

Air Quality Assessment
Auburn Boulevard Fueling Station
Sacramento County, California

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TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background..... 1

1.2 Project Location..... 1

1.3 Project Description 1

2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology 6

2.2 Air Pollutants of Concern 6

2.3 Sensitive Receptors..... 9

3 REGULATORY SETTING

3.1 Federal.....10

3.2 State of California12

3.3 Regional.....12

3.4 Local.....15

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds17

4.2 Methodology18

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis 20

6 REFERENCES

References..... 39

TABLES

Table 1: Air Contaminants and Associated Public Health Concerns..... 6

Table 2: Ambient Air Quality Data..... 7

Table 3: Sensitive Receptors..... 8

Table 4: State and Federal Ambient Air Quality Standards..... 9

Table 5: Sacramento County Attainment Status..... 13

Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds..... 16

Table 7: Project Construction-Related Emissions..... 21

Table 8: Project Operational Emissions..... 23

Table 9: Construction Risk Assessment Results..... 28

Table 10: Operational Risk Assessment Results..... 29

EXHIBITS

Exhibit 1 Regional Location Map..... 3

Exhibit 2 Project Vicinity Map..... 4

Exhibit 3 Conceptual Site Plan..... 5

APPENDICES

Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H ₂ S	hydrogen sulfide
Pb	lead
µg/m ³	micrograms per cubic meter
mg/m ³	milligrams per cubic meter
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	National Ambient Air Quality Standards
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
O ₃	ozone
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RS	Resignation Substitution
SACOG	Sacramento Area Council of Governments
SFNA	Sacramento Federal Nonattainment Area
SMAQMD	Sacramento Metropolitan Air Quality Management District
SVAB	Sacramento Valley Air Basin
SB	Senate Bill
sf	square foot
SIP	State Implementation Plan
SO ₄₋₂	sulfates
SO ₂	sulfur dioxide
TAC	toxic air contaminant
C ₂ H ₃ Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Auburn Boulevard Fueling Station (project). This analysis has been undertaken to analyze whether the proposed project would result in significant environmental impacts. The purpose of this Air Quality Assessment is to document whether any air quality-related impacts would occur based on the proposed project described below pursuant to State California Environmental Quality Act (CEQA).

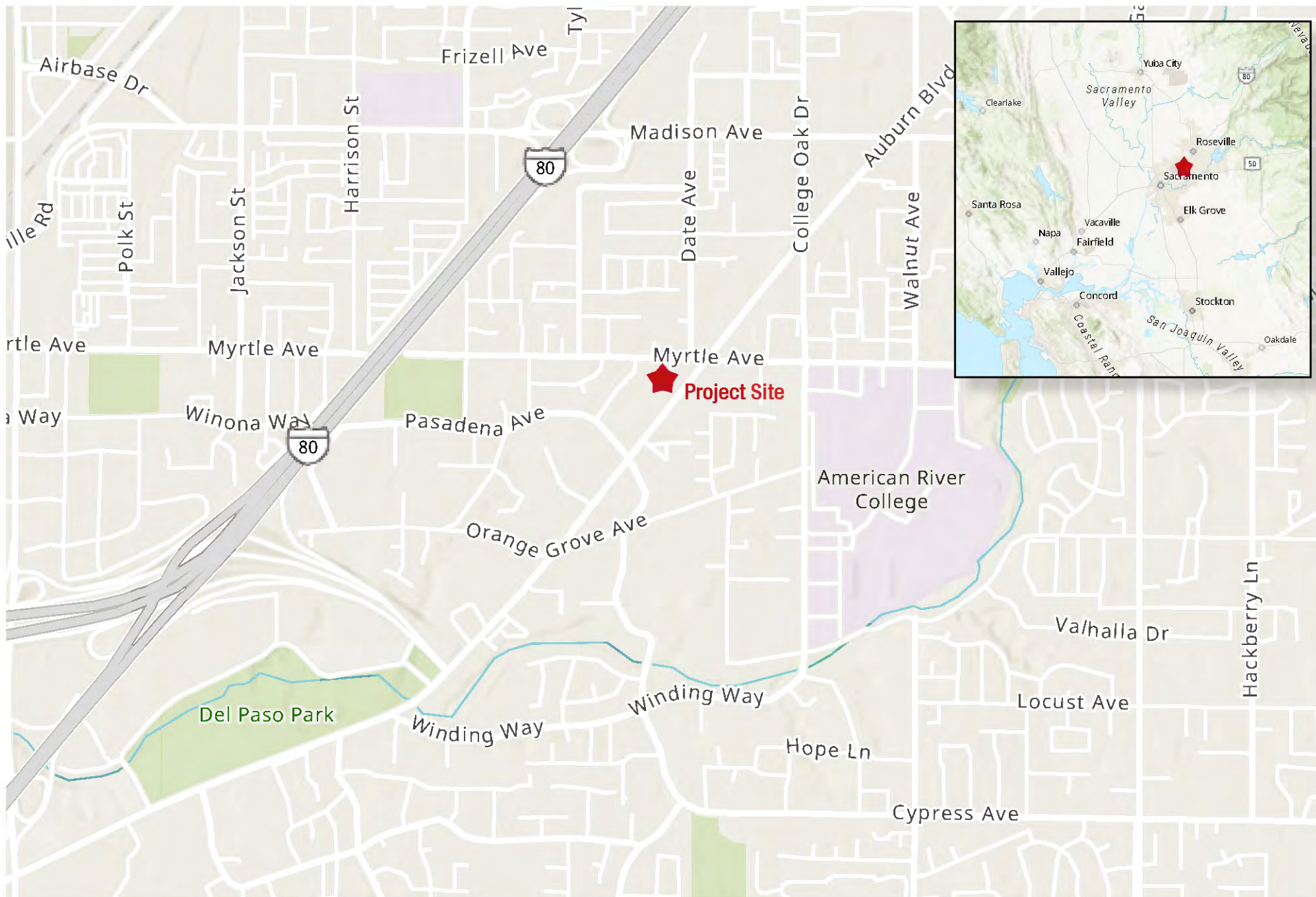
1.1 Project Location

The project is located east of the City of Sacramento, in Sacramento County. The project site (Assessor Parcel Number [APN] 240-0061-001 & 002) is located at the southwestern corner of Auburn Boulevard and Myrtle Avenue. The project site is currently developed with two existing storage and retail buildings. Access is provided from Auburn Boulevard. The approximately 1.1-acre site is located approximately 0.5 mile east of the I-80; refer to **Exhibit 1: Regional Location Map** and **Exhibit 2: Project Vicinity Map**.

1.2 Project Description

The project is proposing to demolish the existing retail and storage buildings and construct a new building with convenience store and drive-thru quick-serve restaurant (QSR) or coffee tenant, and fuel canopy. As shown in the **Exhibit 3: Conceptual Site Plan**, the proposed development consists of a convenience store of 2,804 gross square foot (sf), QSR of 2,059 sf, new underground fuel tanks and piping, new fuel canopy and dispensers, new trash enclosure, landscaping, and irrigation. The intent of the project is to revitalize this corner site. The existing retail use would be changed to a convenience store (beer & wine sales, tobacco sales, 24-hour operation) with fueling and drive-thru. The project proposes 23 standard spaces, 1 accessible space, and 12 fueling positions (18 total). Vehicular access to the project site would be provided on Auburn Boulevard.

There are two existing retail and storage buildings located on the project site that would require demolition. Grading over the entire site would consist of 125 cubic yards of soil export. Demolition is anticipated to begin in April 2023, followed by site grading and construction in May 2023. Construction is expected to last for approximately 11 months, concluding in March 2024.



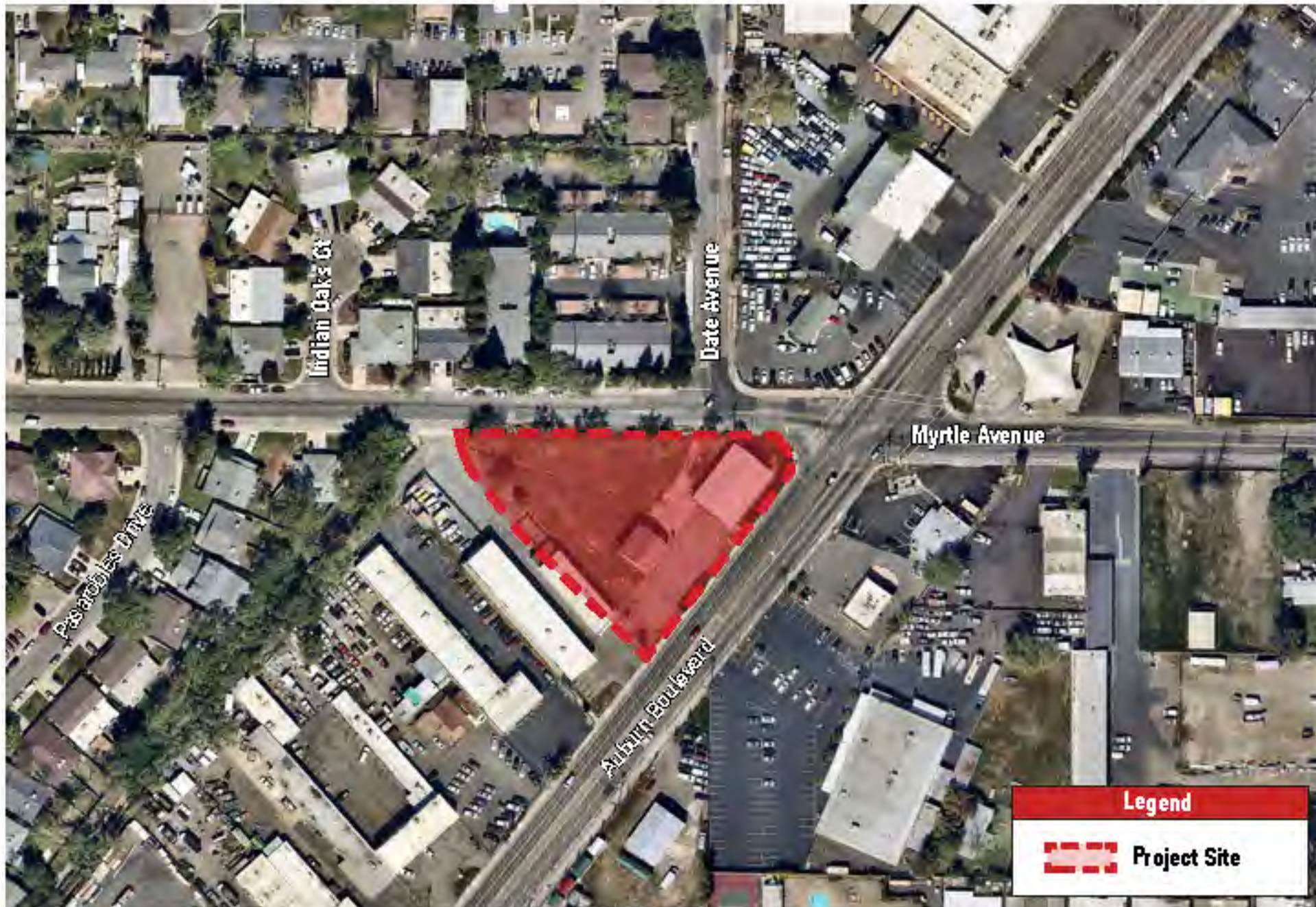
Source: USGS, 2022

Figure 1: Regional Map

Auburn Boulevard Fueling Station Project



Not to scale

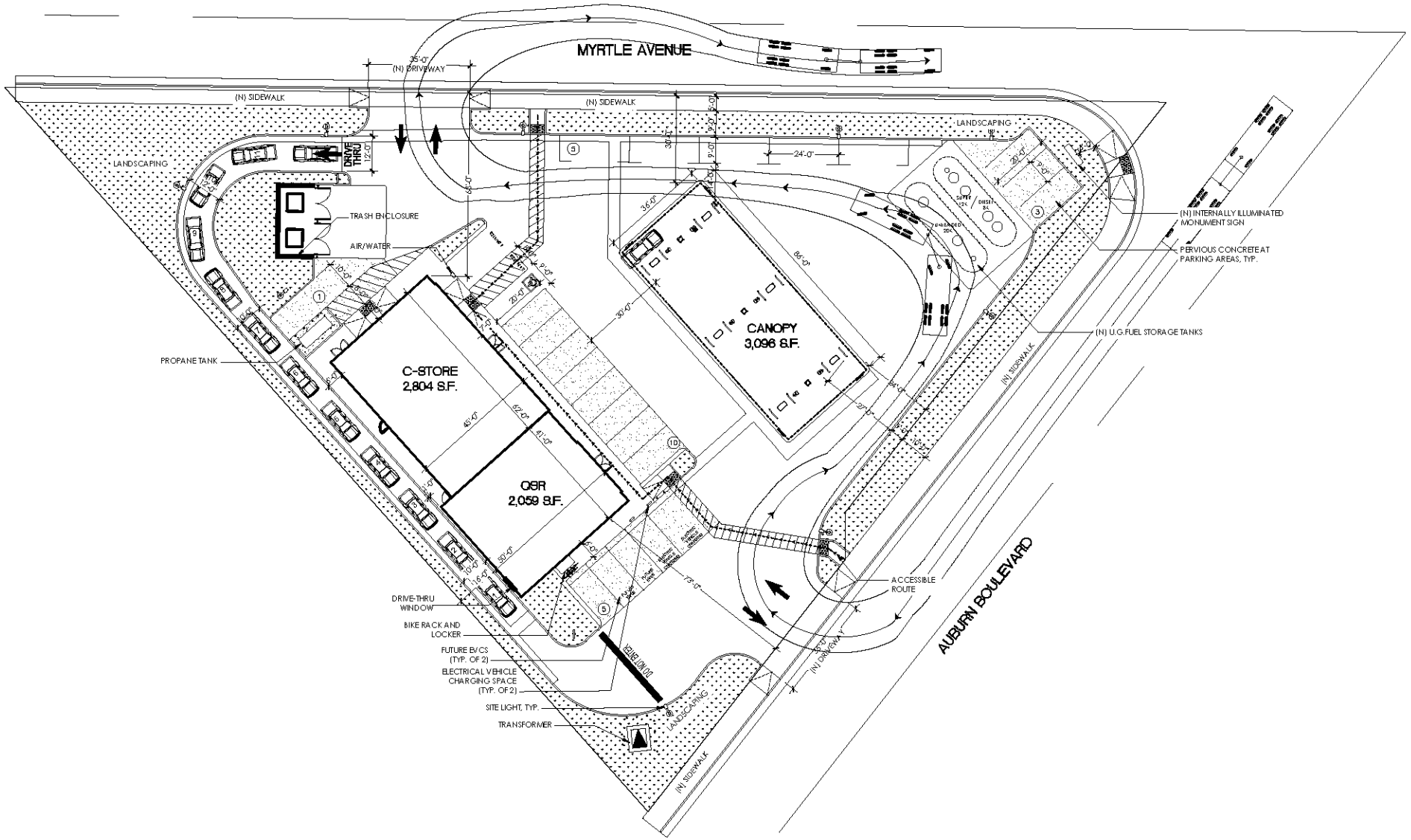


Source: Maxima, 2022

Figure 2: Project Vicinity Map
Auburn Boulevard Fueling Station Project



Not to scale



Source: PM Design, 2022

Figure 3: Site Plan

Auburn Boulevard Fueling Station Project



Not to scale

2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the Sacramento Valley Air Basin (SVAB), which includes Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, Yuba, portions of Placer and Solano counties, as well as Sacramento County. The SVAB is bounded by the North Coast Ranges on the west and the Northern Sierra Nevada Mountains on the east.¹ The intervening terrain is flat. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SVAB has a Mediterranean climate, characterized by hot dry summers and mild rainy winters. The annual average temperature in SVAB ranges from 20 to 115 degrees Fahrenheit with summer highs around 90 degrees and winter lows occasionally below freezing. The average annual rainfall in SVAB is usually about 20 inches in the winter and spring with snowfall being rare. Wind in this air basin are moderate in strength and the breezes vary from moist to dry land flows from the north. The average wind speed is about 8 miles per hour at SMF and the predominate wind directions are from the south-southeast in the spring, summer, and fall, trending to the north-northwest in the winter.²

The mountains surrounding SVAB create a barrier to airflow, which can create inversion layers, trapping air pollutants in the Sacramento Valley when meteorological conditions are right. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. During the winter, surface inversions (0 to 500 feet) occur and subsidence inversions (1,000 to 2,000 feet) occur during the summer.

Ozone season in the SVAB occurs in the months of May through October and is characterized by steady morning air or light winds with the Delta sea breeze arriving in the afternoon and out of the southwest. The evening breezes usually transport airborne pollutants to the north out of the SVAB. From July to September, a phenomenon called the "Schultz Eddy" prevents this from occurring half of the days in July to September. The Schultz Eddy would cause the wind pattern and pollutants to circle back southward instead of allowing for the prevailing wind patterns to move north carrying pollutants out of the SVAB. This phenomenon exacerbates pollution levels in the SVAB and increases the likelihood of violating federal and state air quality standards.

2.2 Air Pollutants of Concern

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

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀), fine particulate matter

¹ Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

² Sacramento International Airport Master Plan Draft EIR, 2007.

(PM_{2.5}), and lead are primary air pollutants. Of these, CO, NO_x, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. ROG and NO_x are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O₃) is formed by a chemical reaction between ROG and NO_x in the presence of sunlight. O₃ and nitrogen dioxide (NO₂) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1: Air Contaminants and Associated Public Health Concerns**.

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM ₁₀ and PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC) ¹ and nitrogen oxides (NO _x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO ₂)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O ₃ . Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
¹ Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), Health Effects, http://www.capcoa.org/health-effects/ , Accessed May 2022.		

Toxic Air Contaminants

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

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

Ambient Air Quality

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

Pollutants of concern in Sacramento County include O₃, PM₁₀, and PM_{2.5}. The closest air monitoring station to the project that monitors ambient concentrations of these pollutants is the Sacramento-Del Paso Manor Monitoring Station (located approximately 2.9 miles to the south). Local air quality data from 2018 to 2020 are provided in **Table 2: Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data			
Criteria Pollutant	2018	2019	2020
Ozone (O₃)¹			
1-hour Maximum Concentration (ppm)	0.102	0.087	0.120
8-hour Maximum Concentration (ppm)	0.087	0.067	0.085
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	3	0	4
NAAQS 8-hour (>0.070 ppm)	6	0	10

Table 2: Ambient Air Quality Data			
Criteria/Pollutant	2018	2019	2020
Nitrogen Dioxide (NO₂)¹			
1-hour Maximum Concentration (ppm)	42.0	51.0	46.0
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM₁₀)¹			
National 24-hour Maximum Concentration	212.0	53.0	188.0
State 24-hour Maximum Concentration	224.0	110.4	190.0
State Annual Average Concentration (CAAQS=20 µg/m ³)	24.5	-	-
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	12.3	-	6.1
CAAQS 24-hour (>50 µg/m ³)	12.2	-	-
Particulate Matter Less Than 2.5 Microns (PM_{2.5})¹			
National 24-hour Maximum Concentration	228.4	41.4	147.3
State 24-hour Maximum Concentration	250.0	41.4	147.3
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-hour (>35 µg/m ³)	10.6	3.0	28.1
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m ³ = micrograms per cubic meter; - = not measured			
¹ Measurements taken at the Sacramento-Del Paso Manor Monitoring Station at 2170 Avalon Drive, Sacramento, CA 95821 (CARB# 34295)			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).			

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive land uses surrounding the project consist mostly of single-family residential communities. Sensitive land uses nearest to the project are shown in **Table 3: Sensitive Receptors**.

Table 3: Sensitive Receptors	
Receptor Description	Distance and Direction from the Project ¹
Single-Family Residential Community	60 feet north
Single-Family Residential Community	75 feet west
Single-Family Residential Community	430 feet southeast
Lyudia's Day Care	700 feet north west
Multi-family Residences	900 feet east
American River College	1,500 feet east
Notes:	
1. Distance measured from the project site to the receiver property line.	
Source: Google Earth Pro, 2022.	

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (U.S. EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the U.S. EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The U.S. EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in **Table 4: State and Federal Ambient Air Quality Standards.**

Pollutant	Averaging Time	State Standards ¹	Federal Standards ²
Ozone (O ₃) ^{2, 5, 7}	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m ³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	0.10 ppm ¹¹
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
Sulfur Dioxide (SO ₂) ⁸	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m ³)
Particulate Matter (PM ₁₀) ^{1, 3, 6}	24-Hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	NA
Fine Particulate Matter (PM _{2.5}) ^{3, 4, 6, 9}	24-Hour	NA	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³
Sulfates (SO ₄₋₂)	24 Hour	25 µg/m ³	NA
Lead (Pb) ^{10, 11}	30-Day Average	1.5 µg/m ³	NA
	Calendar Quarter	NA	1.5 µg/m ³
	Rolling 3-Month Average	NA	0.15 µg/m ³
Hydrogen Sulfide (H ₂ S)	1 Hour	0.03 ppm (0.15 µg/m ³)	NA
Vinyl Chloride (C ₂ H ₃ Cl) ¹⁰	24 Hour	0.01 ppm (26 µg/m ³)	NA

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

¹ California standards for O₃, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards ¹	Federal Standards ²
<p>² National standards shown are the "primary standards" designed to protect public health. National standards other than for O₃, particulates, and those based on annual averages are not to be exceeded more than once a year. The 1-hour O₃ standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O₃ standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.</p> <p>³ Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the U.S. EPA at levels determined to be protective of public health with an adequate margin of safety.</p> <p>⁴ On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O₃ concentration per year, averaged over three years, is equal to or less than 0.070 ppm. U.S. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O₃ level in the area.</p> <p>⁵ The national 1-hour O₃ standard was revoked by the U.S. EPA on June 15, 2005.</p> <p>⁶ In June 2002, CARB established new annual standards for PM_{2.5} and PM₁₀.</p> <p>⁷ The 8-hour California O₃ standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.</p> <p>⁸ On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO₂ NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO₂ NAAQS.</p> <p>⁹ In December 2012, U.S. EPA strengthened the annual PM_{2.5} NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.</p> <p>¹⁰ CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.</p> <p>¹¹ National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.</p>			
<p>Source: South Coast Air Quality Management District, <i>Air Quality Management Plan</i>, 2016; California Air Resources Board, <i>Ambient Air Quality Standards</i>, May 6, 2016.</p>			

Conformity

Conformity is defined as conformity to the SIPs (or Federal Implementation Plans [FIPs]) purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It requires that federal activities will not:

1. Cause or contribute to any new violation of any standard in any area;
2. Increase the frequency or severity of any existing violation of any standard in any area; or
3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The General Conformity Rule was published in the Federal Register on November 30, 1993, and amended on April 5, 2010. The General Conformity Rule established a process based on emissions analysis to determine whether a federal action conforms to the SIP. The rule defines emissions as "direct" or "indirect" (see 40 CFR § 93.152). Actions that do not meet the definitions of direct or indirect emissions are exempt from the General Conformity Rule. "Direct emissions" are those that occur at the same time and place as the federal action. The definition of "indirect emissions" contains four criteria, all of which must be met. As stated in 40 CFR § 93.152, indirect emissions means those emissions of a criteria pollutant or its precursors:

- that are caused or initiated by the federal action and originate in the same nonattainment
- or maintenance area but occur at a different time or place from the action;
- that are reasonably foreseeable;
- that the agency can practically control; and
- for which the agency has continuing program responsibility.

When developing the General Conformity Rule, the EPA recognized that many actions conducted by federal agencies do not result in substantial increases in air pollutant emissions in nonattainment and maintenance areas. Therefore, the EPA established threshold levels (also referred to as *de minimis* levels) for emissions of each of the criteria pollutants. When the sum of the increases in direct and indirect emissions caused by a project would be less than the *de minimis* levels, a project would not require a general conformity determination.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 5**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the U.S. EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in **Table 5**.

3.3 Regional

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the air pollution control agency for Sacramento County. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SVAB. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SMAQMD rules and regulations in effect at the time of construction.

The SMAQMD is also the lead agency in charge of developing attainment plans, with input from the U.S. EPA, the Sacramento Area Council of Governments (SACOG) and CARB. The attainment plans are comprehensive plans that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SACOG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The Sacramento Federal Nonattainment Area (SFNA) was designated as “severe” nonattainment for the 1979 1-Hour ozone NAAQS. The 1-Hour standard was revoked when the U.S. EPA published the Final Phase 1 Rule (69 FR 23951) implementing a more stringent 1997 8-Hour ozone NAAQS. On October 18, 2012, the U.S. EPA determined that the SFNA attained the revoked 1-Hour ozone standard. However, the SMAQMD would still be subject to anti backsliding requirements for the 1-Hour standard unless a Resignation Substitution (RS) Request is approved by the U.S. EPA. The RS request was approved by the SMAQMD on September 28, 2017 and forwarded to the U.S. EPA by CARB. Once approved by the U.S. EPA, this RS request would redesignate the SFNA to attainment and remove the previous CAA obligations associated with that standard.³

The latest attainment plans (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*) for the Sacramento O₃ nonattainment area was adopted by the SMAQMD on July 24, 2017, and the four other air districts that comprise the SFNA (Yolo-Solano AQMD, Feather River AQMD, Placer County APCD, and El Dorado County AQMD). The purpose of the attainment plans is to set forth regulations that govern how the region and State would comply with the FCAA requirements and lead the SFNA into compliance with the federal 2008 8-hour Ozone air quality standard of 75 ppb by an attainment year of 2024. The attainment plans incorporate the latest scientific and technological information and planning assumptions, including the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS) and updated emission inventory methodologies for various source categories.

In December 2019, the SMAQMD published the *Guide to Air Quality Assessment in Sacramento County* to provide to help local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA). The guidance document also provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *Guide to Air Quality Assessment in Sacramento County* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SMAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SACOG is the regional planning agency for Sacramento metropolitan region and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SACOG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

³ Sacramento Metropolitan Air Quality Management District, *Sacramento Federal Ozone Nonattainment Area Redesignation Substitution Request for the 1979 1-Hour Standard*, 2017.

The state and federal attainment status designations for Sacramento County are summarized in **Table 5: Sacramento County Attainment Status**. Sacramento County is currently designated as a nonattainment area with respect to the State 1-hour and 8-hour O₃, 24-hour PM₁₀ standards, as well as the national 8-hour O₃ and 24-hour PM_{2.5} standards. Sacramento County is designated as attainment or unclassified for the remaining state and federal standards.

Pollutant	State	Federal
Ozone (O ₃) (1 Hour Standard)	Non-Attainment	Attainment
Ozone (O ₃) (8 Hour Standard)	Non-Attainment	Non-Attainment (Severe-15)
Particulate Matter (PM _{2.5}) (24 Hour Standard)	Attainment	Non-Attainment
Particulate Matter (PM _{2.5}) (Annual Standard)	Attainment	Attainment
Particulate Matter (PM ₁₀) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM ₁₀) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO ₂) (Annual Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO ₂) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO ₂) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	–
Lead (Pb) (3 Month Standard)	Attainment	Attainment
Sulfates (SO ₄₋₂) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H ₂ S) (1 Hour Standard)	Unclassified	–

Source: Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2018.

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

- **Rule 201 (General Permit Requirements)**-This rule provides an orderly procedure for the review of new sources of air pollution and modification and operation of existing sources through issuance of permits. For any projects that include the use of equipment capable of releasing emissions to the atmosphere, permits may be required from SMAQMD prior to operation.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or

annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)**– This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce fugitive dust emissions into the atmosphere. This rule does not apply to emissions emanating from agricultural operations, unworked land designated as reclaimed for agriculture, or unpaved roads for public travel.
- **Rule 404 (Particulate Matter)**– This rule is intended to limit the quantity of particulate matter in the atmosphere through establishment of an emission concentration limit.
- **Rule 405 (Dust and Condensed Fumes)**– This rule is intended to limit the discharge of dust and condensed fumes into the atmosphere by establishing emission rates based on process weight.
- **Rule 442 (Architectural Coatings)**– This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.
- **Rule 453 (Cutback and Emulsified Asphalt Paving Materials)**– This rule is to limit emissions of volatile organic compounds from the use of cutback and emulsified asphalt in paving materials, paving and maintenance operations.

3.4 Local

County of Sacramento General Plan

The County of Sacramento General Plan is a roadmap that encompasses the hopes, aspirations, values and dreams of the community. The General Plan has goals and policies to improve air quality through transportation infrastructure. Since there are limited project-relevant policies specific to air quality, related policies are mentioned in this section. Where inconsistencies exist, if any, they are addressed in the respective impact analysis below. General Plan policies that directly address reducing and avoiding natural resources impacts include the following:

Goal 1: Improve air quality to promote the public health, safety, welfare, and environmental quality of the community.

Policy AQ-3: Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The California Air Resources Board’s “Air Quality and Land Use Handbook: A Community Health Perspective”, and the County of Sacramento General Plan 2 Air Quality Element

Amended September 26, 2017 AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.

Policy AQ-4:

Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

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

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

SMAQMD Thresholds

The significance criteria established by SMAQMD may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds**.

	Construction Phase	Operational Phase
Mass Emission Thresholds		
NO _x (ozone precursor)	85 lbs/day	65 lbs/day
ROG (VOC) (ozone precursor)	None	65 lbs/day
PM ₁₀	Zero (0). If all feasible BACT ¹ /BMPs ² are applied, then 80 lbs/day and 14.6 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 80 lbs/day and 14.6 tons/year
PM _{2.5}	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year
1. BACT – Best Available Control Technology 2. BMP – Best Management Practices		
Source: Sacramento Metropolitan Air Quality Management District, SMAQMD Thresholds of Significance Table, 2020.		

The SMAQMD has established emission thresholds for PM₁₀ and PM_{2.5} and ozone precursors because the Sacramento Region does not meet State and federal particulate matter and ozone ambient air quality standards. Emissions of particulate matter and ozone precursors from an individual project could contribute to the cumulative non-attainment problem. A “considerable” or “substantial” contribution means one that exceeds the mass emissions threshold levels. ⁴

⁴ Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

The construction and operational mass emissions thresholds for ozone precursors correlate to the NO_x and ROG reductions from heavy-duty vehicles and land use project emission reduction requirements committed to in the 2004 Ozone Attainment Plan for the Sacramento Federal Ozone Nonattainment Area. These thresholds were adopted by the District's Board of Directors in March 2002 and are based on the SMAQMD's document Foundation for a Threshold: Justification for Air Quality Thresholds of Significance in the Sacramento Federal Nonattainment Area.

SMAQMD recommends that projects anticipated to emit 65 pounds or more of NO_x per day, 65 pounds or more of ROG per day, 80 pounds or more of PM₁₀ per day or 82 pounds or more of PM_{2.5} per day are considered operationally significant for CEQA purposes and should apply feasible mitigation.

Localized Carbon Monoxide

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

Toxic Air Contaminants

SMAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of TACs. The "substantial" TAC threshold defined by SMAQMD is any exposure of a sensitive receptor to an individual emissions source resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (i.e., chronic or acute) hazard index (HI) greater than 1.0. These threshold levels should be used to determine whether a project's TAC emissions are cumulatively considerable.⁵

4.2 Methodology

This air quality impact analysis considers construction and operational impacts associated with the project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SMAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

⁵ Sacramento Metropolitan Air Quality Management District. 2009. SMAQMD Thresholds of Significance Table. Last updated in April 2020. Available: <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf>.

Project operations would result in emissions of area sources (consumer products), energy sources (electricity), and mobile sources (motor vehicles from project generated vehicle trips). CalEEMod energy inputs were adjusted to be consistent with the most current version of the California Title 24, Part 6 Building Energy Efficiency Standards. Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the Auburn Boulevard Fuel Station Traffic Evaluation (Traffic Evaluation) prepared by Kimley-Horn (May 2022). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use and stationary source activity data.

As discussed above, the SMAQMD provides significance thresholds for emissions associated with proposed project construction and operations. The proposed project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

Air Quality Mitigation Plan

SMAQMD has developed guidance to mitigate operational emissions for projects subject to CEQA. SMAQMD recommends that project applicants prepare an Air Quality Mitigation Plan for all projects that exceed SMAQMD's operational significant thresholds of 65 pounds per day (ppd) for ROG and/or 65 ppd for NO_x.

For projects that are included in the current SIP, SMAQMD recommend a 15 percent reduction of ozone precursor mobile source emissions. For projects not considered in the SIP, SMAQMD recommends a 35 percent reduction of ozone precursors. These reductions would be considered feasible mitigation and should be included in an AQMP.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

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

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

The project is located within the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. To reduce such emissions, the SMAQMD drafted the latest attainment plan (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*). The attainment plans establish rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The attainment plans are a regional and multi-agency effort including the SMAQMD, the CARB, the SACOG, and the U.S. EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SACOG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SACOG's latest growth forecasts. SACOG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed project was assessed to determine if impacts associated with implementation of the proposed project would conflict with or obstruct the implementation of the applicable attainment plan. Based on the SMAQMD CEQA Guide, by exceeding the SMAQMD's mass emission thresholds for operational emissions of ROG, NO_x, PM₁₀ or PM_{2.5}, a project would be considered to conflict with or obstruct implementation of SMAQMD air quality planning efforts.

As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SMAQMD thresholds of significance. Operational emissions associated with the proposed project would also not exceed SMAQMD established significance thresholds for ROG, NO_x, PM₁₀, or PM_{2.5} emissions. Therefore, the proposed project would not conflict with the SMAQMD's ability to achieve emissions reductions as part of their air quality attainment plans at the project level.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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

The SVAB is designated as nonattainment for O₃ and PM_{2.5} for federal standards and non-attainment for O₃ and PM₁₀ for State standards. The SMAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SMAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Construction Emissions

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include O₃-precursor pollutants (i.e. ROG and NO_x) and PM₁₀ and PM_{2.5}. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Construction results in the temporary generation of emissions during demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water. For this project, site preparation includes the excavation and removal of previously identified contaminated soils.

The duration of construction activities associated with the project are estimated to last approximately 11 months. Demolition is anticipated to occur in April 2023, followed by a 10-month construction phase between April 2023 and March 2024. The project's construction-related emissions were calculated using the SMAQMD-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Project site preparation are anticipated to begin in April 2023 and last approximately five days. Project grading, construction, and paving are anticipated to begin in May 2023 and last approximately 10 months. Architectural coating activities were modeled to be completed March 2024. The exact construction timeline is unknown; however, to be conservative, earlier dates were utilized in the modeling. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. See **Appendix A: Air Quality Data** for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in **Table 7: Project Construction-Related Emissions**. Construction of the proposed project

would be required to comply with various SMAQMD rules, including Rule 402 (Nuisance) and Rule 403 (Fugitive Dust).

Table 7: Project Construction-Related Emissions

Construction Year	Emissions (Maximum Pounds per Day) ^{1,2}				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
2023	1.62	15.23	14.00	7.84	4.03
2024	5.16	11.51	13.25	0.70	0.50
Maximum Emissions	5.16	15.23	14.00	7.84	4.03
<i>Threshold³</i>	<i>None</i>	<i>85</i>	<i>None</i>	<i>80</i>	<i>82</i>
Exceed Threshold?	N/A	No	N/A	No	No

Notes:

- SMAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SMAQMD CEQA Guide (Chapter 3) were applied. These emissions do not include MM HRA-1 CARB Tier 4 Final construction equipment. That would result in further reduction in NO_x and exhaust PM. Refer to Appendix A for Model Data Outputs.
- Total values are from CalEEMod and may not add up 100% due to rounding.
- Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table, 2020*.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The SMAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. The project would implement the SMAQMD Basic Construction Emissions Control Practices as a Best Management Practice (BMP) to control dust at the project site during all phases of construction.

Best Management Practice

Application of SMAQMD Basic Construction Emission Control Practices. Consistent with SMAQMD Basic Construction Emission Control Practices (Best Management Practices [BMPs]), the following controls shall be included as specifications for the proposed project and implemented at the construction site:

- Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff.
- All exposed surfaces shall be watered 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 two feet of free board 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.
- Wet power vacuum street sweepers shall be used to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

- All roadways, driveways, sidewalks, parking lots to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling time shall be minimized either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Clear signage shall be provided that posts this requirement for workers at the entrances to the site.
- Current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1] shall be provided.
- All construction equipment shall be maintained in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Construction Equipment and Worker Vehicle Exhaust. Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_x, PM₁₀, and PM_{2.5}. As previously addressed, the SMAQMD recommends the implementation of all Basic Construction Emissions Control Practices, whether or not construction-related emissions exceed applicable significance thresholds. See the above listed BMPs. As detailed in **Table 7**, project construction emissions would not exceed the SMAQMD thresholds and construction emissions would not result in a potentially significant impact. Additionally, the proposed project would be required to use construction equipment that would meet CARB Tier 4 Final emissions standards in order to reduce a potentially significant impact associated with health risks from PM_{2.5} diesel exhaust construction emissions (refer to Mitigation Measures HRA-1 in the project Health Risk Assessment) as summarized in Threshold 5.3 below. Implementation of Mitigation Measure HRA-1 would further reduce construction emissions, as detailed in **Table 7**. Regardless of Mitigation Measure HRA-1, construction air quality impacts would be less than significant.

ROG Emissions. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O₃ precursors. In accordance with the methodology prescribed by the SMAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. The highest concentration of ROG emissions would be generated from architectural coating beginning in fall 2023 and lasting approximately two months. This phase includes the interior and exterior painting as well as striping of all paved parking areas and driveways. Paints would be required to comply with SMAQMD Rule 442: Architectural Coating, provides specifications on painting practices and regulates the ROG content of paint.

Summary. As shown in **Table 7**, all criteria pollutant emissions would remain below their respective thresholds. S considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NO_x emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting, requiring the use of newer construction equipment with better emissions controls would reduce construction-related NO_x emissions. With implementation of the BMPs identified above, project condition of approval, the

proposed project’s construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin’s goal for meeting attainment standards. Impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas usage. project. As shown in **Table 8**, the project’s emissions would not exceed SMAQMD thresholds.

Table 8: Project Operational Emissions

Emissions Source	Emissions (Tons per Year) ¹				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO _x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM ₁₀)	Fine Particulate Matter (PM _{2.5})
Area	0.02	0.00	0.00	0.00	0.00
Energy ²	0.00	0.00	0.00	0.00	0.00
Mobile	0.35	0.41	2.88	0.58	0.16
Mobile (On-Site Drive-Thru)	0.00	0.01	0.04	0.00	0.00
Gas Dispensing Facility	3.47	0.00	0.00	0.00	0.00
Total Emissions	3.86	0.44	2.94	0.58	0.16
<i>Threshold</i>	25 ³	25 ³	N/A ³	N/A ³	100 ³
Exceed Threshold?	No	No	N/A	N/A	No
<i>Notes:</i>					
1. Total values are from CalEEMod and may not add up 100% due to rounding.					
2. The project would not include the use of natural gas per MM GHG-1 .					
3. Sacramento Metropolitan Air Quality Management District, <i>SMAQMD Thresholds of Significance Table</i> , 2020.					
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.					

Area Source Emissions. Area source emissions would be generated due to the use consumer products, architectural coating, and landscaping.

Energy Source Emissions. Energy source emissions would be generated as a result of electricity usage associated with the project. The primary use of electricity by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.

Mobile Source Emissions. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern (NO_x and ROG react with sunlight to form O₃ [photochemical smog], and wind currents readily transport PM₁₀ and PM_{2.5}). However, CO tends to be a localized pollutant, dispersing rapidly at the source. Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the Traffic Evaluation prepared by Kimley-Horn (2022). Based on the transportation analysis, the project would result in a gross total of 3,849 daily vehicle trips. However, with applicable trip reductions including internal capture and pass-by, the project would result in 792 net new trips.

Gasoline Dispensing Facility. The proposed project includes one (1) 18-position gasoline dispensing facility (GDF) and GDFs are regulated by the SMAQMD. Because GDFs require permits from the Air District, emissions attributed to the GDF were estimated separately from the area source operational emissions above. The emissions calculations are based on daily throughput of 6,937 gallons of gasoline (approximately 6.937 million gallons per year). In addition to traffic-related emissions, the GDF is also a source of ROG emissions associated with loading, storage, refueling of vehicles and spillage that results in evaporative emissions. **Table 8** also presents the evaporative ROG emissions associated with the proposed GDF. As shown in **Table 8**, the ROG emissions from the proposed GDF would not result in an exceedance of the SMAQMD 's applicable significance thresholds.

Total Operational Emissions. As seen in **Table 8**, net project operational emissions would not exceed SMAQMD thresholds. As noted above, the SMAQMD has set its CEQA significance threshold based on the trigger levels for the federal NSR Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Project operational emissions would be less than significant.

Cumulative Short-Term Emissions

Sacramento County is designated nonattainment for O_3 and PM_{10} , for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. The SMAQMD's significance thresholds are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SVAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SVAB would not be cumulatively considerable. As discussed above, the project's construction-related emissions by themselves would not exceed SMAQMD significance thresholds for criteria pollutants. Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. Compliance with SMAQMD construction-related rules would reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

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

As shown in **Table 8**, project emissions (primarily from mobile sources) would not exceed any SMAQMD criteria air pollutant threshold. As a result, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold S.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The Friant Ranch project was a 942-acre Specific Plan that involved a commercial master planned community of approximately 2,500 dwelling units and extensive commercial supporting development. The anticipated air quality impacts resulting from this development included significant and unavoidable emissions of multiple criteria pollutants (including significant emissions of both primary O₃ precursors [NO_x and ROG]) at levels that exceeded the daily thresholds of significance. As noted above, implementation of the proposed project would not exceed SMAQMD daily emissions thresholds.

NO_x and ROG are precursor emissions that form O₃ in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O₃ may be formed at a distance downwind from the sources. Breathing ground-level O₃ can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O₃ concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O₃ can make asthma symptoms worse and can increase sensitivity to asthma triggers.

There is currently no methodology available that can accurately quantify regional health effects from CO, NO₂ or O₃ exposure associated with an individual project's ROG or NO_x emissions. The South Coast Air Quality Management District (SCAQMD) reached a similar conclusion in its *Amicus Curiae* brief filed with the California Supreme Court in the case of *Sierra Club v. County of Fresno*, when, speaking about ozone, the SCAQMD stated that it does not know of a way to accurately quantify health impacts caused by emissions produced on a scale as small as individual projects.⁶ One existing tool, U.S. EPA's Environmental Benefits Mapping and Analysis Program (BenMAP), calculates the number and economic value of air

⁶ SCAQMD, Application of the South Coast Air Quality Management District for Leave to File Brief of *Amicus Curiae* in Support of Neither Party and [Proposed] Brief of *Amicus Curiae*. In the Supreme Court of California. *Sierra Club v. County of Fresno*. Supreme Court Case No. S219783. April 13, 2015.

pollution-related deaths and illnesses resulting from changes in O₃ and PM_{2.5} concentrations.⁷ However, the expected changes in regional O₃ concentrations associated with the proposed project would be so low that BenMAP would likely produce estimates of health effects that are near zero.

The SMAQMD prepared a Draft Guidance to Address the Friant Ranch Ruling for CEQA projects in the Sacramento Metro Air District (revised June 2020). The guidance provides screening health information for projects at or below regional CEQA thresholds of significance emissions levels and selected strategic areas above thresholds of significance emissions levels. Modeling guidance for large projects located outside strategic areas is also included.

The SMAQMD provided five potential strategic area project locations for use in the health effects screening modeling. These five locations are intended to be used as proxy locations for nearby projects exceeding the thresholds of significance. The Sacramento Strategic Area is applicable to the proposed project. The screening modeling addressed hypothetical sources at each of the five strategic area project locations at emission levels that were two times (2x) and 8 times (8x) the maximum threshold of significance level. The SMAQMD developed a Strategic Area Projects Health Effects Screening Tool spreadsheet that can be used to estimate health effects for potential projects with emissions below the 8x threshold of significance level. The project's anticipated operational emissions (see **Table 8**) were input into the SMAQMD health effects screening tool. It should be noted that the project's operational emissions were less than the 2x threshold of significance. Based on the results of the tool, the percent of background health indices would be less than one percent (i.e., no more than 0.011 percent); refer to **Appendix A**. Therefore, the health effects associated with the project would be negligible.

Carbon Monoxide Hotspots

The Sacramento Valley Air Basin is attainment for CO. An analysis of CO "hot spots" is needed in nonattainment or maintenance areas to determine whether the change in the level of service (LOS) of an intersection resulting from the project would have the potential to result in exceedances of the CAAQS or NAAQS. As the Sacramento Valley Air Basin is attainment for CO, the following discussion is provided for informational purposes.

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

Emissions and ambient concentrations of CO have decreased dramatically in the SVAB with the introduction of the catalytic converter emission control technology for on-road motor vehicles in 1975 and reformulated fuels required by the 1990 Clean Air Act amendments. The Sacramento Region is currently designated as attainment for both the 1-Hour and 8-Hour state and federal standards. A maintenance plan was developed for CO in 1996. The *2004 Revision to the California State Implementation Plan for Carbon Monoxide* is the most recent SIP that addresses CO concentrations and extends the 1996 CO maintenance plan

⁷ U.S. EPA, Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE), <https://www.epa.gov/benmap>. Website accessed June 2020.

demonstration to 2018. No exceedances of the CAAQS or NAAQS for CO have been recorded at a monitoring station in Sacramento County since 1993.

The preliminary screening methodology provided by the SMAQMD provides lead agencies with a conservative indication of whether project-generated vehicle trips will result in the generation of CO emissions that contribute to an exceedance of the thresholds of significance. The SMAQMD's recommended screening criteria are divided into two tiers. The screening criteria have been developed to help lead agencies analyze potential CO impacts and identify when site-specific CO dispersion modeling is not necessary.

According to the SMAQMD, a project will result in a less than significant impact to air quality for local CO if:

- Traffic generated by the project will not result in deterioration of intersection LOS to LOS E or F; and
- The project will not contribute to additional traffic to an intersection that already operates at LOS of E or F.

The project would satisfy both tiers of screening criteria. As identified in the project Traffic Evaluation the project will not result in deterioration of intersection LOS to LOS E or F and would not contribute to additional traffic to an intersection that already operates at LOS of E or F. Therefore, since the project passes the SMAQMD screening criteria for CO hotspots, the potential for a CO hotspot impact represents a less than significant impact.

Construction Health Risk Analysis

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminant (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptors to the Project site are the residences to the north of the site (approximately 60 feet away). SMAQMD provides guidance for evaluating impacts from TACs in its CEQA Air Quality Guidelines document. As noted therein, an incremental cancer risk of greater than 10 cases per million at the Maximally Exposed Individual (MEI) will result in a significant impact. The SMAQMD significance threshold for non-cancer hazards is 1.0.

Project construction would generate DPM emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Construction is temporary and would be transient throughout the site (i.e. move from location to location) and would not generate emissions in a fixed location for extended periods of time.

Construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Division 3, Article 1, Chapter 10, Sections 2485 and 2449), which reduce DPM and

criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the Project site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM of any one receptor is exposed to would be limited.

PM₁₀ construction emissions rates in grams per second were calculated from the total annual on-site exhaust emissions reported in CalEEMod (0.05 tons) total during construction. Annual emissions were converted to grams per second and these emissions rates were input into AERMOD. Although Project construction would occur for over a period of eleven months, the health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 1-year exposure scenario and thus is conservative.

As noted above, maximum (worst case) PM₁₀ exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. Risk levels were calculated with the CARB Hotspots Analysis and Reporting Program (HARP) Risk Assessment Standalone Tool (RAST) based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015). Results of this assessment are summarized in **Table 9**.

Exposure Scenario	Pollutant Concentration (µg/m ³) ¹	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Unmitigated				
Construction	0.34	60	0.068	2.9
<i>SMAQMD Threshold</i>	—	10	1.0	1.0
Threshold Exceeded?	—	Yes	No	Yes
Mitigated¹				
Construction	0.02	4.0	0.005	0.2
<i>SMAQMD Threshold</i>	—	10	1.0	1.0
Threshold Exceeded?	—	No	No	No
Notes:				
1. The maximum concentration for residential uses approximately 100 feet to the west is reported.				
Source: Refer to Appendix A: Air Quality Modeling Data for AERMOD inputs, outputs, and risk calculations.				

The highest calculated unmitigated carcinogenic risk from project construction would be 60 per million, which would exceed the SMAQMD threshold of 10 in one million. The maximally exposed individual (MEI) during construction (i.e., the closest sensitive receptor) to the project site are the residences north of the project site (approximately 60 feet away).

As discussed in the Health Risk Assessment prepared by Kimley-Horn (May 2022), Mitigation Measure HRA-1 requires the use of construction equipment that would meet CARB Tier 4 Final emissions standards in order to reduce diesel exhaust construction emissions. Mitigation Measure **MM HRA-1** would reduce the project PM₁₀ concentration to 0.02 µg/m³ and would reduce the project's maximum cancer risk to 4.0

per million, which is below the SMAQMD threshold of 10 in one million. Non-cancer chronic hazards for DPM would be below SMAQMD threshold, with a computed chronic hazard index of 0.068 without mitigation and 0.005 with mitigation. However, acute non-cancer hazards for DPM would exceed the SMAQMD threshold, with a computed hazard index of 2.9 without mitigation. Implementing **MM HRA-1** would reduce the acute hazard index to 0.2, below the 1.0 threshold. As described above, construction risk levels would be below the SMAQMD’s thresholds with **MM HRA-1**. Construction risk levels would be less than significant with mitigation.

Operational Health Risk Analysis

According to the Traffic Evaluation (Kimley-Horn, May 2022) prepared of the project, the project is anticipated to generate approximately 792 net daily vehicle trips, including heavy truck trips to the proposed drive-thru restaurant and gas station and would be the most prominent sources of DPM during project operations. As shown in **Table 10**, the highest calculated carcinogenic risk resulting from the project is 4.35 per million residents, which is below the SMAQMD threshold of 10 per million. Acute and chronic hazards also would be below the SMAQMD significance threshold of 1.0. Operational impacts from DPM would be less than significant.

Exposure Scenario	Pollutant Concentration (µg/m³) ¹	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Particulate Matter (PM ₁₀)	0.0901	4.35	0.00	0.00
<i>Threshold</i>	<i>NA</i>	<i>10 in one million</i>	<i>1.0</i>	<i>1.0</i>
Exceed Threshold?	No	No	No	No
1. The maximum concentration for residential uses approximately 100 feet to the west is reported.				
Source: Refer to Appendix A: Air Quality Modeling Data for AERMOD inputs, outputs, and risk calculations.				

Combined Health Risk Analysis

A maximum health risk for the combined construction and operation of the Project is shown in **Table 11: Combined Health Risk**. Based on OEHHA *Risk Assessment Guidelines*, the exposure duration for a resident is 30 years, beginning with the third trimester. Based on the Project schedule, construction would begin mid-2023 and be completed in early 2024. Following construction, the gas station, convenience store, and QSR are assumed to be fully operational and generating emissions. The maximum unmitigated combined cancer risk for residents with 30 years of exposure is 64.35 per million, which exceeds the SCAQMD threshold of 10 in million. With MM HRA-1 incorporated, the cancer risk would be reduced to 8.35 in one million which is below the SCAQMD threshold and would result in a less than significant impact.

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Unmitigated			
Resident Exposure 60 feet north of Project along Myrtle Ave.	64.35	0.068	2.9
<i>Threshold</i>	10	1.0	1.0
Threshold Exceeded	Yes	No	No
Mitigated			
Resident Exposure 60 feet north of Project along Myrtle Ave	8.35	0.005	0.2

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
<i>Threshold</i>	10	1.0	1.0
Threshold Exceeded	No	No	No

Source: AERMOD. Refer to Appendix A: Modeling Data.

It should be noted that carcinogenic risks are calculated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen and are calculated using conservative modeling approaches that overestimate risk at the low exposure range predicted by the model. The oral and inhalation cancer slope factors are used to calculate the theoretical increased risk of an individual developing cancer based on the estimated daily exposure or dose, averaged over a lifetime. **Table 11** shows that with mitigation, the impacts related to cancer risk would be less than significant at nearby residential communities and surrounding businesses.

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure also require an evaluation of non-cancer risks stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The chronic hazard is calculated based on the REL for DPM. As DPM does not have short-term toxicity values, acute risks were conservatively evaluated using hourly PM₁₀ concentrations and the REL for acrolein.

As shown in **Table 11**, the maximum chronic and acute hazard index for residents would be 0.068 and 2.9, respectively before mitigation and 0.005 and 0.2 after mitigation. Therefore, unmitigated non-carcinogenic hazards are calculated to exceed acceptable limits and would result in a potentially significant impact. However, with the implementation of MM HRA-1, the chronic and acute hazard index would be further reduced to less than significant.

Mitigation Measures: Mitigation Measure HRA-1 (refer to the Health Risk Assessment).

Level of Significance: Less than significant impact.

Threshold S.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

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

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

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

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Appendix A

Air Quality Modeling Data

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Sac County Fuel Station
Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	52.66	1000sqft	1.21	52,660.00	0
Fast Food Restaurant with Drive Thru	2.08	1000sqft	0.05	2,080.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	1,694.10	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2024
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 -
- Demolition -
- Grading -
- Vehicle Trips - Per trip generation assumptions
- Energy Use - No Natural Gas per SMAQMD BMP
- Construction Off-road Equipment Mitigation - Per SMAQMD rule compliance
- Waste Mitigation -

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	NT24NG	0.93	0.00
tblEnergyUse	NT24NG	118.04	0.00
tblEnergyUse	T24E	2.91	5.04
tblEnergyUse	T24E	7.86	17.13
tblEnergyUse	T24NG	4.44	0.00
tblEnergyUse	T24NG	59.07	0.00
tblGrading	MaterialExported	0.00	125.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	ST_TR	322.50	47.16
tblVehicleTrips	ST_TR	616.12	108.72
tblVehicleTrips	SU_TR	322.50	47.16
tblVehicleTrips	SU_TR	472.58	108.72
tblVehicleTrips	WD_TR	322.50	47.16
tblVehicleTrips	WD_TR	470.95	108.72

2.0 Emissions Summary

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6162	15.2338	14.0007	0.0288	7.2349	0.6840	7.8443	3.4650	0.6398	4.0258	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456
2024	5.1597	11.5069	13.2500	0.0254	0.2368	0.4538	0.6906	0.0640	0.4378	0.5018	0.0000	2,348.8647	2,348.8647	0.4137	0.0304	2,366.4792
Maximum	5.1597	15.2338	14.0007	0.0288	7.2349	0.6840	7.8443	3.4650	0.6398	4.0258	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6162	15.2338	14.0007	0.0288	3.1693	0.6840	3.7786	1.5020	0.6398	2.0628	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456
2024	5.1597	11.5069	13.2500	0.0254	0.2250	0.4538	0.6787	0.0611	0.4378	0.4989	0.0000	2,348.8647	2,348.8647	0.4137	0.0304	2,366.4792
Maximum	5.1597	15.2338	14.0007	0.0288	3.1693	0.6840	3.7786	1.5020	0.6398	2.0628	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Total	2.4995	2.0688	16.8454	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1804	3,425.1804	0.2274	0.1619	3,479.1014

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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Total	2.4995	2.0688	16.8454	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1804	3,425.1804	0.2274	0.1619	3,479.1014

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4/3/2023	4/28/2023	5	20	
2	Site Preparation	Site Preparation	4/29/2023	5/2/2023	5	2	
3	Grading	Grading	5/3/2023	5/8/2023	5	4	
4	Building Construction	Building Construction	5/9/2023	2/12/2024	5	200	
5	Paving	Paving	2/13/2024	2/26/2024	5	10	
6	Architectural Coating	Architectural Coating	2/27/2024	3/11/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,661; Non-Residential Outdoor: 1,887; Striped Parking Area: 3,160 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	119.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3463	0.0000	1.3463	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	1.3463	0.6766	2.0229	0.2039	0.6328	0.8366		2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0161	0.8944	0.1888	3.7300e-003	0.1038	6.9000e-003	0.1107	0.0284	6.6000e-003	0.0350		407.4011	407.4011	0.0163	0.0646	427.0564
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0211	0.3543	9.0000e-004	0.0989	5.1000e-004	0.0994	0.0262	4.7000e-004	0.0267		92.5209	92.5209	2.5400e-003	2.2700e-003	93.2614
Total	0.0600	0.9154	0.5431	4.6300e-003	0.2027	7.4100e-003	0.2101	0.0546	7.0700e-003	0.0617		499.9220	499.9220	0.0188	0.0669	520.3178

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					0.5755	0.0000	0.5755	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	0.5755	0.6766	1.2522	0.0871	0.6328	0.7199	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0161	0.8944	0.1888	3.7300e-003	0.0990	6.9000e-003	0.1059	0.0273	6.6000e-003	0.0339		407.4011	407.4011	0.0163	0.0646	427.0564
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0211	0.3543	9.0000e-004	0.0937	5.1000e-004	0.0942	0.0250	4.7000e-004	0.0254		92.5209	92.5209	2.5400e-003	2.2700e-003	93.2614
Total	0.0600	0.9154	0.5431	4.6300e-003	0.1928	7.4100e-003	0.2002	0.0522	7.0700e-003	0.0593		499.9220	499.9220	0.0188	0.0669	520.3178

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	6.2662	0.5074	6.7736	3.0041	0.4668	3.4709		1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6788	0.0000	2.6788	1.2843	0.0000	1.2843			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	2.6788	0.5074	3.1862	1.2843	0.4668	1.7510	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	0.0270	0.0130	0.2180	5.6000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0891	0.0000	7.0891	3.4257	0.0000	3.4257			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.0891	0.6044	7.6934	3.4257	0.5560	3.9817		1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0109	0.6012	0.1269	2.5100e-003	0.0698	4.6400e-003	0.0744	0.0191	4.4400e-003	0.0235		273.8831	273.8831	0.0109	0.0434	287.0967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0162	0.2725	7.0000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		71.1699	71.1699	1.9500e-003	1.7500e-003	71.7396
Total	0.0446	0.6174	0.3994	3.2100e-003	0.1458	5.0300e-003	0.1509	0.0393	4.8000e-003	0.0441		345.0530	345.0530	0.0129	0.0452	358.8363

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0306	0.0000	3.0306	1.4645	0.0000	1.4645			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	3.0306	0.6044	3.6349	1.4645	0.5560	2.0205	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0109	0.6012	0.1269	2.5100e-003	0.0666	4.6400e-003	0.0712	0.0183	4.4400e-003	0.0228		273.8831	273.8831	0.0109	0.0434	287.0967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0162	0.2725	7.0000e-004	0.0721	3.9000e-004	0.0725	0.0192	3.6000e-004	0.0196		71.1699	71.1699	1.9500e-003	1.7500e-003	71.7396
Total	0.0446	0.6174	0.3994	3.2100e-003	0.1387	5.0300e-003	0.1437	0.0375	4.8000e-003	0.0423		345.0530	345.0530	0.0129	0.0452	358.8363

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4167	0.1297	1.7100e-003	0.0542	2.3300e-003	0.0566	0.0156	2.2300e-003	0.0178		183.9458	183.9458	4.5500e-003	0.0270	192.0947
Worker	0.0809	0.0389	0.6541	1.6700e-003	0.1826	9.4000e-004	0.1835	0.0484	8.7000e-004	0.0493		170.8077	170.8077	4.6900e-003	4.1900e-003	172.1749
Total	0.0929	0.4556	0.7838	3.3800e-003	0.2368	3.2700e-003	0.2401	0.0640	3.1000e-003	0.0671		354.7535	354.7535	9.2400e-003	0.0312	364.2696

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4167	0.1297	1.7100e-003	0.0519	2.3300e-003	0.0542	0.0150	2.2300e-003	0.0173		183.9458	183.9458	4.5500e-003	0.0270	192.0947
Worker	0.0809	0.0389	0.6541	1.6700e-003	0.1731	9.4000e-004	0.1740	0.0461	8.7000e-004	0.0470		170.8077	170.8077	4.6900e-003	4.1900e-003	172.1749
Total	0.0929	0.4556	0.7838	3.3800e-003	0.2250	3.2700e-003	0.2282	0.0611	3.1000e-003	0.0642		354.7535	354.7535	9.2400e-003	0.0312	364.2696

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4085	0.1257	1.6800e-003	0.0542	2.2900e-003	0.0565	0.0156	2.1900e-003	0.0178		180.4426	180.4426	4.4200e-003	0.0265	188.4536
Worker	0.0755	0.0346	0.6072	1.6100e-003	0.1826	9.0000e-004	0.1835	0.0484	8.3000e-004	0.0493		166.5007	166.5007	4.2300e-003	3.9000e-003	167.7694
Total	0.0871	0.4431	0.7328	3.2900e-003	0.2368	3.1900e-003	0.2400	0.0640	3.0200e-003	0.0671		346.9432	346.9432	8.6500e-003	0.0304	356.2230

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4085	0.1257	1.6800e-003	0.0519	2.2900e-003	0.0542	0.0150	2.1900e-003	0.0172		180.4426	180.4426	4.4200e-003	0.0265	188.4536
Worker	0.0755	0.0346	0.6072	1.6100e-003	0.1731	9.0000e-004	0.1739	0.0461	8.3000e-004	0.0469		166.5007	166.5007	4.2300e-003	3.9000e-003	167.7694
Total	0.0871	0.4431	0.7328	3.2900e-003	0.2250	3.1900e-003	0.2281	0.0611	3.0200e-003	0.0642		346.9432	346.9432	8.6500e-003	0.0304	356.2230

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0188	0.3289	8.7000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751
Total	0.0409	0.0188	0.3289	8.7000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751

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	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0188	0.3289	8.7000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751
Total	0.0409	0.0188	0.3289	8.7000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520
Total	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	GH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520
Total	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Unmitigated	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	565.92	565.92	565.92	1,096,923	1,096,923
Fast Food Restaurant with Drive Thru	226.14	226.14	226.14	444,084	444,084
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	792.06	792.06	792.06	1,541,007	1,541,007

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
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	10.00	5.00	6.50	2.20	78.80	19.00	100	0	0
Other Asphalt Surfaces	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
Convenience Market with Gas Pumps	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fast Food Restaurant with Drive Thru	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Other Asphalt Surfaces	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Convenience Market with Gas Pumps	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
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Convenience Market with Gas Pumps	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
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Unmitigated	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

7.0 Water Detail

7.1 Mitigation Measures Water

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Sac County Fuel Station
Sacramento County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	52.66	1000sqft	1.21	52,660.00	0
Fast Food Restaurant with Drive Thru	2.08	1000sqft	0.05	2,080.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	1,694.10	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2024
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 -
- Demolition -
- Grading -
- Vehicle Trips - Per trip generation assumptions
- Energy Use - No Natural Gas per SMAQMD BMP
- Construction Off-road Equipment Mitigation - Per SMAQMD rule compliance
- Waste Mitigation -

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	NT24NG	0.93	0.00
tblEnergyUse	NT24NG	118.04	0.00
tblEnergyUse	T24E	2.91	5.04
tblEnergyUse	T24E	7.86	17.13
tblEnergyUse	T24NG	4.44	0.00
tblEnergyUse	T24NG	59.07	0.00
tblGrading	MaterialExported	0.00	125.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	ST_TR	322.50	47.16
tblVehicleTrips	ST_TR	616.12	108.72
tblVehicleTrips	SU_TR	322.50	47.16
tblVehicleTrips	SU_TR	472.58	108.72
tblVehicleTrips	WD_TR	322.50	47.16
tblVehicleTrips	WD_TR	470.95	108.72

2.0 Emissions Summary

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6065	15.3112	13.9585	0.0287	7.2349	0.6841	7.8443	3.4650	0.6399	4.0258	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765
2024	5.1579	11.5454	13.1800	0.0252	0.2368	0.4538	0.6906	0.0640	0.4378	0.5019	0.0000	2,330.6724	2,330.6724	0.4141	0.0310	2,348.4917
Maximum	5.1579	15.3112	13.9585	0.0287	7.2349	0.6841	7.8443	3.4650	0.6399	4.0258	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6065	15.3112	13.9585	0.0287	3.1693	0.6841	3.7787	1.5020	0.6399	2.0628	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765
2024	5.1579	11.5454	13.1800	0.0252	0.2250	0.4538	0.6787	0.0611	0.4378	0.4990	0.0000	2,330.6723	2,330.6723	0.4141	0.0310	2,348.4917
Maximum	5.1579	15.3112	13.9585	0.0287	3.1693	0.6841	3.7787	1.5020	0.6399	2.0628	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135.4177	3,135.4177	0.2626	0.1773	3,194.8048
Total	1.9323	2.3922	17.0839	0.0302	3.2496	0.0252	3.2748	0.8664	0.0236	0.8899		3,135.4323	3,135.4323	0.2627	0.1773	3,194.8204

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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135.4177	3,135.4177	0.2626	0.1773	3,194.8048
Total	1.9323	2.3922	17.0839	0.0302	3.2496	0.0252	3.2748	0.8664	0.0236	0.8899		3,135.4323	3,135.4323	0.2627	0.1773	3,194.8204

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4/3/2023	4/28/2023	5	20	
2	Site Preparation	Site Preparation	4/29/2023	5/2/2023	5	2	
3	Grading	Grading	5/3/2023	5/8/2023	5	4	
4	Building Construction	Building Construction	5/9/2023	2/12/2024	5	200	
5	Paving	Paving	2/13/2024	2/26/2024	5	10	
6	Architectural Coating	Architectural Coating	2/27/2024	3/11/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,661; Non-Residential Outdoor: 1,887; Striped Parking Area: 3,160 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	119.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3463	0.0000	1.3463	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	1.3463	0.6766	2.0229	0.2039	0.6328	0.8366		2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0154	0.9670	0.1922	3.7300e-003	0.1038	6.9200e-003	0.1107	0.0284	6.6200e-003	0.0350		407.6328	407.6328	0.0162	0.0646	427.2989
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0388	0.0258	0.3086	8.0000e-004	0.0989	5.1000e-004	0.0994	0.0262	4.7000e-004	0.0267		82.3002	82.3002	2.9200e-003	2.6100e-003	83.1498
Total	0.0542	0.9928	0.5008	4.5300e-003	0.2027	7.4300e-003	0.2101	0.0546	7.0900e-003	0.0617		489.9329	489.9329	0.0191	0.0672	510.4487

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					0.5755	0.0000	0.5755	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	0.5755	0.6766	1.2522	0.0871	0.6328	0.7199	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0154	0.9670	0.1922	3.7300e-003	0.0990	6.9200e-003	0.1060	0.0273	6.6200e-003	0.0339		407.6328	407.6328	0.0162	0.0646	427.2989
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0388	0.0258	0.3086	8.0000e-004	0.0937	5.1000e-004	0.0942	0.0250	4.7000e-004	0.0254		82.3002	82.3002	2.9200e-003	2.6100e-003	83.1498
Total	0.0542	0.9928	0.5008	4.5300e-003	0.1928	7.4300e-003	0.2002	0.0522	7.0900e-003	0.0593		489.9329	489.9329	0.0191	0.0672	510.4487

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	6.2662	0.5074	6.7736	3.0041	0.4668	3.4709		1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0159	0.1899	4.9000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691
Total	0.0239	0.0159	0.1899	4.9000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6788	0.0000	2.6788	1.2843	0.0000	1.2843			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	2.6788	0.5074	3.1862	1.2843	0.4668	1.7510	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0159	0.1899	4.9000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691
Total	0.0239	0.0159	0.1899	4.9000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0891	0.0000	7.0891	3.4257	0.0000	3.4257			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.0891	0.6044	7.6934	3.4257	0.5560	3.9817		1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0103	0.6501	0.1292	2.5100e-003	0.0698	4.6500e-003	0.0744	0.0191	4.4500e-003	0.0236		274.0388	274.0388	0.0109	0.0435	287.2598
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0199	0.2374	6.2000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		63.3078	63.3078	2.2500e-003	2.0000e-003	63.9614
Total	0.0402	0.6699	0.3666	3.1300e-003	0.1458	5.0400e-003	0.1509	0.0393	4.8100e-003	0.0441		337.3467	337.3467	0.0131	0.0455	351.2212

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0306	0.0000	3.0306	1.4645	0.0000	1.4645			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	3.0306	0.6044	3.6349	1.4645	0.5560	2.0205	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0103	0.6501	0.1292	2.5100e-003	0.0666	4.6500e-003	0.0712	0.0183	4.4500e-003	0.0228		274.0388	274.0388	0.0109	0.0435	287.2598
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0199	0.2374	6.2000e-004	0.0721	3.9000e-004	0.0725	0.0192	3.6000e-004	0.0196		63.3078	63.3078	2.2500e-003	2.0000e-003	63.9614
Total	0.0402	0.6699	0.3666	3.1300e-003	0.1387	5.0400e-003	0.1437	0.0375	4.8100e-003	0.0423		337.3467	337.3467	0.0131	0.0455	351.2212

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.4479	0.1356	1.7200e-003	0.0542	2.3500e-003	0.0566	0.0156	2.2500e-003	0.0179		184.0776	184.0776	4.5200e-003	0.0270	192.2452
Worker	0.0716	0.0477	0.5697	1.4800e-003	0.1826	9.4000e-004	0.1835	0.0484	8.7000e-004	0.0493		151.9388	151.9388	5.4000e-003	4.8100e-003	153.5074
Total	0.0833	0.4956	0.7053	3.2000e-003	0.2368	3.2900e-003	0.2401	0.0640	3.1200e-003	0.0672		336.0164	336.0164	9.9200e-003	0.0318	345.7526

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.4479	0.1356	1.7200e-003	0.0519	2.3500e-003	0.0543	0.0150	2.2500e-003	0.0173		184.0776	184.0776	4.5200e-003	0.0270	192.2452
Worker	0.0716	0.0477	0.5697	1.4800e-003	0.1731	9.4000e-004	0.1740	0.0461	8.7000e-004	0.0470		151.9388	151.9388	5.4000e-003	4.8100e-003	153.5074
Total	0.0833	0.4956	0.7053	3.2000e-003	0.2250	3.2900e-003	0.2283	0.0611	3.1200e-003	0.0643		336.0164	336.0164	9.9200e-003	0.0318	345.7526

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4391	0.1315	1.6800e-003	0.0542	2.3200e-003	0.0565	0.0156	2.2200e-003	0.0178		180.5948	180.5948	4.4000e-003	0.0266	188.6239
Worker	0.0670	0.0425	0.5313	1.4400e-003	0.1826	9.0000e-004	0.1835	0.0484	8.3000e-004	0.0493		148.1561	148.1561	4.9000e-003	4.4700e-003	149.6116
Total	0.0782	0.4816	0.6628	3.1200e-003	0.2368	3.2200e-003	0.2400	0.0640	3.0500e-003	0.0671		328.7509	328.7509	9.3000e-003	0.0310	338.2354

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4391	0.1315	1.6800e-003	0.0519	2.3200e-003	0.0542	0.0150	2.2200e-003	0.0173		180.5948	180.5948	4.4000e-003	0.0266	188.6239
Worker	0.0670	0.0425	0.5313	1.4400e-003	0.1731	9.0000e-004	0.1739	0.0461	8.3000e-004	0.0469		148.1561	148.1561	4.9000e-003	4.4700e-003	149.6116
Total	0.0782	0.4816	0.6628	3.1200e-003	0.2250	3.2200e-003	0.2282	0.0611	3.0500e-003	0.0642		328.7509	328.7509	9.3000e-003	0.0310	338.2354

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0230	0.2878	7.8000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396
Total	0.0363	0.0230	0.2878	7.8000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396

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	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0230	0.2878	7.8000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396
Total	0.0363	0.0230	0.2878	7.8000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691
Total	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	GH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691
Total	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135,417 7	3,135,417 7	0.2626	0.1773	3,194,804 8
Unmitigated	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135,417 7	3,135,417 7	0.2626	0.1773	3,194,804 8

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	565.92	565.92	565.92	1,096,923	1,096,923
Fast Food Restaurant with Drive Thru	226.14	226.14	226.14	444,084	444,084
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	792.06	792.06	792.06	1,541,007	1,541,007

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
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	10.00	5.00	6.50	2.20	78.80	19.00	100	0	0
Other Asphalt Surfaces	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
Convenience Market with Gas Pumps	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fast Food Restaurant with Drive Thru	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Other Asphalt Surfaces	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Convenience Market with Gas Pumps	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
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	MBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market with Gas Pumps	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
Fast Food Restaurant with Drive Thru	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Unmitigated	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

7.0 Water Detail

7.1 Mitigation Measures Water

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Sac County Fuel Station
Sacramento County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	52.66	1000sqft	1.21	52,660.00	0
Fast Food Restaurant with Drive Thru	2.08	1000sqft	0.05	2,080.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	1,694.10	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2024
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 -
- Demolition -
- Grading -
- Vehicle Trips - Per trip generation assumptions
- Construction Off-road Equipment Mitigation - Per SMAQMD rule compliance
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblGrading	MaterialExported	0.00	125.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	ST_TR	322.50	47.16
tblVehicleTrips	ST_TR	616.12	108.72
tblVehicleTrips	SU_TR	322.50	47.16
tblVehicleTrips	SU_TR	472.58	108.72
tblVehicleTrips	WD_TR	322.50	47.16
tblVehicleTrips	WD_TR	470.95	108.72

2.0 Emissions Summary

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6162	15.2338	14.0007	0.0288	7.2349	0.6840	7.8443	3.4650	0.6398	4.0258	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456
2024	5.1597	11.5069	13.2500	0.0254	0.2368	0.4538	0.6906	0.0640	0.4378	0.5018	0.0000	2,348.8647	2,348.8647	0.4137	0.0304	2,366.4792
Maximum	5.1597	15.2338	14.0007	0.0288	7.2349	0.6840	7.8443	3.4650	0.6398	4.0258	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.5990	6.0115	15.2615	0.0288	3.1693	0.1786	3.3479	1.5020	0.1663	1.6683	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456
2024	5.0086	4.1551	13.8570	0.0254	0.2250	0.0335	0.2584	0.0611	0.0333	0.0945	0.0000	2,348.8647	2,348.8647	0.4137	0.0304	2,366.4792
Maximum	5.0086	6.0115	15.2615	0.0288	3.1693	0.1786	3.3479	1.5020	0.1663	1.6683	0.0000	2,824.3178	2,824.3178	0.6583	0.0669	2,859.4456

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
Mobile	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Total	2.5106	2.1702	16.9305	0.0337	3.2496	0.0329	3.2824	0.8664	0.0312	0.8976		3,546.8520	3,546.8520	0.2298	0.1641	3,601.4960

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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
Mobile	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Total	2.5106	2.1702	16.9305	0.0337	3.2496	0.0329	3.2824	0.8664	0.0312	0.8976		3,546.8520	3,546.8520	0.2298	0.1641	3,601.4960

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4/3/2023	4/28/2023	5	20	
2	Site Preparation	Site Preparation	4/29/2023	5/2/2023	5	2	
3	Grading	Grading	5/3/2023	5/8/2023	5	4	
4	Building Construction	Building Construction	5/9/2023	2/12/2024	5	200	
5	Paving	Paving	2/13/2024	2/26/2024	5	10	
6	Architectural Coating	Architectural Coating	2/27/2024	3/11/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,661; Non-Residential Outdoor: 1,887; Striped Parking Area: 3,160 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	119.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3463	0.0000	1.3463	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	1.3463	0.6766	2.0229	0.2039	0.6328	0.8366		2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0161	0.8944	0.1888	3.7300e-003	0.1038	6.9000e-003	0.1107	0.0284	6.6000e-003	0.0350		407.4011	407.4011	0.0163	0.0646	427.0564
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0211	0.3543	9.0000e-004	0.0989	5.1000e-004	0.0994	0.0262	4.7000e-004	0.0267		92.5209	92.5209	2.5400e-003	2.2700e-003	93.2614
Total	0.0600	0.9154	0.5431	4.6300e-003	0.2027	7.4100e-003	0.2101	0.0546	7.0700e-003	0.0617		499.9220	499.9220	0.0188	0.0669	520.3178

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					0.5755	0.0000	0.5755	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	0.2811	1.2179	14.7184	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	0.2811	1.2179	14.7184	0.0241	0.5755	0.0375	0.6130	0.0871	0.0375	0.1246	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0161	0.8944	0.1888	3.7300e-003	0.0990	6.9000e-003	0.1059	0.0273	6.6000e-003	0.0339		407.4011	407.4011	0.0163	0.0646	427.0564
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0211	0.3543	9.0000e-004	0.0937	5.1000e-004	0.0942	0.0250	4.7000e-004	0.0254		92.5209	92.5209	2.5400e-003	2.2700e-003	93.2614
Total	0.0600	0.9154	0.5431	4.6300e-003	0.1928	7.4100e-003	0.2002	0.0522	7.0700e-003	0.0593		499.9220	499.9220	0.0188	0.0669	520.3178

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	6.2662	0.5074	6.7736	3.0041	0.4668	3.4709		1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6788	0.0000	2.6788	1.2843	0.0000	1.2843			0.0000			0.0000
Off-Road	0.5129	5.2140	7.3891	0.0172		0.1680	0.1680		0.1560	0.1560	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	0.5129	5.2140	7.3891	0.0172	2.6788	0.1680	2.8468	1.2843	0.1560	1.4402	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	0.0270	0.0130	0.2180	5.6000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0891	0.0000	7.0891	3.4257	0.0000	3.4257			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.0891	0.6044	7.6934	3.4257	0.5560	3.9817		1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0109	0.6012	0.1269	2.5100e-003	0.0698	4.6400e-003	0.0744	0.0191	4.4400e-003	0.0235		273.8831	273.8831	0.0109	0.0434	287.0967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0162	0.2725	7.0000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		71.1699	71.1699	1.9500e-003	1.7500e-003	71.7396
Total	0.0446	0.6174	0.3994	3.2100e-003	0.1458	5.0300e-003	0.1509	0.0393	4.8000e-003	0.0441		345.0530	345.0530	0.0129	0.0452	358.8363

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0306	0.0000	3.0306	1.4645	0.0000	1.4645			0.0000			0.0000
Off-Road	0.5545	5.3941	9.6248	0.0206		0.1736	0.1736		0.1615	0.1615	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	0.5545	5.3941	9.6248	0.0206	3.0306	0.1736	3.2041	1.4645	0.1615	1.6260	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0109	0.6012	0.1269	2.5100e-003	0.0666	4.6400e-003	0.0712	0.0183	4.4400e-003	0.0228		273.8831	273.8831	0.0109	0.0434	287.0967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0162	0.2725	7.0000e-004	0.0721	3.9000e-004	0.0725	0.0192	3.6000e-004	0.0196		71.1699	71.1699	1.9500e-003	1.7500e-003	71.7396
Total	0.0446	0.6174	0.3994	3.2100e-003	0.1387	5.0300e-003	0.1437	0.0375	4.8000e-003	0.0423		345.0530	345.0530	0.0129	0.0452	358.8363

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4167	0.1297	1.7100e-003	0.0542	2.3300e-003	0.0566	0.0156	2.2300e-003	0.0178		183.9458	183.9458	4.5500e-003	0.0270	192.0947
Worker	0.0809	0.0389	0.6541	1.6700e-003	0.1826	9.4000e-004	0.1835	0.0484	8.7000e-004	0.0493		170.8077	170.8077	4.6900e-003	4.1900e-003	172.1749
Total	0.0929	0.4556	0.7838	3.3800e-003	0.2368	3.2700e-003	0.2401	0.0640	3.1000e-003	0.0671		354.7535	354.7535	9.2400e-003	0.0312	364.2696

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	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4167	0.1297	1.7100e-003	0.0519	2.3300e-003	0.0542	0.0150	2.2300e-003	0.0173		183.9458	183.9458	4.5500e-003	0.0270	192.0947
Worker	0.0809	0.0389	0.6541	1.6700e-003	0.1731	9.4000e-004	0.1740	0.0461	8.7000e-004	0.0470		170.8077	170.8077	4.6900e-003	4.1900e-003	172.1749
Total	0.0929	0.4556	0.7838	3.3800e-003	0.2250	3.2700e-003	0.2282	0.0611	3.1000e-003	0.0642		354.7535	354.7535	9.2400e-003	0.0312	364.2696

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4085	0.1257	1.6800e-003	0.0542	2.2900e-003	0.0565	0.0156	2.1900e-003	0.0178		180.4426	180.4426	4.4200e-003	0.0265	188.4536
Worker	0.0755	0.0346	0.6072	1.6100e-003	0.1826	9.0000e-004	0.1835	0.0484	8.3000e-004	0.0493		166.5007	166.5007	4.2300e-003	3.9000e-003	167.7694
Total	0.0871	0.4431	0.7328	3.2900e-003	0.2368	3.1900e-003	0.2400	0.0640	3.0200e-003	0.0671		346.9432	346.9432	8.6500e-003	0.0304	356.2230

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	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4085	0.1257	1.6800e-003	0.0519	2.2900e-003	0.0542	0.0150	2.1900e-003	0.0172		180.4426	180.4426	4.4200e-003	0.0265	188.4536
Worker	0.0755	0.0346	0.6072	1.6100e-003	0.1731	9.0000e-004	0.1739	0.0461	8.3000e-004	0.0469		166.5007	166.5007	4.2300e-003	3.9000e-003	167.7694
Total	0.0871	0.4431	0.7328	3.2900e-003	0.2250	3.1900e-003	0.2281	0.0611	3.0200e-003	0.0642		346.9432	346.9432	8.6500e-003	0.0304	356.2230

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0188	0.3289	8.7000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751
Total	0.0409	0.0188	0.3289	8.7000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751

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	0.1598	0.6922	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.4768	0.6922	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0188	0.3289	8.7000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751
Total	0.0409	0.0188	0.3289	8.7000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		90.1879	90.1879	2.2900e-003	2.1100e-003	90.8751

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520
Total	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	4.9929	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520
Total	0.0157	7.2100e-003	0.1265	3.4000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		34.6876	34.6876	8.8000e-004	8.1000e-004	34.9520

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858
Unmitigated	2.3858	2.0688	16.8386	0.0331	3.2496	0.0252	3.2747	0.8664	0.0235	0.8899		3,425.1658	3,425.1658	0.2274	0.1619	3,479.0858

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	565.92	565.92	565.92	1,096,923	1,096,923
Fast Food Restaurant with Drive Thru	226.14	226.14	226.14	444,084	444,084
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	792.06	792.06	792.06	1,541,007	1,541,007

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
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	10.00	5.00	6.50	2.20	78.80	19.00	100	0	0
Other Asphalt Surfaces	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
Convenience Market with Gas Pumps	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fast Food Restaurant with Drive Thru	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Other Asphalt Surfaces	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
NaturalGas Unmitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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						
Convenience Market with Gas Pumps	24.9242	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004			2.9323	2.9323	6.0000e-005	5.0000e-005	2.9497
Fast Food Restaurant with Drive Thru	1009.28	0.0109	0.0990	0.0831	5.9000e-004		7.5200e-003	7.5200e-003		7.5200e-003	7.5200e-003			118.7393	118.7393	2.2800e-003	2.1800e-003	119.4450
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0112	0.1014	0.0852	6.0000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003			121.6716	121.6716	2.3400e-003	2.2300e-003	122.3946

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day						
Convenience Market with Gas Pumps	0.0249242	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004			2.9323	2.9323	6.0000e-005	5.0000e-005	2.9497
Fast Food Restaurant with Drive Thru	1.00928	0.0109	0.0990	0.0831	5.9000e-004		7.5200e-003	7.5200e-003		7.5200e-003	7.5200e-003			118.7393	118.7393	2.2800e-003	2.1800e-003	119.4450
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0112	0.1014	0.0852	6.0000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003			121.6716	121.6716	2.3400e-003	2.2300e-003	122.3946

6.0 Area Detail

6.1 Mitigation Measures Area

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Unmitigated	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

7.0 Water Detail

7.1 Mitigation Measures Water

Sac County Fuel Station - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
----------------	--------

11.0 Vegetation

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Sac County Fuel Station
Sacramento County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	52.66	1000sqft	1.21	52,660.00	0
Fast Food Restaurant with Drive Thru	2.08	1000sqft	0.05	2,080.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	1,694.10	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2024
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 -
- Demolition -
- Grading -
- Vehicle Trips - Per trip generation assumptions
- Construction Off-road Equipment Mitigation - Per SMAQMD rule compliance
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblGrading	MaterialExported	0.00	125.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	ST_TR	322.50	47.16
tblVehicleTrips	ST_TR	616.12	108.72
tblVehicleTrips	SU_TR	322.50	47.16
tblVehicleTrips	SU_TR	472.58	108.72
tblVehicleTrips	WD_TR	322.50	47.16
tblVehicleTrips	WD_TR	470.95	108.72

2.0 Emissions Summary

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6065	15.3112	13.9585	0.0287	7.2349	0.6841	7.8443	3.4650	0.6399	4.0258	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765
2024	5.1579	11.5454	13.1800	0.0252	0.2368	0.4538	0.6906	0.0640	0.4378	0.5019	0.0000	2,330.6724	2,330.6724	0.4141	0.0310	2,348.4917
Maximum	5.1579	15.3112	13.9585	0.0287	7.2349	0.6841	7.8443	3.4650	0.6399	4.0258	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.5947	6.0640	15.2192	0.0287	3.1693	0.1786	3.3479	1.5020	0.1663	1.6683	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765
2024	5.0068	4.1936	13.7869	0.0252	0.2250	0.0335	0.2585	0.0611	0.0333	0.0945	0.0000	2,330.6723	2,330.6723	0.4141	0.0310	2,348.4917
Maximum	5.0068	6.0640	15.2192	0.0287	3.1693	0.1786	3.3479	1.5020	0.1663	1.6683	0.0000	2,814.3288	2,814.3288	0.6586	0.0672	2,849.5765

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
Mobile	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135.4177	3,135.4177	0.2626	0.1773	3,194.8048
Total	1.9435	2.4936	17.1691	0.0309	3.2496	0.0329	3.2825	0.8664	0.0313	0.8976		3,257.1039	3,257.1039	0.2650	0.1795	3,317.2150

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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
Mobile	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135.4177	3,135.4177	0.2626	0.1773	3,194.8048
Total	1.9435	2.4936	17.1691	0.0309	3.2496	0.0329	3.2825	0.8664	0.0313	0.8976		3,257.1039	3,257.1039	0.2650	0.1795	3,317.2150

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	4/3/2023	4/28/2023	5	20	
2	Site Preparation	Site Preparation	4/29/2023	5/2/2023	5	2	
3	Grading	Grading	5/3/2023	5/8/2023	5	4	
4	Building Construction	Building Construction	5/9/2023	2/12/2024	5	200	
5	Paving	Paving	2/13/2024	2/26/2024	5	10	
6	Architectural Coating	Architectural Coating	2/27/2024	3/11/2024	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,661; Non-Residential Outdoor: 1,887; Striped Parking Area: 3,160 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	119.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	24.00	9.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3463	0.0000	1.3463	0.2039	0.0000	0.2039			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	1.4725	14.3184	13.4577	0.0241	1.3463	0.6766	2.0229	0.2039	0.6328	0.8366		2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0154	0.9670	0.1922	3.7300e-003	0.1038	6.9200e-003	0.1107	0.0284	6.6200e-003	0.0350		407.6328	407.6328	0.0162	0.0646	427.2989
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0388	0.0258	0.3086	8.0000e-004	0.0989	5.1000e-004	0.0994	0.0262	4.7000e-004	0.0267		82.3002	82.3002	2.9200e-003	2.6100e-003	83.1498
Total	0.0542	0.9928	0.5008	4.5300e-003	0.2027	7.4300e-003	0.2101	0.0546	7.0900e-003	0.0617		489.9329	489.9329	0.0191	0.0672	510.4487

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					0.5755	0.0000	0.5755	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	0.2811	1.2179	14.7184	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	0.2811	1.2179	14.7184	0.0241	0.5755	0.0375	0.6130	0.0871	0.0375	0.1246	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0154	0.9670	0.1922	3.7300e-003	0.0990	6.9200e-003	0.1060	0.0273	6.6200e-003	0.0339		407.6328	407.6328	0.0162	0.0646	427.2989
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0388	0.0258	0.3086	8.0000e-004	0.0937	5.1000e-004	0.0942	0.0250	4.7000e-004	0.0254		82.3002	82.3002	2.9200e-003	2.6100e-003	83.1498
Total	0.0542	0.9928	0.5008	4.5300e-003	0.1928	7.4300e-003	0.2002	0.0522	7.0900e-003	0.0593		489.9329	489.9329	0.0191	0.0672	510.4487

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	1.1339	12.4250	6.6420	0.0172	6.2662	0.5074	6.7736	3.0041	0.4668	3.4709		1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0159	0.1899	4.9000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691
Total	0.0239	0.0159	0.1899	4.9000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6788	0.0000	2.6788	1.2843	0.0000	1.2843			0.0000			0.0000
Off-Road	0.5129	5.2140	7.3891	0.0172		0.1680	0.1680		0.1560	0.1560	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	0.5129	5.2140	7.3891	0.0172	2.6788	0.1680	2.8468	1.2843	0.1560	1.4402	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0159	0.1899	4.9000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691
Total	0.0239	0.0159	0.1899	4.9000e-004	0.0577	3.1000e-004	0.0580	0.0154	2.9000e-004	0.0157		50.6463	50.6463	1.8000e-003	1.6000e-003	51.1691

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0891	0.0000	7.0891	3.4257	0.0000	3.4257			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.0891	0.6044	7.6934	3.4257	0.5560	3.9817		1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0103	0.6501	0.1292	2.5100e-003	0.0698	4.6500e-003	0.0744	0.0191	4.4500e-003	0.0236		274.0388	274.0388	0.0109	0.0435	287.2598
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0199	0.2374	6.2000e-004	0.0761	3.9000e-004	0.0765	0.0202	3.6000e-004	0.0205		63.3078	63.3078	2.2500e-003	2.0000e-003	63.9614
Total	0.0402	0.6699	0.3666	3.1300e-003	0.1458	5.0400e-003	0.1509	0.0393	4.8100e-003	0.0441		337.3467	337.3467	0.0131	0.0455	351.2212

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0306	0.0000	3.0306	1.4645	0.0000	1.4645			0.0000			0.0000
Off-Road	0.5545	5.3941	9.6248	0.0206		0.1736	0.1736		0.1615	0.1615	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	0.5545	5.3941	9.6248	0.0206	3.0306	0.1736	3.2041	1.4645	0.1615	1.6260	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0103	0.6501	0.1292	2.5100e-003	0.0666	4.6500e-003	0.0712	0.0183	4.4500e-003	0.0228		274.0388	274.0388	0.0109	0.0435	287.2598
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0199	0.2374	6.2000e-004	0.0721	3.9000e-004	0.0725	0.0192	3.6000e-004	0.0196		63.3078	63.3078	2.2500e-003	2.0000e-003	63.9614
Total	0.0402	0.6699	0.3666	3.1300e-003	0.1387	5.0400e-003	0.1437	0.0375	4.8100e-003	0.0423		337.3467	337.3467	0.0131	0.0455	351.2212

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.4479	0.1356	1.7200e-003	0.0542	2.3500e-003	0.0566	0.0156	2.2500e-003	0.0179		184.0776	184.0776	4.5200e-003	0.0270	192.2452
Worker	0.0716	0.0477	0.5697	1.4800e-003	0.1826	9.4000e-004	0.1835	0.0484	8.7000e-004	0.0493		151.9388	151.9388	5.4000e-003	4.8100e-003	153.5074
Total	0.0833	0.4956	0.7053	3.2000e-003	0.2368	3.2900e-003	0.2401	0.0640	3.1200e-003	0.0672		336.0164	336.0164	9.9200e-003	0.0318	345.7526

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	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.4479	0.1356	1.7200e-003	0.0519	2.3500e-003	0.0543	0.0150	2.2500e-003	0.0173		184.0776	184.0776	4.5200e-003	0.0270	192.2452
Worker	0.0716	0.0477	0.5697	1.4800e-003	0.1731	9.4000e-004	0.1740	0.0461	8.7000e-004	0.0470		151.9388	151.9388	5.4000e-003	4.8100e-003	153.5074
Total	0.0833	0.4956	0.7053	3.2000e-003	0.2250	3.2900e-003	0.2283	0.0611	3.1200e-003	0.0643		336.0164	336.0164	9.9200e-003	0.0318	345.7526

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4391	0.1315	1.6800e-003	0.0542	2.3200e-003	0.0565	0.0156	2.2200e-003	0.0178		180.5948	180.5948	4.4000e-003	0.0266	188.6239
Worker	0.0670	0.0425	0.5313	1.4400e-003	0.1826	9.0000e-004	0.1835	0.0484	8.3000e-004	0.0493		148.1561	148.1561	4.9000e-003	4.4700e-003	149.6116
Total	0.0782	0.4816	0.6628	3.1200e-003	0.2368	3.2200e-003	0.2400	0.0640	3.0500e-003	0.0671		328.7509	328.7509	9.3000e-003	0.0310	338.2354

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	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	0.2930	3.7120	13.1241	0.0221		0.0303	0.0303		0.0303	0.0303	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4391	0.1315	1.6800e-003	0.0519	2.3200e-003	0.0542	0.0150	2.2200e-003	0.0173		180.5948	180.5948	4.4000e-003	0.0266	188.6239
Worker	0.0670	0.0425	0.5313	1.4400e-003	0.1731	9.0000e-004	0.1739	0.0461	8.3000e-004	0.0469		148.1561	148.1561	4.9000e-003	4.4700e-003	149.6116
Total	0.0782	0.4816	0.6628	3.1200e-003	0.2250	3.2200e-003	0.2282	0.0611	3.0500e-003	0.0642		328.7509	328.7509	9.3000e-003	0.0310	338.2354

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9350	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0230	0.2878	7.8000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396
Total	0.0363	0.0230	0.2878	7.8000e-004	0.0989	4.9000e-004	0.0994	0.0262	4.5000e-004	0.0267		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396

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	0.1598	0.6922	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.3170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.4768	0.6922	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0230	0.2878	7.8000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396
Total	0.0363	0.0230	0.2878	7.8000e-004	0.0937	4.9000e-004	0.0942	0.0250	4.5000e-004	0.0254		80.2512	80.2512	2.6600e-003	2.4200e-003	81.0396

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	5.1439	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691
Total	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0380	1.9000e-004	0.0382	0.0101	1.7000e-004	0.0103		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.9632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	4.9929	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	GH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691
Total	0.0140	8.8400e-003	0.1107	3.0000e-004	0.0361	1.9000e-004	0.0362	9.6000e-003	1.7000e-004	9.7700e-003		30.8659	30.8659	1.0200e-003	9.3000e-004	31.1691

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135,417 7	3,135,417 7	0.2626	0.1773	3,194,804 8
Unmitigated	1.8187	2.3922	17.0771	0.0302	3.2496	0.0252	3.2748	0.8664	0.0235	0.8899		3,135,417 7	3,135,417 7	0.2626	0.1773	3,194,804 8

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	565.92	565.92	565.92	1,096,923	1,096,923
Fast Food Restaurant with Drive Thru	226.14	226.14	226.14	444,084	444,084
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	792.06	792.06	792.06	1,541,007	1,541,007

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
Convenience Market with Gas	10.00	5.00	6.50	0.80	80.20	19.00	100	0	0
Fast Food Restaurant with Drive	10.00	5.00	6.50	2.20	78.80	19.00	100	0	0
Other Asphalt Surfaces	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
Convenience Market with Gas Pumps	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fast Food Restaurant with Drive Thru	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Other Asphalt Surfaces	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946
NaturalGas Unmitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3300e-003	2.2300e-003	122.3946

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Convenience Market with Gas Pumps	24.9242	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		2.9323	2.9323	6.0000e-005	5.0000e-005	2.9497
Fast Food Restaurant with Drive Thru	1009.28	0.0109	0.0990	0.0831	5.9000e-004		7.5200e-003	7.5200e-003		7.5200e-003	7.5200e-003		118.7393	118.7393	2.2800e-003	2.1800e-003	119.4450
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0112	0.1014	0.0852	6.0000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3400e-003	2.2300e-003	122.3946

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Convenience Market with Gas Pumps	0.0249242	2.7000e-004	2.4400e-003	2.0500e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		2.9323	2.9323	6.0000e-005	5.0000e-005	2.9497
Fast Food Restaurant with Drive Thru	1.00928	0.0109	0.0990	0.0831	5.9000e-004		7.5200e-003	7.5200e-003		7.5200e-003	7.5200e-003		118.7393	118.7393	2.2800e-003	2.1800e-003	119.4450
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0112	0.1014	0.0852	6.0000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003		121.6716	121.6716	2.3400e-003	2.2300e-003	122.3946

6.0 Area Detail

6.1 Mitigation Measures Area

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Unmitigated	0.1136	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156
Total	0.1137	6.0000e-005	6.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0146	0.0146	4.0000e-005		0.0156

7.0 Water Detail

7.1 Mitigation Measures Water

Sac County Fuel Station - Sacramento County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
