302	0.0491	0.0000	2.0569

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	4.09	0.8302	0.0491	0.0000	2.0569
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.8302	0.0491	0.0000	2.0569

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	4.09	0.8302	0.0491	0.0000	2.0569
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.8302	0.0491	0.0000	2.0569

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Appendix B

Special-Status Species Data

Table 1 Special-Status Plants Known to Occur in the Project Region and their Potential to Occur on the Project Site

Name	Federal Status ¹	State Status ¹	CRPR	SSHCP	Habitat	Potential to Occur in the Project Site
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	–	–	2B.2	–	Freshwater marsh. 49–919 feet in elevation. Blooms July–October.	<i>Not expected to occur.</i> The project site does not have wetland habitat suitable for this species.
Dwarf downingia <i>Downingia pusilla</i>	–	–	2B.2	Covered	Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 3–1608 feet in elevation. Blooms March–May.	<i>Not expected to occur.</i> The project site does not have wetland habitat suitable for this species.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	–	SE	1B.2	Covered	Clay soils; usually in vernal pools, sometimes on lake margins. 33–7792 feet in elevation. Blooms April–August.	<i>Not expected to occur.</i> The project site does not have wetland habitat suitable for this species.
Woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	–	–	1B.2	–	Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0–509 feet in elevation. Blooms June–September.	<i>Not expected to occur.</i> The project site does not have wetland habitat suitable for this species.
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	–	–	1B.2	Covered	Restricted to the edges of vernal pools in grassland. 98–328 feet in elevation. Blooms March–May.	<i>Not expected to occur.</i> The project site does not have vernal pool habitat suitable for this species.
Alkali-sink goldfields <i>Lasthenia chrysantha</i>	–	–	1B.1	–	Vernal pools. Alkaline. 0–656 feet in elevation. Blooms February–June.	<i>Not expected to occur.</i> The project site does not have vernal pool habitat suitable for this species.
Legenere <i>Legenere limosa</i>	–	–	1B.1	Covered	In beds of vernal pools. 3–2887 feet in elevation. Blooms April–June.	<i>Not expected to occur.</i> The project site does not have vernal pool habitat suitable for this species.
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	–	–	1B.2	–	Grassland, and sometimes vernal pool edges. Alkaline soils. 3–98 feet in elevation. Blooms March–May.	<i>Not expected to occur.</i> The project site does not have grassland or vernal pool habitat suitable for this species.
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	–	–	1B.1	Covered	Vernal pools, wetland. Clay soils within non-native grassland. 148–328 feet in elevation. Blooms April–May.	<i>Not expected to occur.</i> The project site does not contain vernal pool habitat suitable for this species
Slender Orcutt grass <i>Orcuttia tenuis</i>	FT	SE	1B.1	Covered	Vernal pools, wetland. Often in gravelly substrate. 82–5758 feet in elevation. Blooms May–September (October).	<i>Not expected to occur.</i> The project site does not have vernal pool habitat suitable for this species.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE	SE	1B.1	Covered	Vernal pools, wetland. 49–279 feet in elevation. Blooms April–July (September).	<i>Not expected to occur.</i> The project site does not have vernal pool habitat suitable for this species.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	–	–	1B.2	Covered	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2133 feet in elevation. Blooms May–October (November).	<i>Not expected to occur.</i> The project site does not have mesic habitat suitable for this species.

Name	Federal Status ¹	State Status ¹	CRPR	SSHCP	Habitat	Potential to Occur in the Project Site
Saline clover <i>Trifolium hydrophilum</i>	–	–	1B.2	–	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0–984 feet in elevation. Blooms April–June.	<i>Not expected to occur.</i> The project site does not have mesic habitat suitable for this species.

Notes: CRPR = California Rare Plant Rank; CNDDDB = California Natural Diversity Database; SSHCP = South Sacramento Habitat Conservation Plan

¹ Legal Status Definitions

Federal:

- E Endangered (legally protected by ESA)
- T Threatened (legally protected by ESA)

State:

- E Endangered (legally protected by CESA)
- T Threatened (legally protected by CESA)
- R Rare (legally protected by CNPPA)

California Rare Plant Ranks:

- 1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
- 2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks:

- 0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
- 0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)
- 0.3 Not very threatened in California (less than 20% of occurrences threatened; low degree and immediacy of threat or not current threats known)

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present within the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available within the project site; however, there are little to no other indicators that the species might be present.

Sources: CNDDDB 2021; CNPS 2021; SSHCP 2021; Jepson Flora Projects 2021.

Table 2 Special-Status Wildlife Known to Occur in the Project Region and their Potential to Occur on the Project Site

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Amphibians and Reptiles					
California tiger salamander (Central Valley population) <i>Ambystoma californiense</i>	FT	ST	Covered	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	<i>Not expected to occur.</i> The project site does not contain burrow or aquatic habitat suitable for this species.
Coast horned lizard <i>Phrynosoma blainvillii</i>	–	SSC	–	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	<i>Not expected to occur.</i> The project site is graded and lacks loose soil habitat suitable for this species.
Giant gartersnake <i>Thamnophis gigas</i>	FT	ST	Covered	Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	<i>Not expected to occur.</i> The project site does not support aquatic nor upland habitat suitable for this species.
Western pond turtle <i>Actinemys marmorata</i>	–	SSC	Covered	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	<i>Not expected to occur.</i> The project site does not support aquatic habitat suitable for this species.
Western spadefoot <i>Spea hammondi</i>	–	SSC	Covered	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	<i>Not expected to occur.</i> The project site does not support aquatic habitat suitable for this species.
Birds					
American peregrine falcon <i>Falco peregrinus anatum</i>	FD	SD, FP	–	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	<i>Not expected to occur.</i> The project site does not support aquatic habitat suitable for this species.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD	SE, FP	–	Lower montane coniferous forest, old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	<i>Not expected to occur.</i> Nesting habitat suitable for bald eagle (i.e., large trees) is not present on or adjacent to the project site.
Bank swallow <i>Riparia riparia</i>	–	ST	–	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<i>Not expected to occur.</i> The project site does not contain riparian habitat or vertical banks/cliffs suitable for this species.

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Burrowing owl <i>Athene cunicularia</i>	–	SSC	Covered	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<i>Not expected to occur.</i> The project site is graded and does not contain grassland habitat suitable for burrowing owl. No large burrows or California ground squirrel activity was observed during the reconnaissance-level survey.
California least tern <i>Sternula antillarum browni</i>	FE	SE, FP	–	Alkali playa, wetland. Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	<i>Not expected to occur.</i> The project site does not contain any wetland habitat suitable for this species.
Cooper's hawk <i>Accipiter cooperi</i>	–	SSC	Covered	Woodland, primarily of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	<i>Not expected to occur.</i> The project site does not contain open woodland or riparian habitat suitable for this species.
Ferruginous hawk <i>Buteo regalis</i>	–	–	Covered	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	<i>Not expected to occur.</i> The project site does not contain open habitat suitable for this species.
Golden eagle <i>Aquila chrysaetos</i>	–	FP	–	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	<i>Not expected to occur.</i> The project site has no foraging or nesting habitat suitable for this species.
Grasshopper sparrow <i>Ammodramus savannarum</i>	–	SSC	–	Valley and foothill grassland. Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	<i>Not expected to occur.</i> The project site does not contain dense native grassland habitat.
Greater sandhill crane <i>Grus canadensis tabida</i>	–	T, FP	Covered	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. Typically nests in mounds of wetland plants or hummocks in remote portions of extensive wetlands. Sometimes nests in grass-lined depressions on dry sites.	<i>Not expected to occur.</i> The project site does not contain grassland, cropland, or wetland habitat suitable for this species.
Least bittern <i>Ixobrychus exilis</i>	BCC	SSC	–	Marsh and swamp, wetlands. Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.	<i>Not expected to occur.</i> The project site does not contain wetland habitat suitable for this species.
Loggerhead shrike <i>Lanius ludovicianus</i>	–	SSC	Covered	A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Sometimes uses edges of denser habitats.	<i>Not expected to occur.</i> The project site is on the edge of a densely urbanized area and does not contain habitat suitable for this species.

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Northern harrier <i>Circus cyaneus</i>	–	SSC	Covered	Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	<i>Not expected to occur.</i> The ruderal grassland habitat present on the project site does not provide sufficient cover for nesting northern harriers.
Purple martin <i>Progne subis</i>	–	SSC	–	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	<i>Not expected to occur.</i> The project site does not support woodland or forest habitat suitable for nesting for this species.
Short-eared owl <i>Asio flammeus</i>	–	SSC	–	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	<i>Not expected to occur.</i> The project site does not contain vegetation with sufficient cover to be suitable for nesting habitat for this species.
Song sparrow ("Modesto" population) <i>Melospiza melodia</i>	–	SSC	–	Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (<i>Quercus lobata</i>), and vegetated irrigation canals and levees.	<i>Not expected to occur.</i> The project site does not support marsh, swamp, or wetland habitat suitable for this species.
Swainson's hawk <i>Buteo swainsoni</i>	–	ST	Covered	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. There are two Swainson's hawk nest occurrences 2.9 miles away from the project site, one to the northeast and one to the southeast. Due to large size of trees located directly east of the project site, they may serve as nesting habitat for this species.
Tricolored blackbird <i>Agelaius tricolor</i>	–	ST, SSC	Covered	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	<i>Not expected to occur.</i> The project site does not contain mesic habitat suitable for this species.
Vaux's swift <i>Chaetura vauxi</i>	–	SSC	–	Redwood, Douglas-fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	<i>Not expected to occur.</i> The project site does not contain forest habitat suitable for this species.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	–	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	<i>Not expected to occur.</i> The project site does not support riparian forest nesting habitat suitable for this species.
White-tailed kite <i>Elanus leucurus</i>	–	FP	Covered	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	<i>Not expected to occur.</i> The project site does not contain rolling foothill or mesic habitat suitable for this species.

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Yellow warbler <i>Setophaga petechia</i>	–	SSC	–	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	<i>Not expected to occur.</i> The project site does not support riparian habitat suitable for this species.
Yellow-breasted chat <i>Icteria virens</i>	–	SSC	–	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	<i>Not expected to occur.</i> The project site does not support riparian habitat suitable for this species.
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	–	SSC	–	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 Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	<i>Not expected to occur.</i> The project site does not support marsh, swamp or wetland habitat suitable for this species.
Fish					
Chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> (pop. 6)	FT	ST	–	Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Delta smelt <i>Hypomesus transpacificus</i>	FT	SE	–	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Hardhead <i>Mylopharodon conocephalus</i>	USFS-S	SSC	–	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC	SSC	–	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Pacific lamprey <i>Entosphenus tridentatus</i>	USFS-S	SSC	–	Found in Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temperatures between 12-18 degrees C. Ammocoetes need soft sand or mud.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	–	SSC	–	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> (pop. 11)	FT	–	–	Populations in the Sacramento and San Joaquin rivers and their tributaries.	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Western river lamprey <i>Lampetra ayresii</i>	–	SSC	–	Lower Sacramento River, San Joaquin River and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles, ammocoetes need sandy backwaters or stream edges, good water quality and temperatures < 25 C	<i>Not expected to occur.</i> The project site does not contain aquatic habitat suitable for this species.
Invertebrates					
Crotch bumble bee <i>Bombus crotchii</i>	–	SC	–	Bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Crotch bumble bee historically ranged from coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	<i>Not expected to occur.</i> The project site does not support plants associated for this bumble bee.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	–	–	Covered	Vernal pools in the Central Valley.	<i>Not expected to occur.</i> The project site does not support vernal pool or wetland habitat suitable for this species.
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	–	–	Covered	Aquatic, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters. Aquatic.	<i>Not expected to occur.</i> The project site does not support aquatic habitat suitable for this species.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	–	Covered	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus nigra</i> ssp. <i>caerulea</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	<i>Not expected to occur.</i> The project site does not contain blue elderberry habitat suitable for this species.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	–	Covered	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	<i>Not expected to occur.</i> The project site does not support vernal pool or wetland habitat suitable for this species.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE	–	Covered	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	<i>Not expected to occur.</i> The project site does not support vernal pool or wetland habitat suitable for this species.
Mammals					
American badger <i>Taxidea taxus</i>	–	SSC	Covered	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	<i>Not expected to occur.</i> The project site does not contain friable soils suitable for burrowing habitat and during the reconnaissance-level survey, no evidence of burrowing animals was found.

Name	Federal Status ¹	State Status ¹	SSHCP	Habitat	Potential to Occur in the Project Site
Pallid bat <i>Antrozous pallidus</i>	USFS-S	SSC	–	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<i>Not expected to occur.</i> The project site is on the edge of a highly urbanized area and does not contain rocky habitat suitable for roosting.
Western red bat <i>Lasiurus blossevillii</i>	–	SSC	Covered	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below and located above dark ground with open areas for foraging.	<i>Not expected to occur.</i> The project site does not support habitat suitable for this species. The trees (Chinese pistache, European hackberry, and valley oak) do not have canopies that are open below with dark ground underneath for roosting, and therefore are not suitable for roosting habitat for this species.

General references: Unless otherwise noted all habitat and distribution data provided by CNDDDB.

Note: CNDDDB = California Natural Diversity Database

¹ Legal Status Definitions

Federal:

- E Endangered (legally protected)
- T Threatened (legally protected)
- D Delisted
- C Candidate

State:

- D Delisted
- FP Fully protected (legally protected)
- SA Special Animal List (no formal protection other than CEQA consideration).
- SSC Species of special concern (no formal protection other than CEQA consideration)
- E Endangered (legally protected)
- T Threatened (legally protected)
- CE Candidate Endangered
- CT Candidate Threatened

SSHCP:

- Covered Species is covered under the SSHCP

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present in the plan area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available in the plan area; however, there are little to no other indicators that the species might be present.

Source: CNDDDB 2021; SSHCP 2021.

Appendix C

Cultural Resources Assessment Report

Cultural Resources Assessment Report

for the
Watt and Elder Creek 7-Eleven Project

Prepared for:
Tekin & Associates
775 Folsom Blvd, Ste 200
Sacramento, CA

September 2021

Cultural Resources Assessment Report for the Watt and Elder Creek 7-Eleven Project

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September 2021

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EXECUTIVE SUMMARY

Purpose and Scope:

Ascent Environmental was retained by Tekin and Associates to perform a cultural resources assessment in support of the Watt and Elder Creek 7-Eleven Project located in Sacramento County; the property (Assessor Parcel Number 062-0060-033) will be annexed into the City of Sacramento as part of the project. The services provided included a cultural resources literature search, Sacred Lands File search, consultation with potentially affected parties, geoarchaeological sensitivity analyses, intensive pedestrian survey of the project site, and a potential impact assessment. This study was completed in compliance with the California Environmental Quality Act (CEQA) Section 21083.2 of the statute and Section 15064.5 of the CEQA Guidelines. The presence of, or the potential for the presence of tribal cultural resources as defined by California Public Resources Code (PRC) Section 21074, is not the subject of this study.

Findings of the Investigation:

The California Historical Resources Information System records search at the North Central Information Center indicated that one prior cultural resource study has been completed within a portion of the project site, and three additional studies have been completed outside the project site but within the 0.25-mile record search radius. The record search also indicated that no cultural resources have been previously recorded within the project site, but that three have been recorded within the 0.25-mile search radius. The Sacred Lands File database search conducted by the Native American Heritage Commission (NAHC) returned positive results for Native American resources within or in the vicinity of the project. The NAHC suggested contacting the United Auburn Indian Community (UAIC) in regard to the positive result. Ascent contacted the tribe and also sent project information and cultural resource knowledge requests to nine additional tribal entities based on a list provided by the NAHC with the Sacred Lands File results. On September 9, 2021, Anna Starkey, Cultural Regulatory Specialist for the UAIC, responded that she forwarded the request to her assistant who would review it against their records and that she'd respond shortly after that; however, no additional response has been received to date. Details of the consultation with both parties can be found in Table 2-4. No additional responses from tribal groups or individuals have been received to date.

A pedestrian survey of the project site was conducted on August 12, 2021, by Emilie Zelazo, R.P.A. Two concrete building pads and two metal electrical cabinets were identified as a result of the survey efforts. Examination of historical aerial imagery and mapping revealed that these structures date to 1993 or later, and therefore do not constitute historical resources for the purposes CEQA. No prehistoric or historic-age archaeological resources were identified as a result of the pedestrian survey.

Assessment Conclusion and Recommendations:

No unique archaeological sites or historical resources were identified within the project site as a result of the background research and pedestrian survey. Analysis of the geologic data and land-use history for the project site conclude there is a low potential for archaeological resources; however, the Sacred Lands File search return a positive result for the presence of a cultural resource located somewhere within or near the project site. Therefore, to avoid significant impacts to cultural resources during project activities, including the inadvertent discovery of human remains, the following measures are recommended:

- ▶ **Inadvertent Discoveries:** If an archaeological resource is inadvertently discovered during ground disturbing project activities, including midden soils, stone tools, chipped stone, baked clay, or concentrations of shell, bone, charcoal, glass, metal, or ceramics, all work shall cease within 100 feet (30.5 meters) of the find and the services of a professional archaeologist shall be retained immediately. The archaeologist will assess the significance of the resource under PRC Section 5024.1 and 21083.2 then provide proper management recommendations. If the find is determined to be a unique archeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures and mitigation will be made available. Possible management recommendations for significant resources could include resource avoidance or data recovery excavations. Do not resume work in the area of the discovery until directed to do so by the archaeologist.

- ▶ Inadvertent Discovery of Human Remains: If human remains are discovered during construction activities, work within 100 feet (30.5 meters) of the remains shall be stopped immediately, and the project proponent shall notify the Sacramento County Coroner, in accordance with PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the coroner to be Native American, the coroner will notify the NAHC within 24 hours, and the NAHC will designate a Most Likely Descendant (MLD). Together the land-owner and the MLD shall determine the ultimate treatment and disposition of the remains in accordance with PRC Section 5097.94.

Disposition of Data

This report will be filed with the City of Sacramento, the North Central Information Center at California State University, Sacramento, and the Ascent office in Sacramento. All field notes and other documentation related to the study are on file at the Sacramento office of Ascent.

Personnel Qualifications:

Emilie Zelazo has 17 years of environmental compliance and cultural resource management experience in California, Arizona, and the Great Basin. Her experience includes NEPA and CEQA document preparation, as well as cultural resources technical document preparation and oversight for CEQA, PRC 5024, and Section 106 compliance documents. Emilie has field and reporting experience in the Central Valley, Sierra Nevada foothills, San Francisco Peninsula, Southern California, and the Great Basin, as well as in parts of Nevada and southwestern Arizona. She has worked in coordination with various government agencies including the National Park Service, Bureau of Land Management, US Forest Service, US Army Corps of Engineers, Federal Aviation Agency, Federal Highways Administration, US Department of the Army, and California Department of Transportation (Caltrans). Emilie meets the Secretary of the Interior's Standards for both archaeology and architectural history.

1 INTRODUCTION

Tekin and Associates retained Ascent Environmental (Ascent) to complete a Cultural Resources Assessment Report for the Watt and Elder Creek 7-Eleven Project, in an unincorporated part of Sacramento, Sacramento County. The City of Sacramento is the lead agency under the California Environmental Quality Act (CEQA).

Ascent conducted this cultural report in compliance with the CEQA Section 21083.2 of the statute and Section 15064.5 of the CEQA Guidelines. This report details the methods and results of the study, which consisted of an archival document review, intensive pedestrian field survey, and a potential impact assessment.

1.1 PROJECT LOCATION AND DESCRIPTION

The project would be located on Assessor Parcel Number 062-0060-033 at the intersection of S. Watt Avenue and Elder Creek Road on approximately 2.49 acres of commercial property in Sacramento County. The project site (Figure 1-1) is currently a vacant lot with areas of pavement and concrete building pads interspaced with patches of noxious weeds and a few trees around the perimeter.

The project proposes to develop the lot into a 7-Eleven facility with a 3,900 square foot convenience store, a 990 square foot drive through carwash, fueling canopy, fueling islands, and underground storage tanks, with landscaping and pavement. The City of Sacramento will also be annexing the parcel into to the city limits as part of the project

Depth of disturbance depends on the type of work being done. An average up to two to three feet below the surface is expected for site preparation, which includes removal of the undocumented fill, subgrade preparation, concrete and asphalt removal, and placement of new engineered fills (Terracon 2019:3, 8). A depth of up to 10 to 12 feet below the surface can be expected for utility installment, including the underground storage tanks. All staging and storage are anticipated to occur within the project site. The project site limits equate to the parcel limits.

1.2 REGULATORY CONTEXT

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

All properties in California that are listed in or formally determined eligible for listing in the NRHP are eligible for listing in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the National Register of Historic Places. In addition, properties designated under municipal, or county ordinances are also eligible for listing in the CRHR. A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA.

The CRHR uses four evaluation criteria for significance:

- Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Criterion 2. Is associated with the lives of persons important to local, California, or national history.
- Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.



Source: Adapted by Ascent Environmental in 2021

Figure 1-1 Project Location and Limits

A property must have both significance and integrity to be considered eligible for listing in the CRHR. Loss of integrity, if sufficiently great, will overwhelm the historical significance of a resource and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible. Integrity is evaluated by regarding the property's retention of its location, design, setting, workmanship, materials, feeling, and association to its period of significance. These seven factors can be roughly grouped into three types of integrity considerations. Location and setting relate to the relationship between the property and its environment. Design, materials, and workmanship, as they apply to historic buildings, relate to construction methods and architectural details. Feeling and association are the least objective of the seven factors and pertain to the overall ability of the property to convey a sense of the historical time and place in which it was constructed.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires public agencies to consider the effects of their actions on "historical resources," and "unique archaeological resources." Pursuant to PRC Section 21084.1, 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." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR (PRC Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
- 4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]) or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means 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 one or more of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CALIFORNIA NATIVE AMERICAN HISTORICAL, CULTURAL, AND SACRED SITES ACT

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the Native American Heritage Commission (NAHC), which notifies (and has the authority to designate) the most likely descendants (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

HEALTH AND SAFETY CODE, SECTION 7050

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

PUBLIC RESOURCE CODE SECTION 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

2 RECORDS SEARCHES AND CONSULTATION

2.1 RECORDS SEARCH

On August 16, 2021, a search of records of the project site and a one-half-mile radius around the project site was conducted at the North Central Information Center (NCIC), at California State University, Sacramento (SAC-21-162). The NCIC results are included as Appendix A.

The following information was reviewed:

- ▶ site records of previously recorded cultural resources,
- ▶ previous cultural studies,
- ▶ NRHP and CRHR listings,
- ▶ the California Historic Resources Inventory
- ▶ Built Environment Resource Directory (BERD) for Sacramento County
- ▶ Historical United States Geological Survey (USGS) topographic maps (1911, 1950, 1954, 1967)
- ▶ General Land Office Plat maps (1865, 1866)

The records search identified no previously recorded resources within the project site, but that three historic-period archaeological resources had been previously recorded within a 0.25-mile radius. Table 2-1 describes the previously recorded resources located within 0.25 miles of the project site. The search also found that one previous investigation included a portion of the project site, and three investigations have occurred within 0.25-mile. Table 2-2 lists the previously conducted studies within the project site and Table 2-3 lists the studies within the 0.25-mile radius.

Table 2-1 Previously Recorded Resources within 0.25-mile of Project Site

Primary/Trinomial Number	Name	Age	Attribute Codes
P-34-00606/CA-SAC-00506H	Central California Company Traction Railroad	Historic	AH07 (Roads/trails/railroad grades); HP11 (Engineering structure) - Railroad
P-34-001296/CA-SAC-00819H	Residential Remnant, Sacramento County	Historic	AH02 (Foundations/structure pads)
P-34-001626/CA-SAC-00970H	--	Historic	AH02 (Foundations/structure pads)

Table 2-2 Reports Within Project Site

Report Number	Year	Author/Affiliation	Title	Percent of Project Site Investigated
8062	2006	Roger Mason ECORP	Cultural Resources Survey and Evaluation North Vineyard Station Off-Site (WBIG) Project	≤ 50%

Table 2-3 Reports Outside the Project Site, Within 0.25-Mile Radius

Report Number	Year	Author/Affiliation	Title
488	1980	Ann Peak, Peak and Associates	Cultural Resource Assessment of Sacramento Municipal Utility District's Project A, Phase II 230kV Transmission Line, Hurley to Hedge-Pocket Tap, Sacramento County, California.
6154	1995	Brian Hatoff, Barb Voss, Sharon Waechter, Stephen Wee, and Vance Bente Woodward-Clyde; Far Western Anthropological Research Group; JRP	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project
11541	2014	Carrie D. Wills Michael Brandman Associates	Cultural Resources Records Search and Site Visit Results for Verizon Wireless, LLC Candidate Turner Road 8864 Elder Creek Road Sacramento, Sacramento County, California EBI Project No. 61141411

2.2 OTHER SOURCES

Additional research included reviews of historic USGS Topographic maps and aerials available on-line from Nationwide Environmental Title Research, LLC (NETR) were also reviewed. Both historic USGS topographic maps from 1911 to 2018 and aerial images from 1947 to 2018 were reviewed.

Other documents examined included the geotechnical report prepared for the project (Terracon 2019), the Caltrans Geoarchaeological Overview and Assessment of Caltrans District 3 (Caltrans 2008), the County of Sacramento General Plan Update Final Environmental Impact Report Volume II (County of Sacramento 2010a) and the Florin-Vineyard Gap Community Plan Final Environmental Impact Report Volume I (County of Sacramento 2010b). These reports provided information on the geology present within the project site, geoarchaeological sensitivity, and land use history of the general area.

2.3 SCARED LANDS FILE

Ascent requested a search of the Sacred Lands File from the NAHC on August 12, 2021. Positive results were returned on August 25, 2021. The NAHC recommended contacting the United Auburn Indian Community (UAIC) for details.

Attached to the results was a list of Native American entities to contact who may also have knowledge of cultural resources in the project site. A summary of that contact is included in Section 2.4.1 below. A copy of the NAHC response letter is included in Appendix B.

2.4 CONSULTATION

2.4.1 Tribal Consultation

Tribal consultation for this report was conducted as part of the background research effort. Emails were sent to all groups and individuals provided by the NAHC. Table 2-4 provides a summary of the tribal representatives contacted, how, when, and their response, if any. Copies of the correspondence is included in Appendix B.

Table 2-4 Native American Consultation by Ascent

Name and Title	Affiliation	Date and Medium of Initial Contact	Date and Medium of Follow-up Contact	Response Summary
Don Ryberg, Chairperson	Tsi Akim Maidu	August 26, 2021 Email	September 9, 2021 Email	None to date.
Anna Starkey, Cultural Regulatory Specialist (for Gene Whitehouse, Chairperson)	United Auburn Indian Community of Auburn Rancheria	August 26, 2021 Email	September 9, 2021 Email	Ms. Starkey responded on September 9, 2021, that she forwarded the request to her assistant who would review it against their records and that she'd respond shortly after that. No additional response has been received to date.
Jesus Tarango, Jr., Chairperson	Wilton Rancheria	August 26, 2021 Email	September 9, 2021 Email	None to date
Steve Hutchason, Tribal Historic Preservation Officer	Wilton Rancheria	August 26, 2021 Email	September 9, 2021 Email	None to date.
Dahlton Brown, Director of Administration	Wilton Rancheria	August 26, 2021 Email	September 9, 2021 Email	Reply stating they were out of town and would return on August 30 th was received on August 26, 2021. No additional response has been received to date.
Sara A. Dutschke, Chairperson	lone Band of Miwok Indians	August 26, 2021 Email	September 9, 2021 Email	None to date.
Cosme A. Valdez, Chairperson	Nashville Enterprise Miwok-Maidu-Nishinam Tribe	August 26, 2021 Email	September 9, 2021 Email	None to date.
Regina Cuellar, Chairperson	Shingle Springs Rancheria	August 26, 2021 Email	September 9, 2021 Email	None to date.

2.5 FIELD METHODS

Field work for the project was conducted on August 13, 2021 by Ascent cultural resources staff, including and under the direction of Emilie Zelazo, R.P.A. Parallel transects measuring approximately 15 meters apart were used to cover the project site. All areas were examined. Special attention was given to bare patches of ground, excavated areas, cut-banks, push piles, and exposed soils as well as existing concrete and metal structural remnants.

3 ENVIRONMENTAL SETTING

The project site lies within Sacramento County, which is located in the lower Sacramento Valley, west of the Sierra Nevada foothills on gently rolling terrain. The project site itself is located at an elevation of 50 feet above mean sea level (WBIG 2006:5). This region is characterized by hot, dry summers and warm, moist winters. Prior to agricultural development, the region would have been characterized by grassland habitat with riparian scrub/forest along the Morrison Creek corridor to the north and the Elder Creek corridor to the south. Seasonal wetlands may have also occurred within the grassland habitat.

Within this mosaic environment, grasses such as needlegrass (*Stipa spp.*), bluegrass (*Poa spp.*), and three awn (*Aristida divaricate*) would have been present. Clover (*Trifolium willdenovii*) would have been available in the spring. Tule (*Scirpus sp.*) and stands of willow (*Salix sp.*), cottonwood (*Populus fremontii*), and sycamore (*Platanus racemosa*) were supported by the marshy wetlands adjacent to riparian corridors. Regional oak groves would have included blue oak (*Quercus douglasii*), interior live oak (*Q. wislizeni*), and valley oak (*Q. lobata*) (WBIG 2006:7).

The larger mammals inhabiting the project region would have included mule deer (*Odocoileus hemionus californicus*), black-tailed deer (*O. hemionus columbianus*), tule elk (*Cervus elaphus nannoides*), pronghorn (*Antilocapra americana*), mountain lion (*Felis concolor*), black bear (*Ursus americanus*) and even the now extinct California Grizzly Bear (*Ursus arctos californicus*) in the riparian areas. Small animals, such as badger (*Taxidea taxus*), striped skunk (*Mephitis mephitis*), rabbit (*Sylvilagus sp.*), black tailed jackrabbit (*Lepus californicus*), gray squirrel (*Sciurus griseus*), coyote (*Canis latrans*), and gray fox (*Urocyon cinereoargenteus*) are still prevalent in the area but would have likely existed in larger numbers in the past (Zelazo 2013:13-20; WBIG 2006:7).

Waterfowl species would have likely utilized available marshy areas to feed and grasslands to nest in seasonally while wood ducks (*Aix sponsa*), resident Canada Goose (*Branta canadensis moffitti*), and mallards (*Anas platyrhynchos*) could have been present year-round. Other prevalent birds include great blue heron (*Ardea herodias*), the American crow (*Corvus brachyrhynchos*), northern flicker woodpecker (*Colaptes auratus*), red-tailed hawk (*Buteo jamaicensis*), and northern harrier (*Circus cyaneus*) as well as a variety of songbirds. Fish such as Sacramento sucker (*Castostomus occidentalis*), hardhead (*Mylopharodon conocephalus*) and Sacramento pikeminnow (*Ptychocheilus grandis*) may have been or still are present in Elder Creek and Morrison Creek (Zelazo 2013:13-20; Stevens and Zelazo 2015:172-173). Morrison Creek was historically connected to the Sacramento River, thus anadromous fish species, such as Chinook Salmon (*Oncorhynchus tshawytscha*), white and green sturgeon (*Acipenser montanus* and *A. medirostris*), and Pacific and river lamprey (*Lampetra tridentata* and *L. ayresii*) were also likely seasonally present in the study area.

3.1 GEOLOGY AND SOILS

Geologically, the project site is composed of Riverbank Formation soils (Terracon Consultants, Inc. 2019:2). The Riverbank Formation is classified as a "terrace deposit" laid down along the east margin of the Sacramento River Valley between 150,000 to 450,000 years ago during Pleistocene mid-continental glacial episodes. Soils associated with the Riverbank Formation are unconsolidated to semi-consolidated gravel, sand, and silt comprised of moderately weathered reddish largely granitic gravel that increase in topographic position with age (City of Roseville 2004:4.7-6). They are typically well-drained and underlain at various depths by tan to brown, very stiff to hard silts and lean clays. Such soils are indicative of a pre-Pleistocene depositional environment consisting of a topographic low with standing or slow-moving water.

The soils present are of stiff to hard lean clays with varying amounts of sand with interbedded layers of medium dense to dense sands with varying amounts of silt and clay extending to boring termination depths of 16½ feet below ground surface (Terracon Consultants, Inc. 2019:i). Such soils are characteristic of the Riverbank Formation. The investigation also found that in southeast corner of the northwest quadrant of the site, up to 2.5 feet of fill is present. The fill is comprised of poorly graded sand of silt and gravel.

4 CULTURAL SETTING

4.1 NATIVE AMERICAN PRE-CONTACT SETTING

A tripartite classification system for cultural change in the Sacramento River Valley has been standard since the 1930s. More recently, Rosenthal and others (2007), have adjusted this system based on modern radiocarbon calibration curves for the Georgian/Julian calendar (the terms B.C.E. for Before Common Era and C.E. for Common Era will be used). Based on this new system, the following classification system has been defined for the Pre-Contact Period: Paleo-Indian (11,500–8550 cal [calibrated] B.C.E.), Lower Archaic (8550–5550 cal B.C.E.), Middle Archaic (5550–550 cal B.C.E.), Upper Archaic (550 cal B.C.E.– 1100 cal. C.E.), and Emergent or Late Prehistoric Period (1100 cal C.E.–Historic Contact).

Subsequent to the Paleo-Indian and Lower Archaic periods, the cultural framework is further divided into three regionally based “patterns.” These are the Windmill, Berkeley, and Augustine patterns. The patterns mark distinct changes in artifact types, subsistence practices, and settlement patterns, which began circa 5550 cal B.C.E. and lasted until historic contact in the mid-1800s. They were initially identified at three archaeological sites: the Windmill site (CA-SAC-107) near the Cosumnes River in Sacramento County; the West Berkeley site (CA-ALA-307) on the east side of the San Francisco Bay in Alameda County; and the Augustine site (CA-SAC-127) in the Sacramento–San Joaquin Delta. In general, the patterns conform to three temporal divisions: Middle Archaic Period/Windmill Pattern, Upper Archaic Period/Berkeley Pattern, Late Prehistoric Period/Augustine Pattern (Spillane and Hayes 2021:9).

4.1.1 Paleo-Indian and Lower Archaic Periods (11,500-5550 cal B.C.E.)

There is little evidence of the Paleo-Indian and Lower Archaic periods in the Central Valley (Rosenthal et al. 2007:151). Recent geoarchaeological studies have found that large segments of the Late Pleistocene landscape throughout the California lowlands have been buried or removed by periodic episodes of deposition and erosion. Periods of climate change and associated alluvial deposition occurred at the end of the Pleistocene (approximately 9050 cal B.C.E.) and at the beginning of the early Middle Holocene (approximately 5550 cal B.C.E.). Earlier studies had also estimated that Paleo-Indian and Lower Archaic sites along the lower stretch of the Sacramento River and San Joaquin River drainage systems had been buried by Holocene alluvium up to 33 feet (10 meters) thick that was deposited during the last 5,000 to 6,000 years (Rosenthal et al. 2007:151; Spillane and Hayes 2021). The formation of the Sacramento–San Joaquin Delta began during the early Middle Holocene. After approximately 1,000 cal B.C.E. during the Late Holocene, there were renewed episodes of alluvial fan and floodplain deposition (Rosenthal et al. 2007).

The archaeological evidence that is available for the Paleo-Indian Period is primarily defined by basally thinned, fluted projectile points. These points are morphologically similar to well-dated Clovis points found elsewhere in North America. In the Central Valley, fluted points have been recovered from remnant features of the Pleistocene landscape at only three archaeological localities, the Woolfsen Mound in Merced County; Tracey Lake in San Joaquin County; and Tulare Lake basin in Kings County (Spillane and Hayes 2021:10).

4.1.2 Middle Archaic Period/Windmill Pattern (5550-550 cal B.C.E.)

Archaeological sites dating to the first 3,000 years of the Middle Archaic are relatively scarce in the Sacramento River Valley, mainly due to natural geomorphic processes (Rosenthal et al. 2007). On the valley floor, sites are more common after 2550 cal. B.C.E. The archaeological record in the valley and foothills indicates the subsistence system during this period included a wide range of natural resources (e.g., plants, small and large mammals, fish, and waterfowl) indicating people followed a seasonal foraging strategy. Some researchers (e.g., Moratto 2004) suggest populations may have occupied lower elevations during the winter and moved to higher elevations in the summer. Others (e.g., Rosenthal et al. 2007) suggest there was increasing residential stability along Central Valley river corridors during the Middle Archaic.

Excavations at Windmill Pattern sites have yielded abundant remains of terrestrial fauna (deer, tule elk, pronghorn, and rabbits) and fish (sturgeon, salmon, and smaller fishes). Projectile points with triangular blades and contracting stems are common at Windmill Pattern sites. A variety of fishing implements such as angling hooks, composite bone hooks, spears, and baked clay artifacts, which may have been used as net or line sinkers, are also relatively common. The points are classified within the Sierra Contracting Stem and Houx Contracting Stem series (Spillane and Hayes 2021:10). The presence of milling implements (grinding slabs, handstones, and mortar fragments) indicate that acorns or seeds were an important part of the Middle Archaic diet.

The presence of numerous exotic trade goods within Middle Archaic assemblages indicate that populations were already part of a complex regional trade network. Obsidian sources include eastern Sierra sources (e.g., Bodie Hills, Casa Diablo, Coso, and Mount Hicks), North Coast Range (e.g., Napa Valley and Borax Lake), and southern Cascades (e.g., Tuscan) (Rosenthal et al. 2007:155). Olivella shell beads make their first appearance in the study area during the Early Period, indicating trade with Southern California coastal groups (Hughes and Milliken 2007:268-269). Lastly, burial complexes with large populations and elaborate grave offerings indicate extended residential occupancy.

4.1.3 Upper Archaic Period/Berkeley Pattern (550 cal B.C.E. - 1100 cal. C.E.)

The Upper Archaic is characterized by a shift over a 1,000-year period to the more specialized, adaptive Berkeley Pattern. Excavated archaeological sites dating to the Upper Archaic indicate an increase in mortar and pestle groundstone technology. This change is supported by dated palaeobotanical remains and a decrease in slab milling stones and handstones. Archaeologists generally agree mortars and pestles are better suited to crushing and grinding acorns, while milling slabs and handstones may have been used primarily for grinding wild grass grains and seeds (Spillane and Hayes 2021:11). New types of shell beads, charmstones, bone tools, and ceremonial blades are additional evidence of the more specialized technology present during this period.

The artifact assemblage in Berkeley Pattern sites demonstrates that populations continued to exploit a variety plant and animal resources from different environmental zones, including grassland, riparian, and freshwater marsh settings. Deposits of this temporal period have a characteristic well-developed brown midden containing hearth features, fire-fractured rock, storage pits, and house floors. These features indicate that Upper Archaic sites were intensively occupied by large populations (Caltrans 2008:68; Rosenthal et al. 2007:156).

Berkeley Pattern artifact assemblages are also characterized by split, saddle and saucer shaped Olivella shell beads, Haliotis ornaments, and a variety of bone tool types. Charmstones are fishtail and asymmetrical spindle-shaped. Mortuary patterns are characterized by flexed burials in variable orientations and a paucity of grave goods. Some cremations have also been recorded in Middle Period cemeteries. Inhumations are sometimes accompanied by animal bones and animal-only burials have also been recorded (Zelazo 2013:35). Obsidian from the North Coast Ranges and the east side of the Sierra Nevada Range indicate a slight shift in trade patterns away from more northerly sources.

4.1.4 Emergent Period/Augustine Pattern (1100 cal. C.E. - Historic Contact)

The archaeological record for the Emergent or Late Prehistoric Period shows an increase in the number of archaeological sites associated with the Augustine Pattern in the Sacramento River Valley, as well as an increase in the number and diversity of artifacts. The Emergent Period was shaped by a number of cultural innovations, such as the bow and arrow and intricate fishing technology, as well as an elaborate social and ceremonial organization. Cultural patterns typical of the Emergent Period appear to be reflected in the cultural traditions known from historic period Native American groups.

Faunal and botanical remains recovered at Emergent Period archaeological sites indicate occupants relied on a diverse assortment of mammals, fish, and plant, including acorns and pine nuts. Hopper mortars, shaped mortars, and pestles are among the new technologies that appear during this time period. Small, Gunther barbed series projectile points have been found at sites dating to the early part of the period, while Desert-side notched points appear later in the period. The Stockton serrated arrow point also appears in archaeological assemblages dating to this period and in some parts of the lower Sacramento River Valley Cosumnes Brownware ceramics are present. The appearance of ceramics during this period is likely a direct improvement on the prior baked clay industry (Spillane and Hayes 2021:12). Complex fishing instruments appear, such as the serrated fish harpoons, composite bone hooks, and the toggle harpoon (Zelazo 2013:39).

During the Emergent Period, villages were located along major waterways with smaller settlements found in outlying areas. Settlements on natural levees and high spots in floodplains were common. House floors or other structural remains have been preserved at some sites dating to this period. The increase in sedentism and population growth led to the development of social stratification, with an elaborate social and ceremonial organization. Examples of items associated with rituals and ceremonials include flanged tubular pipes, incised patterned bird bone tubes and whistles, and baked clay effigies representing animals and humans. Mortuary practices changed to include flexed burials, cremations with grave goods and offerings, and pre-interment burning in a burial pit. Currency, in the form of clamshell disk beads, also developed during the later part of the period together with extensive exchange networks that included the Pacific Northwest and southern California (Spillane and Hayes 2021:12; Rosenthal et al. 2007:159).

4.2 ETHNOGRAPHIC SETTING

The Native Americans who occupied the Sacramento County region at the time of Euro-American contact (ca. 1840s) are known as the Eastern or Plains Miwok. The Plains Miwok represent a linguistic fusion of many autonomous socio-political groups or tribelets (Zelazo 2013:42). They spoke one of the five Eastern Miwok languages of the Utian language family (Levy 1978:398). The Patwin were their neighbors across the Sacramento River to the west, the Sierra Miwok in the foothills to the east, the Yokuts across the Mokelumne River to the south, and the Nisenan across the American River to the north. The territory south of the American River at times was occupied by the Nisenan and at other times by the Plains Miwok as the centuries passed.

Plains Miwok inhabited the lower reaches of the Mokelumne and Cosumnes Rivers and the banks of the Sacramento River from Rio Vista to Freeport (Levy 1978:398). As mentioned above, stretches of the south bank of the American River were also sometimes held by the Plains Miwok, from the original confluence of the Sacramento and American Rivers just south of Old Sacramento, up to Roseville.

Linguistic and archaeological evidence suggest that the ancestors of the Plains Miwok have resided in this region for at least 4400 years (Golla 2007:76). Population estimates between 11.1 and 57 persons per square mile have been proposed for the Plains Miwok, with the highest density reflecting areas along watercourses (Zelazo 2013:42).

The project is located between three historically known Plains Miwok villages (Bennyhoff 1977:165):

1. *Sama* (CA-SAC-29) - located near the Little Pocket neighborhood on the Sacramento River to the west.

2. *Yusumne* (no exact known site equivalent) - likely located near the Glenbrook neighborhood to the north on the south side of the American River.
3. *Yumhui* (no exact known site equivalent) – located near Sloughouse on the Consumnes River, slightly to south and east.

Plains Miwok built a variety of structures including residential dwellings, ceremonial structures, semisubterranean sweat lodges, and menstruating huts. The typical dwelling was a thatched house, consisting of a conical framework of poles that was covered by brush, grass, or tules. Semi subterranean earth lodge roundhouses were also built for ceremonial gatherings, assemblies, local feasts, and housing visitors (Levy 1978:408-409).

A variety of flaked and ground stone tools were common among Plains Miwok (e.g., knives, arrow and spear points, and rough cobble and shaped pestles). Plains Miwok imported obsidian, which was a highly valued material for tool manufacture. Tools and weapons were also made of bone and wood, including both simple and sinew-backed bows, arrow shafts and points, bone fishhooks, harpoons with detachable points, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation equipment. Cordage was made from plant material and used to construct fishing nets and braided and twined tumplines. Soaproot brushes were commonly used during grinding activities to collect meal and/or flour. Tule and bark rafts were used to acquire resources and facilitate travel (Levy 1978:406). Cosumnes Brownware is a unique ceramic tradition attributed to Late Period Plains Miwok groups (Zelazo 2013:39).

Acorns, buckeyes, pine nuts, seeds and other plant foods, and meat were routinely processed using bedrock mortars and pestles. Fist-sized, heated stones or baked clay balls were used to cook liquid-based foods such as acorn gruel. In addition to these plant resources, other plants may have been managed, primarily by controlled burning, for both food (e.g., edible grasses, herbs, and seed producing plants) and basketmaking materials (Levy 1978:402-403).

Contact between the Plains Miwok and Euro-Americans came during Spanish military and religious expeditions. The Franciscan order of the Roman Catholic Church in Spain established Mission San Jose, the fourteenth in the Alta California system, on June 11, 1797 (County of Sacramento 2010a:15-6). Explorative expeditions started soon after, namely by Alferes Gabriel Moraga, who led an overland expedition to the Sacramento region in 1808 and by Father Narciso Duran and Luis Arguello who sailed up the Sacramento River in the summer of 1817. These encounters soon led to the missionization of some of the local Native Americans, including Plains Miwok peoples, many of whom are mentioned by name in the records of Mission San Jose and sometimes, Mission Delores (Bennyhoff 1977:25). Between 1811 and 1834, over 2,100 Plains Miwok baptisms are recorded in mission baptismal records (Levy 1978:401). Resistance to Spanish and Mexican invasion and missionization also occurred, particularly among the *Ochejamne*, the largest tribelet on the Sacramento River, as well as the *Junizumne*, *Siusumne*, and *Chupmne*; all of these tribelets were located south of the project site. This block of opposition delayed penetration of mission activities farther north along the Sacramento River and is a critical reason for the lack of Nisenan villages represented in mission registers (Bennyhoff 1977:31).

After a devastating epidemic in 1833, surviving Plains Miwok as well as other neighboring groups amalgamated and relocated to new tribal centers. Thus, when full secularization of the missions occurred in 1836, many Plains Miwok returned to their traditional homeland, but not necessarily to their original villages. Today, many of the descendants of these survivors still live within Sacramento and the surrounding area, continuing to tend to the land and the cultural of their ancestors.

4.3 CONTEMPORARY NATIVE AMERICAN SETTING

As archaeologists routinely focus on traditional Native American lifeways and ignore current and vibrant Native American culture, a sufficient context or set of values maintained by the current Native American community related to their history and the landscape is often ignored. To help remedy this, a discussion of the contemporary Native American setting is also included here.

Wilton Rancheria is the closest contemporary Native American community to the project. It is home to many descendants of the indigenous peoples who made Sacramento County home. Many Native American tribes, such as the members of the Wilton Rancheria, consider themselves contemporary stewards of their culture and the

landscape. These tribal communities represent a continuum from the past to the present. They are resilient, vibrant, and active in the community. Tribes maintain their connection to their history and ongoing culture by practicing traditional ceremonies, engaging in traditional practices (e.g., basketry), and conducting public education and interpretation. The acknowledgement of Native American history and the persistence of tribes cannot be overlooked and should be recognized. Indeed, Native American communities of Sacramento and their history are commemorated in the City of Sacramento, on the grounds of the Capitol, and at Sacramento City Hall. Collaboration and consultation with tribes to identify their perspective and incorporate their stewardship ethic to the fullest extent feasible in research is the best way to acknowledge the presence and contributions of Native Americans in both the past and the present, as well as paving a respectful and inclusive pathway to the future.

4.4 EUROMERICAN HISTOIRC PERIOD OVERVIEW

Permanent Euromerican occupation in what would become Sacramento County started with the arrival of John A. Sutter in August of 1839. Prior to that, a few Spanish expeditions, such as that by Gabriel Moraga in 1808 and Luis Arguello in 1817, had been made into the Sacramento County area to search for mission sites, for Native Americans to bring to the missions, or to locate Native Americans who had run away from the missions. However, it wasn't until after the Gold Rush of 1849 that Euromericans began to settle in Sacramento County.

4.4.1 Ranchos

Sutter, a Swiss immigrant, came to Sacramento with expectations of obtaining a land grant from the Mexican government, and dreams of establishing an agricultural empire. He and his party erected a fort on a high point near today's 27th Street and L Street, just under ten miles northwest of the project site. In 1841, Sutter received his land grant which was called New Helvetia. Sutter's land grant equaled some 97 square miles (48,839 acres) (Beck and Haase 1974:28). He quickly proceeded to set up fisheries, a flour grist mill, and a lumber mill (WBIG 2006:11).

Not long after Sutter received his land grant from the Mexican governor, a grant of over 55 square miles (35,500 acres) of land on the south side of the American River was awarded to William A. Leidesdorff in 1844 (Beck and Haase 1974:28; Hoover et al. 2002:304). Known as the Rancho Rio de los Americanos, this grant encompassed lands directly east of the project site, and those to the northeast in what is today Rancho Cordova and Folsom. Leidesdorff was born in the Virgin Islands to a Danish planter father and a woman of African descent. He was also major political figure in early San Francisco history while it was under Mexican rule, even serving as vice-consul of the United States (Hoover et al. 2002:304). He established several adobes on the rancho but was unable to accomplish much more because he died soon afterward in 1848. Captain Joseph L. Folsom, whom Leidesdorff had worked with in San Francisco, purchased the entire land grant from Leidesdorff's heirs. The City of Folsom is named after him.

4.4.2 Agriculture

After most of the available placer gold ran out, many former Gold Rush miners turned to agriculture and started to settle in the areas surrounding the gold fields, including Sacramento County. By 1850, when California achieved statehood and Sacramento County was incorporated, the population of Sacramento County was just over 9,000 (WBIG 2006:11). Sacramento County is one of the original 27 counties of the State of California (Hoover et al. 2002:301).

The lands in the portion of Sacramento County where the project site is were primarily dry plains cut by seasonal drainages (County of Sacramento 2010b:15-7). Lands along major drainages, such as Morrison Creek, were the first to be occupied and farmed, while settlement on the lesser drainages, such as Elder Creek, started in the late 1850s and early 1860s. As a result, most agricultural in the county was dry land farming, such as for grain and hay, or grazing land for cattle.

Lands near the major drainages which had may have had water for most of the year, could be used for grapes and orchards, or for dairies. Morrison Creek being connected to the Sacramento River likely had water year-round and

would have likely allowed for just such cultivation. In contrast, lands near Elder Creek were likely used for dry land farming; Elder Creek is labeled an *arroyo* on the 1885 Official County Map, indicating that it was a fairly minor drainage (County of Sacramento 2010b:5-17). The project site lying between Morrison and Elder creeks, appears to have been under agricultural use from at least 1947 to 1993, although it was likely agricultural land long before 1947. The exact use and/or kind of crops are not known. When Watt Avenue is constructed sometime between 1967 and 1975, the parcel it takes on the boundaries that comprise its parcel limits today.

4.4.3 Railroads

The early success of agriculture in Sacramento County was aided by the development of good transportation routes in and out of the county centered in the City of Sacramento, particularly railroads. The one which had influence on development in the vicinity of the project site is the Central California Traction Railroad (CCTR). Its tracks are located approximately 840 feet to the west of the project site.

The CCTR was started in 1905 with three goals in mind: to compete with the Southern Pacific and Western Pacific railroads for transporting agricultural products from farms on the east side of the San Joaquin and Sacramento valleys; to develop farmland along the railroad right-of-way; and to provide a major customer for the power company owned by several of the corporate directors (Herbert and Blosser 2001).

The CCTR started as a 16-mile electric passenger line from Stockton to Lodi. CCTR continued to extend its railroad north from Lodi Junction through to Sheldon, and finally Sacramento by 1910. The section near the project site was completed in 1910 (County of Sacramento 2010b:15-8). This electric railway was made possible by early technological advances related to the long-distance transmission of hydroelectric generated power from the construction of nearby Folsom Dam in 1895. As a result, interurban electrified railways became a popular form of transportation for passenger service and freight service throughout Sacramento and the region.

Right from the start, the CCTR built up a substantial freight business, and was a financial success. In 1928, Southern Pacific, Santa Fe and Western Pacific purchased the railway jointly. They even built housing for their employees near depots and sub-stations along the tracks. Eventually, the increasing use of personal automobiles and bus lines brought a reduction in the number of passengers for the railroad, and passenger service was eliminated in 1933. In 1946, the use of electricity was discontinued in favor of diesel service (Roark and Gueyger 2000). Historic aerial imagery shows that a warehouse or railyard was established near the intersection of the CCTR tracks and Elder Creek Road sometime between 1957 and 1964 (NETR 2021); it still there today. The CCTR line stayed in operation until 1998 when service between Stockton and Sacramento ceased.

5 RESULTS

5.1.1 Background Research Results

The results of the NCIC record search found that no cultural resources have been previously identified within the project site and that approximately 50 percent of the project site was previously surveyed for cultural resources in 2006 as part of the North Vineyard Station Off-Site Project (WBIG 2006).

Review of the 1865 and 1866 GLO plat maps, historic United States Geologic Survey topographic maps from 1902 to 2018 and historic aerials starting in 1947 to 2018, revealed that the project site has seen relatively little development in over 156 years. Examination of historic aerials show that the parcel was under agricultural use from at least 1947 to 1993 (NETR 2021); however, it is more likely that it was under agricultural for dry land farming or grazing for a time before 1947. This supports historical documentation that states the general region had been largely used for dry land farming for over 100 years. Additional support is provided by available Sacramento County Assessor's Office parcel details which shows no property characteristics or recorded building permits for Assessor Parcel Number 062-0060-033 (County of Sacramento 2021). Today the parcel is zoned as light industrial.

Only one permanent structure appears to have present on the parcel from sometime at of before 1947 (NETR 2021). It appears to be a barn or other type of agricultural structure and not a residence. It was located in the southeast corner of the northwest quadrant of the parcel. It does not correspond to the existing concrete pads or any other structural remains present within the project site. This structure was gone by 1950. Additionally, since no depot or station was located in the vicinity of Elder Creek until 1964, this building cannot be associated the CCTR. No other structures appear on the parcel until 1993, when a series of metal cargo-like storage containers, support structures (such as the electrical cabinets), and underlying concrete pads are visible on aerials. These containers were all gone by 1999, and it seems nothing has been located on the parcel since.

Review of the 1865 and 1866 GLO plat maps found that a road was present at the current location of Elder Creek Road, directly south of the project site, since at least 1865; it had no name on either the 1865 or 1866 GLO plat map. However, historic USGS topographic maps indicated that this road was named Elder Creek Road and located in its current alignment since at least 1911. In contrast, S. Watt Avenue to the west was not constructed until sometime between 1967 and 1975, and Turner Road to the east was not constructed until sometime between 1980 and 1993.

5.1.2 Pedestrian Survey Results

The entire project site was subjected to an intensive level on August 12, 2021. Low standing grasses and weeds, as well as degrading asphalt pavement, concrete, gravel, and other imported or manmade materials, such as pink terra-cotta type material and brick, covered the site in varying degrees and locations. Ground visibility throughout the site ranged between 60 to 80 percent. Figures 5-1 and 5-2 present overviews of the project site.

Two metal electrical cabinets were present in the northeast quadrant; one was stripped of its contents and the other, closer to the north fence, appeared to be intact and connected to the nearby power poles. Two concrete structure pads were also observed, one in the southwest corner of the site, and one starting in the center of the south portion of the site and extending to the east. The pad at the southwest corner is L-shaped and measures approximately 2,500 square feet. The pad in the south central to southeastern portion of the project site is square shaped with some extensions on the south and east. It measures approximately 11,140 square feet. It is surrounded by decomposing asphalt and some gravel. A chain link fence encircles the project site. Both concrete pads are in poor condition being broken and cracked in places, disturbed by vegetation growth, and exfoliation. Background research has established that the concrete pads and metal electrical cabinets are all younger than 45 years, having been constructed no earlier than 1993, and therefore do not warrant recordation or evaluation. Photographs of the concrete pads are contained in Figure 5-3.

Overall, the survey found no presence of anthropogenic soils (i.e., midden), hearth features, or concentrations of shell, bone, or lithic materials that would indicate the presence of a prehistoric archaeological deposit. Similarly, no concentrations of historic-age glass, metal, or ceramic indicative of a historic-age archaeological deposit were observed, only modern debris of glass, metal, plastics, and building materials such as concrete, brick, gravel, and asphalt. No buildings were present and no built environment structures or objects which appeared to be 45 years or older were observed.



Source: Ascent Environmental in 2021

Overview of northeast quadrant of the project site. Metal electrical cabinets in background. View to the north. Taken August 12, 2021.



Source: Ascent Environmental in 2021

Overview of northwest quadrant of the project site. View to the west. Taken August 12, 2021.

Figure 5-1 Representative Photographs of Northwest Quadrant



Source: Ascent Environmental in 2021

Overview of southwest quadrant of the project site. View to the southwest. Taken August 12, 2021.



Source: Ascent Environmental in 2021

Overview of southeast quadrant of the project site. View to the south. Taken August 12, 2021.

Figure 5-2 Representative Photographs of Southeast Quadrant



Source: Ascent Environmental in 2021

Overview of southwest concrete pad. View to the northeast. Taken August 12, 2021”.



Source: Ascent Environmental in 2021

Overview of concrete pad and paved area in southeast corner. View to the south. Taken August 12, 2021.

Figure 5-3 Representative Photographs of Concrete Pad

5.1.3 Potential for Buried Archaeological Deposits

As stated in Section 3.1, the soils underlying the project site are associated with the Riverbank Formation (Terracon Consultants, Inc. 2019:2). In 2008, a comprehensive geoarchaeological study was prepared for the California Department of Transportation (Caltrans) District 3, which includes Sacramento County. This study concluded that based on the age of the Riverbank Formation (150,000 to 450,000 years ago) and results of past archaeological studies within the lower Sacramento Valley, the presence of buried archaeological deposits is extremely unlikely (Caltrans 2008:149). This conclusion is supported by the County of Sacramento Cultural Resources Sensitivity Map which indicates that project site is located in an area of low to no sensitivity for prehistoric, ethnohistoric and historic period resources (County of Sacramento 2010a:15-9).

Despite the geological findings, there was a positive result for the presence of cultural resources of Native American importance from the Sacred Lands File search conducted by the NAHC. This positive result indicates that somewhere within or within proximity to the project site, a cultural resource of Native American importance could be present. The Sacred Lands File result are confidential and therefore do not include information concerning the location or nature of the resource, nor is the search radius provided. Instead, the NAHC recommendation is to contact the associated tribal entity, which in this case was listed as the UAIC. Anna Starkey, Cultural Regulatory Specialist for the UAIC, responded on September 9, 2021, that she forwarded the request to her assistant who would review it against their records and that she'd respond shortly after that; however, no additional response has been received to date.

The results of the NCIC record search do not offer any assistance in the identification of this Sacred Lands File resource; the NCIC results were negative for previously recorded prehistoric cultural resources within the project site or within a 0.25-mile radius. Thus, without more information, the actual potential for a buried archaeological resource within the project site remains a probability.

6 CONCLUSIONS AND RECOMMENDATIONS

Both the background research, which includes the NCIC record search and consultation effort, and the pedestrian survey failed to identify the presence of historical resources or unique archaeological resources within the project site. The presence of, or the potential for the presence of tribal cultural resources as defined by PRC Section 21074, is not included in this study

All the extant structures present at the project site date to 1993 or later. As such, they do not meet the age recommended for California Register of Historical Resources evaluation and therefore, would not qualify as historical resources for the purposes of CEQA (Office of Historic Preservation 1995:2). The mid-Pleistocene geologic age of the soils present in the project site as well as the land use history, i.e., over 100 years of agricultural use followed by grading and paving, finds that the sensitivity of the project area for buried prehistoric or historic-era archaeological resources is considered low. This conclusion is supported by prior geoarchaeological sensitivity investigations (e.g., Caltrans 2008; County of Sacramento 2010a). However, because of the positive Sacred Lands File search results, the following recommendation concerning inadvertent discoveries is proposed for project implementation.

- ▶ **Inadvertent Discoveries:** If an archaeological resource is inadvertently discovered during ground disturbing project activities, including midden soils, stone tools, chipped stone, baked clay, or concentrations of shell, bone, charcoal, glass, metal, or ceramics, all work shall cease within 100 feet (30.5 meters) of the find and the services of a professional archaeologist shall be retained immediately. The archaeologist will assess the significance of the resource under PRC Section 5024.1 and 21083.2 then provide proper management recommendations. If the find is determined to be a unique archeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures and mitigation will be made available. Possible management recommendations for significant resources could include resource avoidance or data recovery excavations. Do not resume work in the area of the discovery until directed to do so by the archaeologist.

Discovery of human remains is not expected; however, if human remains should be discovered, the following measure should be implemented.

- ▶ Inadvertent Discovery of Human Remains: If human remains are discovered during construction activities, work within 100 feet (30.5 meters) of the remains shall be stopped immediately, and the project proponent shall notify the Sacramento County Coroner, in accordance with Section 5097.98 of the PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the coroner to be Native American, the coroner will notify the NAHC within 24 hours, and the NAHC will designate a Most Likely Descendant (MLD).

7 REFERENCES

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Appendix A

Record Search Results



8/16/2021

NCIC File No.: SAC-21-162

Emilie Zelazo
Ascent Environmental
455 Capitol Mall, Suite 300
Sacramento, CA 95814

Re: Watt Avenue and Elder Creek 7-11 Project

The North Central Information Center (NCIC) received your records search request for the project area referenced above, located on the Carmichael USGS 7.5' quad. The following reflects the results of the records search for the project area and a ¼-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: custom GIS maps shapefiles

Recorded resources within project area:	None
Recorded resources outside project area, within radius:	P-34-606 P-34-1296 P-34-1626
Known reports within project area:	8062
Known reports outside project area, within radius:	488 6154 11541

- Resource Database Printout (list):** enclosed not requested nothing listed/NA
- Resource Database Printout (details):** enclosed not requested nothing listed/NA
- Resource Digital Database Records:** enclosed not requested nothing listed/NA
- Report Database Printout (list):** enclosed not requested nothing listed/NA
- Report Database Printout (details):** enclosed not requested nothing listed/NA
- Report Digital Database Records:** enclosed not requested nothing listed/NA
- Resource Record Copies:** enclosed not requested nothing listed/NA
- Report Copies:** enclosed not requested nothing listed/NA
- Built Environment Resources Directory:** enclosed not requested nothing listed/NA
- Archaeological Determinations of Eligibility:** enclosed not requested nothing listed/NA
- CA Inventory of Historic Resources (1976):** enclosed not requested nothing listed/NA

- Caltrans Bridge Survey:** enclosed not requested nothing listed/NA
- Ethnographic Information:** enclosed not requested nothing listed/NA
- Historical Literature:** enclosed not requested nothing listed/NA
- Historical Maps:** enclosed not requested nothing listed/NA
- Local Inventories:** enclosed not requested nothing listed/NA
- GLO and/or Rancho Plat Maps:** enclosed not requested nothing listed/NA
- Shipwreck Inventory:** enclosed not requested nothing listed/NA
- Soil Survey Maps:** enclosed not requested nothing listed/NA

Please forward a copy of any resulting reports and resource records from this project to NCIC as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Please note that local planning agencies rarely, if ever, send reports and resource records to our office. Digital materials are preferred and can be sent to our office through our file transfer system or on a CD by mail via USPS to the address on the top of the first page. Hard copies may also be mailed. 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, it is possible that 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 California Historical Resources Information System (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 records search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Appendix B

Consultation

NATIVE AMERICAN HERITAGE COMMISSION

August 26, 2021

Alta Cunningham
Ascent Environmental

Via Email to: alta.cunningham@ascentenvironmental.com

Re: Watt & Elder creek Development CEQA Project, Sacramento County.

Dear Ms. Cunningham:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the United Auburn Indian Community on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological 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. Please contact all of those listed; if they cannot supply information, they may 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, please contact me at my email address:
Katy.Sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez
Associate Environmental Planner

Attachment



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Native American Heritage Commission
Native American Contacts List
August 26, 2021

Buena Vista Rancheria of Me-Wuk Indians
Rhonda Morningstar Pope, Chairperson
1418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento CA 95811
rhonda@buenavistatribe.com
(916) 491-0011 Office
(916) 491-0012 Fax

Tsi Akim Maidu
Don Ryberg, Chairperson
P.O. Box 510 Maidu
Browns Valley CA 95918
tsi-akim-maidu@att.net
(530) 383-7234

Chicken Ranch Rancheria of Me-Wuk Indians
Lloyd Mathiesen, Chairperson
P.O. Box 1159 Miwok - Me-wuk
Jamestown CA 95327
lmathiesen@crtribal.com
(209) 984-9066
(209) 984-9269

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn CA 95603 Miwok
bguth@auburnrancheria.com
(530) 883-2390 Office
(530) 883-2380 Fax

Ione Band of Miwok Indians
Sara A. Dutschke, Chairperson
9252 Bush Street Miwok
Plymouth CA 95669
consultation@ionemiwok.net
(209) 245-5800
(209) 256-9799

Wilton Rancheria
Jesus G. Tarango Jr., Chairperson
9728 Kent Street Miwok
Elk Grove CA 95624
jtarango@wiltonrancheria-nsn.gov
(916) 683-6000 Office
(916) 683-6015 Fax

Nashville Enterprise Miwok-Maidu-Nishinam Tribe
Cosme A. Valdez, Chairperson
P.O. Box 580986 Miwok
Elk Grove CA 95758-001
valdezcome@comcast.net
(916) 429-8047 Voice/Fax
(916) 396-1173 Cell

Wilton Rancheria
Dahlton Brown, Director of Administration
9728 Kent Street Miwok
Elk Grove CA 95624
dbrown@wiltonrancheria-nsn.gov
(916) 683-6000 Office
(916) 683-6015 Fax

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairperson
P.O. Box 1340 Miwok
Shingle Springs CA 95682 Maidu
rcuellar@ssband.org
(530) 387-4970
(530) 387-8067 Fax

Wilton Rancheria
Steven Hutchason, THPO
9728 Kent Street Miwok
Elk Grove CA 95624
shutchason@wiltonrancheria-nsn.gov
(916) 683-6000 Ext. 2006
(916) 683-6015 Fax

From: [Emilie Zelazo](mailto:Emilie.Zelazo)
To: rhonda@buenavistatribe.com
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:34:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)

Good Morning!

I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

If you have any knowledge of cultural resources within the project area that you are willing to share, or if you have concerns or questions about the project, please let me know. My contact information is provided below.

Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:39 PM
To: rhonda@buenavistatribe.com
Subject: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Take care.
Sincerely,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: [Emilie Zelazo](#)
To: rcuellar@ssband.org
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:38:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good Morning!

I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

If you have any knowledge of cultural resources within the project area that you are willing to share, or if you have concerns or questions about the project, please let me know. My contact information is provided below.

Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:44 PM
To: rcuellar@ssband.org
Subject: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Take care.
Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



Ascent Environmental, Inc
455 Capitol Mall, Suite 300
Sacramento, CA 95814
O 916.444.7301



From: [Emilie Zelazo](mailto:Emilie.Zelazo@ionemiwok.net)
To: consultation@ionemiwok.net
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:38:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good Morning!

I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

If you have any knowledge of cultural resources within the project area that you are willing to share, or if you have concerns or questions about the project, please let me know. My contact information is provided below.

Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:42 PM
To: consultation@ionemiwok.net
Subject: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Take care.
Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



Ascent Environmental, Inc
455 Capitol Mall, Suite 300
Sacramento, CA 95814
O 916.444.7301



Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: [Emilie Zelazo](#)
To: lmathiesen@crtribal.com
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:36:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

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Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:40 PM
To: lmathiesen@crtribal.com
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will

be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Take care.

Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



Ascent Environmental, Inc
455 Capitol Mall, Suite 300
Sacramento, CA 95814

O 916.444.7301



From: [Emilie Zelazo](#)
To: tsi-akim-maidu@att.net
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:43:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

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I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

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Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:53 PM
To: tsi-akim-maidu@att.net
Subject: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Take care.
Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



Ascent Environmental, Inc
455 Capitol Mall, Suite 300
Sacramento, CA 95814
O 916.444.7301



From: [Dahlton Brown](#)
To: [Emilie Zelazo](#)
Subject: Automatic reply: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, August 26, 2021 5:48:29 PM

Hello,

Thank you for your email.

Please note that I am currently away from the office and will be slow to respond to your email at this time. I will return on Monday, August 30th.

Should your email require immediate attention, please reach out to Brandy Reissig, Office Manager at breissig@wiltonrancheria-nsn.gov.

Take Care!

Dahlton Brown

From: [Anna Starkey](#)
To: [Emilie Zelazo](#)
Subject: RE: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:46:58 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Hi Emilie,

Your email must have gotten buried in my inbox. For future requests, please use our online form as it will be sure to get processed right away.

I've forwarded to my assistant who will be reviewing in our THRS system and I will get back to you shortly.

Thank you,
Anna

From: Emilie Zelazo <Emilie.Zelazo@ascentenvironmental.com>
Sent: Thursday, September 9, 2021 9:43 AM
To: Anna Starkey <astarkey@auburnrancheria.com>
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County

Good Morning Anna!

I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

If you have any knowledge of cultural resources within the project area that you are willing to share, or if you have concerns or questions about the project, please let me know. My contact information is provided below.

Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo
Sent: Thursday, August 26, 2021 5:52 PM
To: Anna Starkey <astarkey@auburnrancheria.com>
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings Anna! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates

plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

As part of the project this parcel, APN 062-0060-033, will be annexed into city limits. The parcel measures approximately 2.49 acres and is located on the Carmichael USGS Topographic 7.5' Quad at T8N R6E Section 30. A record search at the North Central Information Center has failed to identify any previously recorded resources within the parcel limits.

A search of the Sacred Lands File at the Native American Heritage Commission returned a positive result and identified the United Auburn Tribe as the tribe to contact for additional information. If you have any knowledge of cultural resources within the project area, particularly concerning the positive result, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by yourself. My contact information is provided below.

Thank you for your time and attention. Hope you are doing well.
Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



Ascent Environmental, Inc
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Nothing in this e-mail is intended to constitute an electronic signature for purposes of the Electronic Signatures in Global and National Commerce Act (E-Sign Act), 15, U.S.C. §§ 7001 to 7006 or the Uniform Electronic Transactions Act of any state or the federal government unless a specific statement to the contrary is included in this e-mail.

From: [Emilie Zelazo](#)
To: [Steven Hutchason](#); jtarango@wiltonrancheria-nsn.gov; dbrown@wiltonrancheria-nsn.gov
Subject: FW: Watt and Elder Creek 7-Eleven Project, Sacramento County
Date: Thursday, September 9, 2021 9:42:00 AM
Attachments: [image001.png](#)
[Tekin 7-11.kmz](#)
[Watt and Elder Creek Project Location Map.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good Morning!

I am emailing you today to follow up on a previous email regarding the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Please see the email below for more details.

If you have any knowledge of cultural resources within the project area that you are willing to share, or if you have concerns or questions about the project, please let me know. My contact information is provided below.

Thank much for your time and attention.

Take care,

Emilie Zelazo

Environmental Planner/Cultural Resource Specialist

C 916.720.1918

E Emilie.Zelazo@AscentEnvironmental.com



From: Emilie Zelazo

Sent: Thursday, August 26, 2021 5:48 PM

To: jtarango@wiltonrancheria-nsn.gov; dbrown@wiltonrancheria-nsn.gov; Steven Hutchason <shutchason@wiltonrancheria-nsn.gov>

Subject: Watt and Elder Creek 7-Eleven Project, Sacramento County

Greetings! I am contacting you today as part of the cultural resources background investigation for the Watt and Elder Creek 7-Eleven Project located in Sacramento County. Tekin and Associates plan to construct a 7-Eleven convenience store with gas station and car wash at the corner of S. Watt and Elder Creek Road in Sacramento County, immediately outside the City of Sacramento limits. The City of Sacramento is the CEQA Lead Agency. A map and KMZ layer of the project location is attached.

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The Native American Heritage Commission has identified you as someone to contact for possible additional information about the project area. If you have any knowledge of cultural resources within the project area, and are willing to share, please let me know. Any information you share will be respected and treated as confidential, unless permission to share the knowledge is granted by

yourself. My contact information is provided below.

Thank you for your time and attention. Take care.
Sincerely,

Emilie Zelazo

Environmental Planner and Cultural Resource Specialist

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Appendix D

Noise Analysis Data



Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L _{eq} dBA)	Equipment	Reference Emission	Usage Factor ¹
				Noise Levels (L _{max}) at 50 feet ¹	
Threshold	66	88.0	Dozer	85	1
220 ft home (closest)	220	74.1	Grader	85	1
Other near by residences	440	74.1	Paver	85	1
			Roller	85	1

Ground Type soft
 Source Height 8
 Receiver Height 5
 Ground Factor² 0.63

Predicted Noise Level ³	L _{eq} dBA at 50 feet ³
Dozer	85.0
Grader	85.0
Paver	85.0
Roller	85.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)

Sources:

¹ Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

² Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

³ Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$$L_{eq}(\text{equip}) = E.L. + 10 \cdot \log(\text{U.F.}) - 20 \cdot \log(D/50) - 10 \cdot G \cdot \log(D/50)$$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.



Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L _{eq} dBA)	Equipment	Reference Emission	Usage Factor ¹
				Noise Levels (L _{max}) at 50 feet ¹	
Threshold	45	88.0	Dozer	85	0.4
220 ft home (closest)	220	69.8	Grader	85	0.4
Other near by residences	440	61.9	Paver	85	0.5
			Roller	85	0.2

Ground Type soft
 Source Height 8
 Receiver Height 5
 Ground Factor² 0.63

Predicted Noise Level ³	L _{eq} dBA at 50 feet ³
Dozer	81.0
Grader	81.0
Paver	82.0
Roller	78.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)

87

Sources:

¹ Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

² Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

³ Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$$L_{eq}(\text{equip}) = E.L. + 10 \cdot \log(\text{U.F.}) - 20 \cdot \log(D/50) - 10 \cdot G \cdot \log(D/50)$$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Equipment Description	Acoustical Usage Factor (%)	Spec 721.560 Lmax @ 50ft (dBA slow)	Actual Measured Lmax @ 50ft (dBA slow)	No. of Actual Data Samples (count)	Spec 721.560 LmaxCalc	Spec 721.560 Leq	Distance	Actual Measured LmaxCalc	Actual Measured Leq
Auger Drill Rig	20	85	84	36	79.0	72.0	100	78.0	71.0
Backhoe	40	80	78	372	74.0	70.0	100	72.0	68.0
Bar Bender	20	80	na	0	74.0	67.0	100		
Blasting	na	94	na	0	88.0		100		
Boring Jack Power Unit	50	80	83	1	74.0	71.0	100	77.0	74.0
Chain Saw	20	85	84	46	79.0	72.0	100	78.0	71.0
Clam Shovel (dropping)	20	93	87	4	87.0	80.0	100	81.0	74.0
Compactor (ground)	20	80	83	57	74.0	67.0	100	77.0	70.0
Compressor (air)	40	80	78	18	74.0	70.0	100	72.0	68.0
Concrete Batch Plant	15	83	na	0	77.0	68.7	100		
Concrete Mixer Truck	40	85	79	40	79.0	75.0	100	73.0	69.0
Concrete Pump Truck	20	82	81	30	76.0	69.0	100	75.0	68.0
Concrete Saw	20	90	90	55	84.0	77.0	100	84.0	77.0
Crane	16	85	81	405	79.0	71.0	100	75.0	67.0
Dozer	40	85	82	55	79.0	75.0	100	76.0	72.0
Drill Rig Truck	20	84	79	22	78.0	71.0	100	73.0	66.0
Drum Mixer	50	80	80	1	74.0	71.0	100	74.0	71.0
Dump Truck	40	84	76	31	78.0	74.0	100	70.0	66.0
Excavator	40	85	81	170	79.0	75.0	100	75.0	71.0
Flat Bed Truck	40	84	74	4	78.0	74.0	100	68.0	64.0
Front End Loader	40	80	79	96	74.0	70.0	100	73.0	69.0
Generator	50	82	81	19	76.0	73.0	100	75.0	72.0
Generator (<25KVA, VMS s	50	70	73	74	64.0	61.0	100	67.0	64.0
Gradall	40	85	83	70	79.0	75.0	100	77.0	73.0
Grader	40	85	na	0	79.0	75.0	100		
Grapple (on Backhoe)	40	85	87	1	79.0	75.0	100	81.0	77.0
Horizontal Boring Hydr. Jac	25	80	82	6	74.0	68.0	100	76.0	70.0
Hydra Break Ram	10	90	na	0	84.0	74.0	100		
Impact Pile Driver	20	95	101	11	89.0	82.0	100	95.0	88.0
Jackhammer	20	85	89	133	79.0	72.0	100	83.0	76.0
Man Lift	20	85	75	23	79.0	72.0	100	69.0	62.0
Mounted Impact Hammer	20	90	90	212	84.0	77.0	100	84.0	77.0
Pavement Scarafier	20	85	90	2	79.0	72.0	100	84.0	77.0
Paver	50	85	77	9	79.0	76.0	100	71.0	68.0
Pickup Truck	40	55	75	1	49.0	45.0	100	69.0	65.0
Pneumatic Tools	50	85	85	90	79.0	76.0	100	79.0	76.0
Pumps	50	77	81	17	71.0	68.0	100	75.0	72.0
Refrigerator Unit	100	82	73	3	76.0	76.0	100	67.0	67.0
Rivit Buster/chipping gun	20	85	79	19	79.0	72.0	100	73.0	66.0
Rock Drill	20	85	81	3	79.0	72.0	100	75.0	68.0
Roller	20	85	80	16	79.0	72.0	100	74.0	67.0
Sand Blasting (Single Nozzl	20	85	96	9	79.0	72.0	100	90.0	83.0
Scraper	40	85	84	12	79.0	75.0	100	78.0	74.0
Shears (on backhoe)	40	85	96	5	79.0	75.0	100	90.0	86.0
Slurry Plant	100	78	78	1	72.0	72.0	100	72.0	72.0
Slurry Trenching Machine	50	82	80	75	76.0	73.0	100	74.0	71.0
Soil Mix Drill Rig	50	80	na	0	74.0	71.0	100		
Tractor	40	84	na	0	78.0	74.0	100		
Vacuum Excavator (Vac-tru	40	85	85	149	79.0	75.0	100	79.0	75.0
Vacuum Street Sweeper	10	80	82	19	74.0	64.0	100	76.0	66.0
Ventilation Fan	100	85	79	13	79.0	79.0	100	73.0	73.0
Vibrating Hopper	50	85	87	1	79.0	76.0	100	81.0	78.0
Vibratory Concrete Mixer	20	80	80	1	74.0	67.0	100	74.0	67.0
Vibratory Pile Driver	20	95	101	44	89.0	82.0	100	95.0	88.0
Warning Horn	5	85	83	12	79.0	66.0	100	77.0	64.0
Welder / Torch	40	73	74	5	67.0	63.0	100	68.0	64.0
chipper		75							

Source:

FHWA Roadway Construction Noise Model, January 2006. Table 9.1

U.S. Department of Transportation

CA/T Construction Spec. 721.560

Attenuation Calculations for Stationary Noise Sources

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).

STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.

STEP 3: Select the distance to the receiver.

Noise Source/ID	Reference Noise Level			Attenuation Characteristics				Attenuated Noise Level at Receptor		
	noise level (dBA)	@	distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	noise level (dBA)	@	distance (ft)
Helicopter	68.0	@	492	soft	6	5	0.65	94.3	@	50
chipper	99.0	@	3	soft	6	5	0.65	67.7	@	50
blasting (night lmax)	94.0	@	50	soft	6	5	0.65	65.0	@	620
helicopter (night leq)	68.0	@	492.00	soft	6	5	0.65	45.1	@	3600
blasting (day lmax)	94.0	@	50	soft	6	5	0.65	70.1	@	400
helicopter (day leq)	68.0	@	492	soft	6	5	0.65	55.0	@	1520
Blasting (SF Res)	94.0	@	50	soft	6	5	0.65	79.6	@	175
blasting	94.0	@	50	soft	6	5	0.65	86.0	@	100
							0.66			
							0.66			
							0.66			
							0.66			
							0.66			
							0.66			

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 12-3 and 12-4 of FTA 2006.

Computation of the ground factor is based on the equation presented in Figure 6-23 on pg. 6-23 of FTA 2006, where the distance of the reference noise level can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

Sources:

Federal Transit Association (FTA). 2006 (May). Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. Washington, D.C. Available: <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>. Accessed: September 24, 2010.

Distance Propagation Calculations for Stationary Construction Sources of Ground Vibration for South Watts Avenue & Elder Creek Road 7-11 Project



KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Determine units in which to perform calculation.

- If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.
- If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Noise Source/ID	Reference Noise Level		
	vibration level (VdB)	@	distance (ft)
Roller	94.0	@	25

Attenuated Noise Level at Receptor		
vibration level (VdB)	@	distance (ft)
80.0	@	73

The Lv metric (VdB) is used to assess the likelihood for vibration to result in human annoyance.

STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Noise Source/ID	Reference Noise Level		
	vibration level (PPV)	@	distance (ft)
Roller	0.210	@	25

Attenuated Noise Level at Receptor		
vibration level (PPV)	@	distance (ft)
0.198	@	26

The PPV metric (in/sec) is used for assessing the likelihood for the potential of structural damage.

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 185 of FTA 2018. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Washington, D.C. Accessed: September 21, 2021. Page Available:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Attenuation Calculations for Stationary Noise Sources

KEY: Orange cells are for input.
 Grey cells are intermediate calculations performed by the model.
 Green cells are data to present in a written analysis (output).

STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).

STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.

STEP 3: Select the distance to the receiver.

Noise Source/ID	Reference Noise Level			Attenuation Characteristics				Attenuated Noise Level at Receptor		
	noise level (dBA)	@	distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	noise level (dBA)	@	distance (ft)
Two wash blowers (Lmax)	84.0	@	50	hard	8	5	0.00	64.4	@	480
Convenience Store HVAC System (Lmax)	85.0	@	3	hard	8	5	0.00	40.9	@	480

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

Computation of the ground factor is based on the equation presented in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise level can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available:

<<http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta>