Appendix B

Air Quality and Greenhouse Gas Emissions Technical Report (2022)

Air Quality and Greenhouse Gas Emissions Analysis Technical Report for the Guajome Crest Project City of Oceanside, California

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CALGreen	California's Green Building Standards
CalRecycle	California Department of Resources Recycling and Recovery
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbon
CH_4	methane
City	City of Oceanside
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
County	San Diego County
CPUC	California Public Utilities Commission
DPM	diesel particulate matter
EIR	environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
g/l	grams per liter
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
MMT	million metric ton
MPO	Metropolitan Planning Organization
MT CO_2e	metric tons of CO_2 equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
PDF	project design feature
PFC	perfluorocarbon
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
RAQS	Regional Air Quality Strategy

Acronym/Abbreviation	Definition
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SDAB	San Diego Air Basin
SCS	Sustainable Communities Strategy
SDAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas & Electric
SF_6	sulfur hexafluoride
SIP	state implementation plan
SLCP	short-lived climate pollutant
SO_2	sulfur dioxide
SO_x	sulfur oxides
TAC	toxic air contaminant
VOC	volatile organic compound

Executive Summary

The purpose of this technical report is to assess the potential air quality and greenhouse gas (GHG) emissions impacts associated with implementation of the proposed Guajome Crest Project (project). This assessment utilizes the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.).

Project Overview

The proposed site consists of a mostly vacant parcel (APN 157-412-15-00) and includes approximately 16.78 acres located in the Guajome Neighborhood Area of the City of Oceanside, California. The proposed project site is located along the north side of Guajome Lake Road southeast of Albright Street in the east-central portion of the City of Oceanside. The City of Vista municipal boundary is located approximately 0.1 miles east of the project site. The project site is located approximately 0.5 miles south of State Route (SR) 76 and approximately 3.4 miles north of SR 78.

The project site is located within the San Diego Air Basin and is under the jurisdiction of the San Diego County Air Pollution Control District (SDAPCD). Construction and operational criteria air pollutant and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0.

Air Quality

The air quality impact analysis evaluated the potential for adverse impacts to air quality due to construction and operational emissions resulting from the project. Impacts were evaluated for their significance based on the SDAPCD mass daily criteria air pollutant thresholds of significance (SDAPCD 2016a).[1] Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants include ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide, particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Pollutants evaluated include volatile organic compounds (VOCs) (also referred to as reactive organic gases), oxides of nitrogen (NO_x), CO, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$. VOCs and NO_x are important because they are precursors to ozone.

Air Quality Plan Consistency

If a project involves development that is greater than that anticipated in the local plan and San Diego Association of Governments (SANDAG) growth projections, the project might be in conflict with the state implementation plan and Regional Air Quality Strategy and may contribute to a potentially significant cumulative impact on air quality. The project was deemed to be consistent with the Regional Air Quality Strategy because the project is consistent with the zoning designation and is anticipated in the local plan and SANDAG's growth projections.

[1] For CEQA purposes, the screening criteria can be used as quantitative methods to demonstrate that a project's total emissions would or would not result in a significant impact to air quality.

Construction Criteria Air Pollutant Emissions

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., vendor trucks and worker vehicle trips). The project's construction emissions were estimated using CalEEMod. Maximum daily construction emissions of NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ would not exceed SDAPCD's significance thresholds. However, maximum daily construction emissions of VOCs would exceed the SDAPCD's significance threshold due to VOC emissions from architectural coating activities. After implementation of mitigation measure (MM)-AQ-1, which limits the VOC content of architectural coatings, the project would not exceed the SDPACD's significance threshold. Therefore, the project would have a less-than-significant impact during construction after mitigation.

Operational Criteria Air Pollutant Emissions

The project would generate criteria pollutant emissions during operation from area, energy, and mobile sources. The emissions were estimated using CalEEMod and compared to SDAPCD's significance thresholds for operation. The project did not exceed the mass emissions significance thresholds for NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during operation. However, maximum daily operational emissions of VOCs would exceed the SDAPCD's significance threshold due to VOC emissions from use of wood fireplaces. After implementation of mitigation measure (MM)-AQ-2, which prohibit the use or installation of wood burning stoves or fireplaces, the project would not exceed the SDPACD's significance threshold. Therefore, the project would have a less-than-significant impact after mitigation.

Cumulative Impacts

The nonattainment status of regional pollutants is a result of past and present development, and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As discussed above, the project would not exceed SDAPCD's mass daily significance thresholds during construction or operation; therefore, the project would have a less-than-significant cumulative impact.

Exposure of Sensitive Receptors

Construction and operational activities would not generate emissions in excess of SDAPCD's mass daily thresholds; therefore, construction and operational impacts during construction of the project would be less than significant. In addition, diesel equipment would also be subject to the California Air Resources Board Airborne Toxic Control Measures for in-use off-road diesel fleets, which would minimize diesel particulate matter emissions. The duration of proposed construction activities (approximately 14 months) would only constitute a small percentage of the total long-term 30-year exposure period and would not result in exposure of proximate sensitive receptors to substantial toxic air contaminants. After construction is complete, there would be no long-term source of toxic air contaminant emissions during operation. The project would not expose sensitive receptors to valley fever and would comply with SDAPCD Rule 55 to help reduce impacts during grading/earth-moving activities. The project would generate less than 1,000 average daily trips which would not likely generate significant daily or peak hour traffic. As such, potential project-generated impacts associated with CO hotspots would be less than significant.

Other Emissions

Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application, which would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Impacts associated with odors during construction would be less than significant. The project entails a residential development and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in less-than-significant impacts to other emissions (such as those leading to odors).

Greenhouse Gas Emissions

This GHG emissions analysis evaluates the potential for the project to generate GHG emissions during construction and operation that may have a significant impact on the environment, and the potential for the project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Principal GHGs regulated under state and federal law include carbon dioxide (CO_2), methane, and nitrous oxide. GHG emissions are measured in metric tons of CO_2 equivalent (MT CO_2e), which account for weighted global warming potential factors for methane and nitrous oxide. Estimated annual project-generated emissions at full buildout in 2025 include area, energy, mobile, solid waste, and water/wastewater emissions sources, as well as amortized construction emissions.

Potential to Generate Significant GHG Emissions

Construction of the project would result in GHG emissions primarily associated with the use of off-road construction equipment, vendor (material delivery) trucks, and worker vehicles. Total project-generated GHG emissions during construction were estimated to be 768 MT CO_2e, or 22 MT CO_2e per year when amortized over 20 years.

The project would generate operational GHG emissions from area sources (landscape maintenance equipment), energy sources (natural gas and electricity consumption), mobile sources (vehicle trips), water supply and wastewater treatment, and solid waste. Estimated annual project-generated operational GHG emissions at buildout in 2025 plus amortized project construction emissions would be approximately 1,158 MT CO_2e per year.

As, project operational emissions would be greater than the City's Climate Action Plan (CAP) GHG threshold of 900 MT CO_2e per year, the project is required to complete the CAP Consistency Checklist to ensure that emission targets identified in the City's CAP can be achieved considering the additional emissions. The project includes the use of on-site renewable energy through solar photovoltaic (PV) roof tiles, and canopy coverage and permeable surface area that meets requirements outlined in the City's Zoning Ordinance. The project would also be consistent with land use and zoning designations of the City's general plan. Therefore, the proposed project is deemed consistent with the measurable goals outlined in the City's CAP. As such, the project is not expected to generate GHG emissions that may have a significant impact on the environment, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and the impact would be **less than significant**.

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1 Introduction

1.1 Report Purpose and Scope

The purpose of this technical report is to assess the potential air quality and greenhouse gas (GHG) emissions impacts associated with implementation of the proposed Guajome Crest Project (project). This assessment uses the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and is based on the emissions-based significance thresholds recommended by the San Diego County Air Pollution Control District (SDAPCD) and other applicable thresholds of significance.

This introductory section provides a description of the project and the project location. Section 2, Air Quality, describes the air quality–related environmental setting, regulatory setting, existing air quality conditions, and thresholds of significance and analysis methodology, and presents an air quality impact analysis per Appendix G of the CEQA Guidelines. Section 3, Greenhouse Gas Emissions, follows the same format as Section 2 and similarly describes the GHG emissions–related environmental setting, regulatory setting, existing climate changes conditions, and thresholds of significance and analysis methodology, and presents a GHG emissions impact analysis per Appendix G of the CEQA Guidelines. Section 4, References Cited, includes a list of the references cited. Section 5, List of Preparers, includes a list of those who prepared this technical report.

1.2 Project Location

The Project is located at 2839 Guajome Lake Road, east of Alright Street, and southwest of Seattle Slew Way in Oceanside, California in northwest San Diego County. The Project area falls within Section 2 of Township 11 South, Range 4 West of the San Luis Rey, California 7.5-minute U.S. Geological Survey Topographic Quadrangle Map (Figure 1). Residential development is present to the northwest, northeast, and southeast of the Project area. The majority of the Project area is located to the northeast of Guajome Lake Road, and south of that is Guajome Regional Park. A drainage runs through the northeastern portion of the Project area which ultimately empties into Guajome Lake, located approximately a half-mile northwest of the Project area within Guajome Regional Park.

1.3 Project Description

The proposed Project would involve a request for approval of a Development Plan, Tentative Map, and Density Bonus to allow for the construction of 84 single-family homes on approximately 9.68 acres of the 16.6-acre project site. The Project is subject to State Density Bonus Law (Government Code Section 65915) and local Density Bonus provisions (Section 3032 of the Zoning Ordinance). The Project area consists of an approximately 16.6-acre property covering one parcel (APN 157-412-15-00) (Figure 2).

Nine of the proposed 84 single-family homes (15% of the total) would be designated as deed-restricted affordable housing. The remaining 75 homes would be sold at market rate. The proposed affordable homes would be distributed evenly throughout the community. In order to accommodate the Project as allowed under Density Bonus Law, the Project cannot physically comply with all of the development standards that apply to standard single-family residential projects. Based on the proposed design to accommodate Density Bonus units, the Project

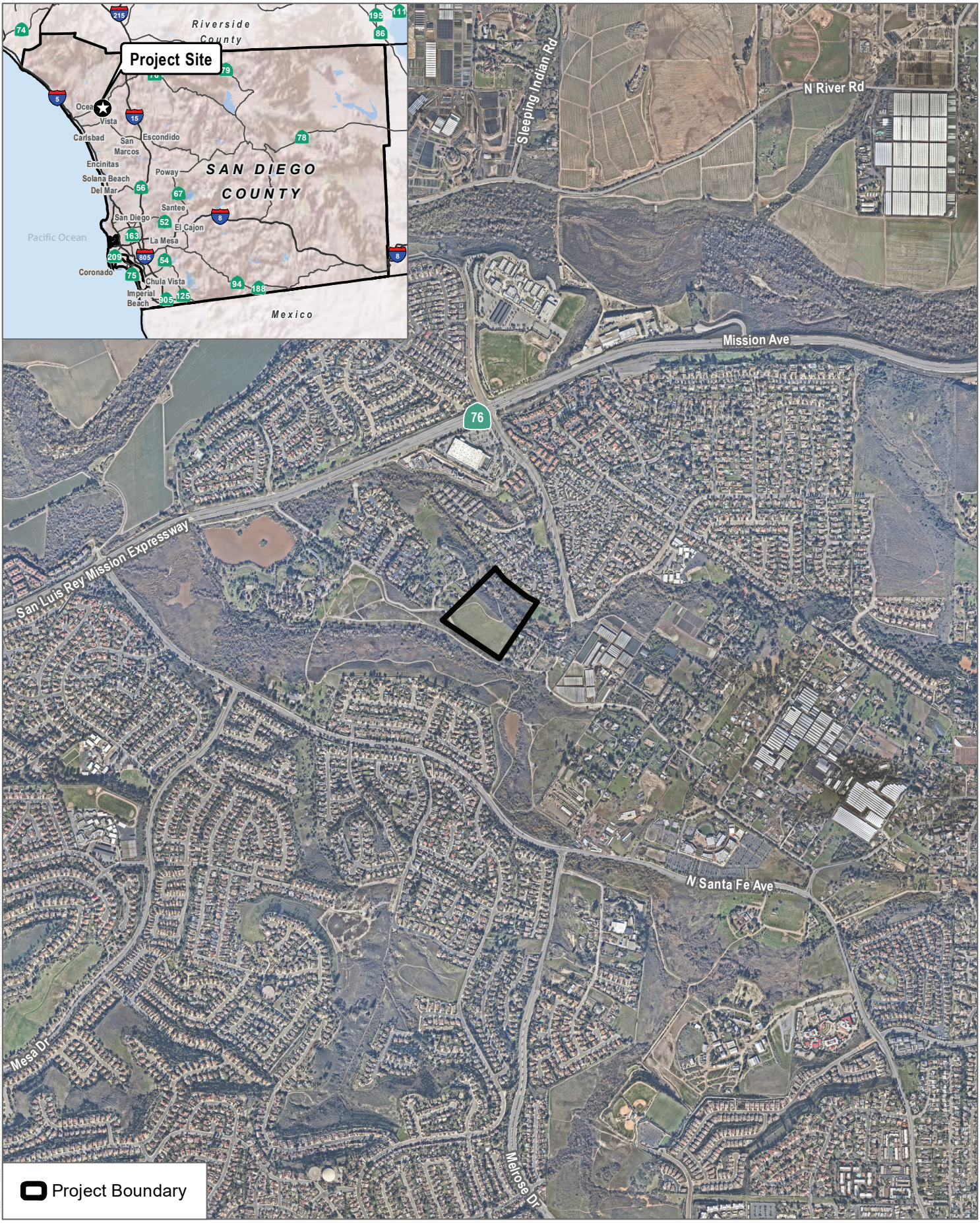
anticipates seeking waivers of development standards, including reduction of lot sizes, equestrian development standards removed, reduction or redistribution of setbacks, reduction of open space/landscape minimums, increased floor area ratio (FAR) per lot, and retaining wall heights.

All homes would be developed on the southern portion of the Project site which has been previously disturbed and graded. The Project may be required to clear part or all of the Coastal Sage Scrub to provide a fuel modification zone for fire requirements. The Project would avoid the northernmost portion of the project site along the riparian corridor, preserving approximately 6.92 acres of the 16.6-acre project site as open space. The General Plan designation for the Project site is Single Family Detached Residential (SFD-R) with a zoning designation of Single-Family Residential - Scenic Park Overlay zone and Equestrian Overlay zone (RS-SP-EQ). The proposed Project would be consistent with the General Plan and Zoning designations for the Project site. In existing conditions, the Project site is mostly vacant and previously disturbed, with one existing residential house in the northern portion of the property.

1.5 Dust Control Strategies

The project would include various construction dust control strategies as a PDF that would be subject to SDAPCD Rule 55. Compliance with these dust control measures would be identified on grading plan approvals. **PDF-AQ-1** provides for dust control strategies:

a. Active construction areas on site shall be watered at least two times daily.
b. Speeds on unpaved roads shall be reduced to less than 15 miles per hour.
c. All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour.
d. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.
e. All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.



SOURCE: SANGIS 2019, Open Street Maps 2019

DUDEK

0 800 1,600 Feet

FIGURE 1

Project Location

Guajome Crest Project

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SOURCE: SANGIS 2019, Open Streets Map 2019

DUDEK

0 75 150 Feet

FIGURE 2

Site Plan

Guajome Crest Project

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2 Air Quality

2.1 Environmental Setting

The project area is located within the San Diego Air Basin (SDAB) and is subject to SDAPCD guidelines and regulations. The SDAB is one of 15 air basins that geographically divide California. The SDAB lies in the southwest corner of California, comprises the entire San Diego region, and covers approximately 4,260 square miles.

2.1.1 Climate and Meteorology

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. Meteorological and topographical factors that affect air quality in the SDAB are described below.[2]

Regional Climate and Meteorological Conditions

The climate of the San Diego region, as in most of Southern California, is influenced by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The SDAB is characterized as a Mediterranean climate with dry, warm summers and mild, occasionally wet winters. Average temperature ranges (in °F) from the mid-40s to the high 90s, with an average of 201 days warmer than 70°F. The SDAB experiences 9 to 13 inches of rainfall annually, with most of the region's precipitation falling from November through March, with infrequent (approximately 10%) precipitation during the summer. El Niño and La Niña patterns have large effects on the annual rainfall received in San Diego; San Diego receives less than normal rainfall during La Niña years.

The interaction of ocean, land, and the Pacific High maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). The winds tend to blow onshore during the day and offshore at night. Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

The favorable climate of San Diego also works to create air pollution problems. Sinking, or subsiding, air from the Pacific High creates a temperature inversion known as a subsidence inversion, which acts as a "lid" to vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic emissions combined with strong sunshine leads to photochemical reactions that result in the creation of ozone (O_3) at this surface layer. In addition, light winds during the summer further limit ventilation.

[2] The discussion of SDAB meteorological and topographical conditions is based on information provided in the SDAPCD 2016 Monitoring Plan (SDAPCD 2017a), the County of San Diego Guidelines for Determining Significance – Air Quality (County of San Diego 2007), the County of San Diego General Plan Update Environmental Impact Report (County of San Diego 2011), and the CARB Recommended Area Designation for the 2010 Federal Sulfur Dioxide Standard (CARB 2011).

In the fall months, the SDAB is often impacted by Santa Ana winds, which are the result of a high-pressure system over the Nevada and Utah regions that overcomes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. The Santa Ana winds are powerful and can blow the SDAB's pollutants out to sea. However, a weak Santa Ana can transport air pollution from the South Coast Air Basin and greatly increase O_3 concentrations in the San Diego area.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to San Diego can also occur within the stable layer of the elevated subsidence inversion, where high levels of O_3 are transported.

Site-Specific Meteorological Conditions

The local climate within the project area is characterized as semi-arid with consistently mild, warmer temperatures throughout the year. The average summertime high temperature in the region is approximately 67.6°F, with highs reaching 73.6°F on average during the months of July through September. The average wintertime low temperature is approximately 52.9°F, reaching as low as 44.2°F on average during the months of November through March. Average precipitation in the local area is approximately 10.54 inches per year, with the bulk of precipitation falling between November and March (WRCC 2016).

2.1.2 Pollutants and Effects

2.1.2.1 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[3] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the

[3] The descriptions of each of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's (EPA) Criteria Air Pollutants (EPA 2018a) and the California Air Resources Board (CARB) Glossary of Air Pollutant Terms (CARB 2019a).

troposphere (ground-level O_3).[4] The O_3 that U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2018b).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

[4] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. PM_{10} tends to collect in the upper portion of the respiratory system, whereas $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

2.1.2.2 Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and

noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2019a). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2019a). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2019a). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "valley fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils.

The County is not considered a highly endemic region for valley fever as the San Diego County Health and Human Services Agency is listed as having 5.5 cases per 100,000 people. The project site is located within the 92054-zip code; the number of incidence of Coccidioidomycosis is even lower with a reported rate of 4.1 per 100,000 (Nelson, pers. comm. 2019). For comparison, statewide incidences in 2018 were 18.8 per 100,000 people (CDPH 2019).

Even if present at a site, earth-moving activities may not result in increased incidence of valley fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when

filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

2.1.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution–sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution–sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The SDAPCD identifies sensitive receptors as those who are especially susceptible to adverse health effects from exposure to toxic air contaminants, such as children, the elderly, and the ill. Sensitive receptors include schools (grades kindergarten through 12), daycare centers, nursing homes, retirement homes, health clinics, and hospitals within 2 kilometers of the project site (SDAPCD 2015). The closest known sensitive receptor are residences located directly adjacent to the project to the northeast and northwest of the project site.

2.2 Regulatory Setting

2.2.1 Federal Regulations

2.2.1.1 Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare state implementation plans (SIPs) that demonstrate how those areas will attain the NAAQS within mandated time frames.

2.2.1.2 Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for HAPs to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

2.2.2 State Regulations

2.2.2.1 Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 1.

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24- hours	25 µg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2019b.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.
[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

2.2.2.2 Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807. The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance

to any considerable number of persons or to the public; that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

2.2.3 Local Regulations

2.2.3.1 San Diego Air Pollution Control District

The SDAPCD is the regional agency responsible for the regulation and enforcement of federal regulations. CARB is responsible for the regulation of mobile emissions sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project area is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

Federal Attainment Plans

In December 2016, the SDAPCD adopted an update to the Eight-Hour Ozone Attainment Plan for San Diego County (2008 O_3 NAAQS). The 2016 Eight-Hour Ozone Attainment Plan for San Diego County indicated that local controls and state programs would allow the region to reach attainment of the federal 8-hour O_3 standard (1997 O_3 NAAQS) by 2018 (SDAPCD 2016b). In this plan, SDAPCD relied on the Regional Air Quality Strategy (RAQS) to demonstrate how the region would comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (NOx and VOCs) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

As documented in the 2016 8-Hour Ozone Attainment Plan for San Diego County, the County has a likely chance of obtaining attainment due to the transition to low emission cars, stricter new source review rules, and continuing the requirement of general conformity for military growth and the San Diego International Airport. The County will also continue emission control measures including ongoing implementation of existing regulations in ozone precursor reduction to stationary and area-wide sources, subsequent inspections of facilities and sources, and the adoption of laws requiring Best Available Retrofit Control Technology for control of emissions (SDAPCD 2016b).

The 2022 RAQS provides a comprehensive strategy to improve air quality, protect public health, and assist in protecting the climate, utilizing tools and resources available to the SDAPCD. It will reduce air pollutant and GHG emissions in the near term, investigate new opportunities in the long-term, and contribute to the region's long-term transformation to a carbon neutral future. These goals are in line with statutory requirements associated with ozone, as well as voluntary actions associated with GHGs and climate change The APCD Governing Board is tentatively scheduled to consider the final version of the 2022 RAQS in early 2023

State Attainment Plans

SDAPCD and SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The RAQS for the SDAB was initially adopted in 1991 and is updated on a triennial basis. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County

and the cities in the county, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the county as part of the development of their general plans (SANDAG 2011, 2017).

In December 2016, SDAPCD adopted the revised RAQS for the County. Since 2007, the San Diego region reduced daily VOC emissions and NO_x emissions by 3.9% and 7.0% respectively; SDAPCD expects to continue reductions through 2035 (SDAPCD 2016b). These reductions were achieved through implementation of six VOC control measures and three NO_x control measures adopted in SDAPCD's 2009 RAQS (SDAPCD 2009a); in addition, SDAPCD is considering additional measures, including three VOC measures and four control measures to reduce 0.3 daily tons of VOC and 1.2 daily tons of NO_x, provided they are found to be feasible region-wide. In addition, SDAPCD has implemented nine incentive-based programs, has worked with SANDAG to implement regional transportation control measures, and has reaffirmed the state emission offset repeal.

On October 14, 2020, the SDAPCD Board approved the *2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County,* demonstrating how the region will further reduce air pollutant emissions in order to attain the current National Ambient Air Quality Standards for ozone in the future *(SDAPCD 2020)*. Approved by the California Air Resources Board on November 19, 2020, the plan was submitted by CARB on January 8, 2021 for EPA's consideration as a revision to the California State Implementation Plan (SIP) for attaining the ozone standards.

In regards to particulate matter emissions reduction efforts, in December 2005, SDAPCD prepared a report titled Measures to Reduce Particulate Matter in San Diego County to address implementation of Senate Bill (SB) 656 in San Diego County (SB 656 required additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$) (SDAPCD 2005). In the report, SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earth-moving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust (SDAPCD 2005).

SDAPCD Rules and Regulations

As stated above, SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD, and would apply to the project.

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions. Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009b).

SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings. Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015).

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1200: Toxic Air Contaminants – New Source Review. Requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2017b).

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction. Requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 (SDAPCD 2017c).

2.2.3.2 San Diego Association of Governments

SANDAG is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization (MPO) for the County. With respect to air quality planning and other regional issues, SANDAG has prepared San Diego Forward: The Regional Plan (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the San Diego region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates and responds to the air district's air quality plans and builds off plan processes that are designed to meet health-based criteria pollutant standards in several ways (SANDAG 2015). First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influence the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On February 26, 2021, SANDAG's Board of Directors adopted the final 2021 Regional Transportation Improvement Program (RTIP). The 2021 RTIP covers five fiscal years (FY 2021 through FY 2025) and incrementally implements

the SANDAG 2019 Federal Regional Transportation Plan. The 2021 RTIP is designed to implement the region's overall strategy for providing mobility and improving the safety, condition, and efficiency of the transportation system while reducing transportation related air pollution. The 2021 RTIP incrementally implements San Diego Forward: The 2019 Federal Regional Transportation Plan (2019 Federal RTP), the long-range transportation plan for the San Diego region approved by the SANDAG Board of Directors on October 25, 2019.

2.2.3.3 City of Oceanside

The City of Oceanside General Plan includes various policies related to improving air quality (both directly and indirectly) (City of Oceanside 2002). Applicable policies include the following.

Land Use Element

Bicycle Facilities

- **Policy A**: Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.
- **Policy B**: Collector streets which function as links for Bicycle Circulation System shall require Class II Bikeways (Bike Lanes). In such cases the City shall reduce hazards to cyclists on collector streets by eliminating on-street parking.
- **Policy D**: The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:
  1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
  2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.

Pedestrian

- **Policy A**: The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

Transit System

- **Policy A**: The City shall coordinate and encourage the existing bus system to serve newly developed areas.
- **Policy B**: The City shall investigate the responsibilities of development in providing necessary on-site and off-site bus system improvements including bus shelters within new commercial, residential, and industrial developments.

Energy

- **Policy A**: The City shall encourage the design, installation, and use of passive and active solar collection systems.
- **Policy B**: The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.
- **Policy C**: The City shall encourage the use of long-term lower cost energy sources.

Grading and Excavation

- **Policy A:** Investigation and evaluation of affected areas will indicate the measures to be included, such as the following measures:
  1. Keep Grading to a minimum; leave vegetation and soils undisturbed wherever possible.
  2. Plant bare slopes and cleared areas with appropriate vegetation immediately after grading.
  3. Chemically treat soils to increase and resistance to erosion.
  4. Install retaining structures where appropriate.
  5. Construct drainage systems to direct and control rate of surface runoff.
  6. Construct silt traps and settling basins in drainage systems.
  7. Construct weirs and check dams on streams.

Circulation Element

Transportation Demand Management

The City shall:

- **Policy A**: Encourage the reduction of vehicle miles, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of Transportation Demand Management and Transportation System Management programs. These may include implementation of mandatory peak-hour trip reduction, requirements for staggered work hours, telecommunication, increased development of employment centers where transit usage is highly viable, encouragement of ride sharing in the public and private sector, provision of park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.
- **Policy B:** Maintain and implement the policies and recommendations of the Bicycle Master Plan as part of the Recreational Trails Element. These facilities shall connect residential areas with schools, parks, recreation areas, major employment centers, and neighborhood commercial areas.
- **Policy C:** Maintain and implement the policies and recommendations of the Pedestrian Master Plan as part of the Recreational Trails Element to ensure pedestrian access along streets and other locations throughout the City are properly maintained and provided.
- **Policy D:** Support parking policies that increase the cost of parking and/or reduce the supply of off-street parking to encourage drivers to consider using alternative modes of transportation or carpool/vanpool opportunities where transit facilities are available.
- **Policy E:** Encourage businesses to offer financial incentives to use modes of transportation other than the single occupant vehicle by way of subsidized transit, carpool/vanpool programs, bike to work programs, parking cash-out programs, or some combination of these.
- **Policy F:** Encourage new developments to provide on-site facilities such as showers, lockers, carpool stalls, and bicycle racks.

The City shall:

- **Policy A:** Cooperate with the North County Transit District (NCTD) to attain a balance of transportation opportunities. This shall include the establishment of criteria to implement transportation improvements,

short and long-range transit service plans, corridor improvements, transit centers, park-and-ride lots with amenities for bicyclists, and the preservation of rights-of-way for commuter rail stations.

- **Policy B:** The City shall require developers to construct, where appropriate, transit facilities when their development is on a transit service route including bus stop amenities to include lighted shelters, benches, and route information signs (where appropriate) through coordination with NCTD.
- **Policy C:** Work with the NCTD to assure that transit centers and major stops have adequate bicycle and pedestrian access, including secure bicycle storage. The City shall continue to work with NCTD to encourage more bus services that accommodate bicycles.
- **Policy D**: Encourage, in coordination with the NCTD, the utilization of the multi-modal transit center by coordinating bus routes and requiring, when applicable, shuttle services to major employment centers. Improved information signage giving directions to the transit center should be a main objective for the Coast Highway and other area thoroughfares.

Bicycle Facilities

The City shall:

- **Policy A:** Integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of the roadway network, transit facilities, public buildings, and parks.
- **Policy B:** Provide and maintain a safe, direct, and comprehensive bicycle network connecting neighborhoods, employment locations, public facilities, transit stations, parks and other key destinations.
- **Policy C:** Plan Class II bicycle lanes into all prime arterial, major arterials, and secondary collectors where safe and appropriate as determined by City staff.
- **Policy D:** Encourage large new developments to be designed with features such as secure bicycle parking and lockers, bike racks, shower facilities, and other amenities that accommodate bicycle users.

Pedestrian Facilities

The City shall:

- **Policy A:** Require the construction of a minimum five-foot wide sidewalk in all new developments and street improvements but will encourage sidewalk widths that go beyond the minimum five-foot ADA standards in areas with high pedestrian activity.
- **Policy B:** Encourage the inclusion of public walkways, open space, or trails for pedestrian usage in large, private developments.
- **Policy C:** Work with NCTD to provide accessible pedestrian facilities at transit stations and bus stops.

2.3 Regional and Local Air Quality Conditions

2.3.1 San Diego Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that

pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on CAAQS rather than the NAAQS. Table 2 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS.

Table 2. San Diego Air Basin Attainment Classification

Pollutant	Designation/Classification	
	National Standards	*California Standards*
Ozone (O_3) – 1 hour [a]	Attainment[a]	**Nonattainment**
O_3 (8-hour – 1997) (8-hour – 2008)	Attainment (Maintenance) **Nonattainment (Moderate)**	**Nonattainment**
Nitrogen Dioxide (NO_2)	Unclassifiable/Attainment	Attainment
Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassifiable/Attainment	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	Unclassifiable/Attainment	**Nonattainment**
Lead (Pb)	Unclassifiable/Attainment	Attainment
Hydrogen Sulfide	No National standard	Attainment
Sulfates	No National standard	Unclassified
Visibility-Reducing Particles	No National standard	Unclassified
Vinyl Chloride	No National standard	No designation

Sources: EPA 2021 (national); CARB 2019 (California).
Notes:
Attainment = meets the standards; Attainment (Maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

[a] The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in SIPs.

In summary, the SDAB is designated as an attainment area for the 1997 8-hour O_3 NAAQS and as a nonattainment area for the 2008 8-hour O_3 NAAQS. The SDAB is designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ CAAQS. The portion of the SDAB where the project is located in is designated as attainment or unclassifiable/unclassified for all other criteria pollutants under the NAAQS and CAAQS.

2.3.2 Air Quality Monitoring Data

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. Local ambient air quality is monitored by SDAPCD. SDAPCD operates a network of ambient air monitoring stations throughout the County that measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest SDAPCD-operated monitoring station is the Camp Pendleton monitoring station, which is located approximately 20 miles north of the project site. This site was used to show the background ambient air quality for O_3 and NO_2. The closest monitoring site that measures CO, SO_2, PM_{10}, and $PM_{2.5}$ for years 2019 and 2021 is the Camp Pendleton monitoring station

located at 21441-W B Street, which is about 7 miles southeast of the site. The most recent background ambient air quality data and number of days exceeding the ambient air quality standards from 2019 to 2021 are presented in Table 3.

Table 3. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2019	*2020*	*2021*	*2019*	*2020*	*2021*
Ozone (O_3) – Camp Pendleton									
Maximum 1-hour concentration	ppm	State	0.09	0.075	0.094	0.074	0	0	0
Maximum 8-hour concentration	ppm	State	0.070	0.073	0.069	0.074	0	3	0
		Federal	0.070	0.063	0.062	0.061	0	3	0
Nitrogen Dioxide (NO_2) – Camp Pendleton									
Maximum 1-hour concentration	ppm	State	0.18	0.053	0.058	0.059	0	0	0
		Federal	0.100	0.053	0.058	0.059	0	0	0
Annual concentration	ppm	State	0.030	0.005	0.006	0.006	—	—	--
		Federal	0.053	0.005	0.006	*	—	—	--
Carbon Monoxide (CO) – Rancho Carmel Dr									
Maximum 1-hour concentration	ppm	State	20	4.1	3.3	3.0	0	0	0
		Federal	35	4.1	3.3	3.0	0	0	0
Maximum 8-hour concentration	ppm	State	9.0	2.5	1.7	1.8	0	0	0
		Federal	9	2.5	1.7	1.8	0	0	0
Sulfur Dioxide (SO_2) – El Cajon – First Street									
Maximum 1-hour concentration	ppm	Federal	0.075	0.0008	0.0035	0.0008	0	0	0
Maximum 24-hour concentration	ppm	Federal	0.14	0.0004	0.0004	0.0003	0	0	0
Annual concentration	ppm	Federal	0.030	0.00007	0.00010	0.00007	0	0	0
Coarse Particulate Matter (PM_{10})a – Camp Pendleton									
Maximum 24-hour concentration	µg/m³	State	50	37.4	*	*	0.0 (0)	*	*
		Federal	150	38.7	43	38.7	0.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	µg/m³	State	20	23	*	*	*(0)	*	*

Table 3. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2019	*2020*	*2021*	*2019*	*2020*	*2021*
Fine Particulate Matter ($PM_{2.5}$)[a] – Camp Pendleton									
Maximum 24-hour concentration	µg/m³	Federal	35	18.9	40.2	23.5	0.0 (0)	3(1)	0.0 (0)
Annual concentration	µg/m³	State	12	*	*	*	0.0 (0)	0.0 (0)	0.0 (0)
		Federal	12.0	*	*	*	0.0 (0)	0.0 (0)	0.0 (0)

Sources: CARB 2019c; EPA 2019a.

Notes: ppm = parts per million; — = not available; µg/m³ = micrograms per cubic meter;
Data taken from CARB iADAM (CARB 2019c) and EPA AirData (EPA 2019a) represent the highest concentrations experienced over a given year. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.
Camp Pendleton monitoring station is located at 21441 West B Street, Camp Pendleton, California.
El Cajon – First Street monitoring station is located at 533 First Street, El Cajon, California.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

* There was insufficient (or no) data available to determine the value.

2.4 Significance Criteria and Methodology

2.4.1 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on Appendix G of the CEQA Guidelines, the project would have a significant impact on air quality it would:

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

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality.

As part of its air quality permitting process, SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments for permitted stationary sources (SDAPCD 2016a). SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Although these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes these levels may be used to evaluate the increased emissions that would be discharge to the SDAB from proposed land development projects (County of San Diego 2007).

Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4 are exceeded.

Table 4. SDAPCD Air Quality Significance Thresholds

Construction Emissions			
Pollutant	*Total Emissions (Pounds per Day)*		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_x)	250		
Oxides of Sulfur (SO_x)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOC)	75*		
Operational Emissions			
	Total Emissions		
Pollutant	*Pounds per Hour*	*Pounds per Day*	*Tons per Year*
Respirable Particulate Matter (PM_{10})	—	100	15
Fine Particulate Matter ($PM_{2.5}$)	—	55	10
Oxides of Nitrogen (NO_x)	25	250	40
Sulfur Oxides (SO_x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	—	3.2	0.6
Volatile Organic Compounds (VOC)	—	75*	13.7

Sources: SDAPCD Rules 1501 (SDAPCD 1995) and 20.2(d)(2) (SDAPCD 2016a).

* VOC threshold based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance.

The thresholds listed in Table 4 represent screening-level thresholds that can be used to evaluate whether proposed-project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. The emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "O_3 significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly (see the discussion of O_3 and its sources in Section 2.1.2.1, Criteria Air Pollutants), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 4, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

2.4.2 Approach and Methodology

2.4.2.1 Construction Emissions

Emissions from the construction phase of the project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA 2021). Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on CalEEMod default values.

For purposes of estimating project emissions, and based on CalEEMod default values and similar projects, it is assumed that construction of the project would occur 5 days per week and commence in July 2023 and would last approximately 18 months, ending in December 202[5]4. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site Preparation: 10 days (July 2023)
- Grading: 1 month (July 2024 – August 2023)
- Building Construction: 10 months (August 2023 – October 2024)
- Paving: 1 month (October 2024 - November 2024)
- Architectural Coating: 1 month (November 2024 – December 2024)

Construction-worker and vendor trip estimates by construction phase were based on CalEEMod default data. To be balanced on-site. The construction equipment mix and vehicle trips used for estimating the project-generated construction emissions are shown in Table 5.

Table 5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Site Preparation	18	6	0	Graders	3	8
				Tractors/loader/backhoes	4	8
Grading	20	6	0	Excavators	2	8
				Graders	2	6
				Rubber-tired dozers	1	6
				Scrapers	2	8
				Tractors/loader/backhoe	2	7
Building Construction	136	50	0	Cranes	1	4
				Forklifts	2	6

[5] The Summer 2023 start date represented the earliest possible start date at the time the air quality technical report was written. Assuming an earlier start date for Project construction represents the worst- case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be less due to more stringent standards for off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles.

Table 5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
				Generator Sets	1	8
				Tractors/loader/ backhoes	1	8
				Welders	3	8
Paving	16	6	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Architectural Coating	28	6	0	Air compressors	1	6

Notes: See Appendix A for details.

As discussed in Section 1.5, Dust Control Strategies, the project would implement dust control strategies as **PDF-AQ-1**. To reflect implementation of proposed dust control strategies, the following was assumed in CalEEMod:

- Water exposed area two times per day (55% reduction in PM_{10} and $PM_{2.5}$).
- Limit vehicle travel on unpaved roads to 15 miles per hour.
- Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday (26% reduction in particulate matter).

2.4.2.2 Operational Emissions

Emissions from the operational phase of the project were estimated using CalEEMod Version 2020.4.0 (CAPCOA 2021). Operational year 2025 was assumed consistent with completion of project construction.

Area Sources

- CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2021). The CalEEMod default values for consumer products were assumed.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of

surface area, and the reapplication rate. VOC emissions were estimated based on CalEEMod defaults which provides VOC content limits for various coatings. The project would use low-VOC paints during construction for interior and exterior of the residential buildings to meet a VOC content of 250 g/L or less. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.7 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2021). For parking lot land uses, 250 g/L VOC was assumed, consistent with CalEEMod default VOC rates.

The project would not construct any wood burning stoves or natural gas fireplaces, as implemented by **PDF-AQ-1**.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

CalEEMod default values for energy consumption were applied for the project analysis. The energy use from residential buildings was calculated based on CalEEMod energy intensity values (natural gas usage per square foot per year) from the Residential Appliance Saturation Survey database.

Mobile Sources

To quantify emissions associated with project operational mobile sources, trip generation rates for the project residential land use were based on CalEEMod default values. CalEEMod default data, including trip characteristics, tip lengths, variable start information and emissions factors were used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles consistent with CalEEMod default vehicle fleet assumptions. Emission factors for 2027 (the first full year of project operation) were used to estimate emissions associated with full buildout of the project.

2.4.2.3 Carbon Monoxide Hotspots

Mobile source impacts occur on two scales of motion: regional and local. Regionally, proposed-project-related travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SDAB. Locally, project-generated traffic would be added to the City's roadway system near the project area. If such traffic (1) occurs during periods of poor atmospheric ventilation, (2) is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and (3) is operating on roadways already congested with non-proposed-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic.

In addition to the numerous factors that would need to be present for a CO hotspot to occur, the potential for CO hotspots in the SDAB is steadily decreasing because of the continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion and the already very low ambient CO concentrations. Furthermore, CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors such as residents, school children, hospital patients, and the elderly. Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable level of service. Projects contributing to adverse traffic impacts may result in the formation of CO hotspots.

Because the City does not have CO hotspot guidance, the guidance recommended by the County was applied to evaluate the potential for CO hotspots to occur as a result of the project. As indicated in the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Air Quality (County of San Diego 2007), a site-specific CO hotspot analysis should be performed if a proposed development would cause road intersections to operate at or below a level of service E with intersection peak-hour trips exceeding 3,000.

2.5 Impact Analysis

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on Appendix G of the CEQA Guidelines, the project impacts are discussed below.

2.5.1 Threshold 1

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

As mentioned in Section 2.2.3, Local Regulations, SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the SIP and RAQS.[6] The federal O_3 maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O_3 attainment plan was adopted in 2021. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2021). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project involves development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

[6] For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan (SDAPCD 2012). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the basin.

Implementation of the project would result in an increase in housing of 84 single family residential units. The City of Oceanside General Plan identifies the site as S Residential and the project site is zoned Single Family Detached (SFD-R) (City of Oceanside 2002). The existing land use designation and zoning allows for single family detached units. The proposed project is consistent with the underlying land use and zoning for the project site but would require a waiver under the state Density Bonus Law.

Under the Density Bonus Law, the provision of 15% very-low-income units allows the applicant to receive a density bonus of 50%, allowing additional market-rate units to be constructed. Of the proposed 84 single-family homes, 9 of the units would be affordable/low-income units, and the remaining 75 units would be considered market-rate units, which complies with the Density Bonus Law provisions regarding affordable housing. Therefore, the proposed mix of residential units totaling 84 units is consistent with the underlying uses anticipated for the project site and consistent with the provisions allowed under State Density Bonus Law.

Furthermore, the most recent Regional Housing Needs Assessment from SANDAG stated that Oceanside needs to build 5,443 units from 2021 through 2029 (SANDAG 2020). The City has a projected deficit of 1,268 very-low units, 718 low-income units, 883 moderate units, and 2,574 above-moderate income units (SANDAG 2020). The proposed project is expected to bring 84 units to market in 2025, including 9 low-income units and 75 above moderate-income units, which would be within SANDAG's growth projection for housing during the 6th Cycle planning horizon (i.e., April 2021 – April 2029). Therefore, the proposed project would not conflict with SANDAG's regional growth forecast for the City (Appendix B).

Based on this, the project would be consistent with the growth assumptions in the City's General Plan and would not conflict with the RAQS or SIP. As the project is consistent with the zoning designation, and is anticipated in the City's General Plan and SANDAG's growth projections, implementation of the project would not conflict with the SIP and RAQS. Therefore, the project would not conflict with or obstruct implementation of an applicable air quality plan, and impacts would be **less than significant.**

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant without mitigation.

2.5.2 Threshold 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 federal or state ambient air quality standard?

Construction Emissions

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, rock crushing, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the

prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in Section 2.4.2.1, Construction Emissions, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2023 and 2024). The construction start date was based on information provided by the project applicant and is intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed project information was not available.

Implementation of the project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The project would implement various dust control strategies (**PDF-AQ-1**) and would be required to comply with SDAPCD Rule 55 to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads two times per day depending on weather conditions and restricting vehicle speed on unpaved roads to 15 miles per hour. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement would also produce VOC emissions. Table 6 presents the estimated maximum daily construction emissions generated during construction of the project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2023	3.38	34.81	28.62	0.06	10.30	5.76
2024	244.35	15.78	19.97	0.05	2.09	0.99
Maximum	244.35	34.81	28.62	0.06	10.30	5.76
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SDAPCD = San Diego Air Pollution Control District.
See Appendix A for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for implementation of the project's fugitive dust control strategies, including watering of the project site and unpaved roads two times per day, restricting vehicle speed on unpaved roads to 15 miles per hour..

As shown in Table 6, daily construction emissions for the project would exceed SDAPCD's significance thresholds for VOCs during the application of architectural coatings. Therefore, the proposed project would have a potentially significant impact related to emissions of criteria air pollutant emissions during construction and would require mitigation.

However, as shown in Table 7 implementation of mitigation measure (**MM)-AQ-1**, which would ensure that low-VOC coatings are used during construction, would reduce VOCs to below the SDPACD threshold. Therefore, construction pollutant emissions impacts would be **less than significant with mitigation.**

Table 7. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions After Mitigation

Construction Phase	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2023	3.38	34.81	28.62	0.06	10.30	5.76
2024	55.14	15.78	19.97	0.05	2.09	0.99
Maximum	***55.14***	***34.81***	***28.62***	***0.06***	***10.30***	***5.76***
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold exceeded?	No	No	No	No	No	No

Source: Appendix A.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SDAPCD = San Diego Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

Operational Emissions

The project involves construction of a residential land use. Operation of the project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, area sources, consumer products, architectural coatings for repainting, landscape maintenance equipment, and energy sources, including combustion of fuels used for space and water heating and cooking appliances. As discussed in Section 2.4.2.2, Operational Emissions, pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated mobile source emissions were estimated in CalEEMod based on project-specific trip rates. CalEEMod default values were used to estimate emissions from the project area and energy sources.

Table 8 presents the maximum daily area, energy, and mobile source emissions associated with operation (year 2025) of the project. Operational year 2025 was assumed upon completion of construction. The values shown are the maximum summer or winter daily emissions results from CalEEMod and are compared to the SDAPCD thresholds of significance. Details of the emission calculations are provided in Appendix A.

Table 8. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Area	132.13	2.28	146.65	0.03	19.19	19.19
Energy	0.07	0.60	0.26	<0.01	0.05	0.05
Mobile	2.35	2.34	21.04	0.05	5.14	1.39
Total	**134.56**	**5.22**	**167.94**	**0.28**	**24.38**	**19.28**
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SDAPCD = San Diego Air Pollution Control District; <0.01 = reported emissions are less than 0.01.
See Appendix A for complete results.
Totals may not sum due to rounding. Residential units were not equipped with woodstoves.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect operational year 2025.

As shown in Table 8, the combined daily area, energy, and mobile source emissions would not exceed the SDAPCD operational thresholds for NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. However, the project would exceed the SDPACD VOC emissions threshold largely because of area source emissions from wood fireplaces.

However as shown in Table 9, implementation of mitigation measure MM-AQ-2, which would ensure that no wood fireplaces would be included in the project design, which would reduce VOC emissions to below the SDAPCD threshold. Thus, impacts associated with project-generated operational criteria air pollutant emissions would be **less than significant after mitigation.**

Table 9. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Area	5.76	0.85	7.25	0.01	0.10	0.10
Energy	0.07	0.60	0.26	0.01	0.05	0.05
Mobile	2.35	2.34	21.04	0.05	5.10	1.39
Total	***8.18***	***3.79***	***28.54***	***0.06***	***5.29***	***1.54***
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SDAPCD = San Diego Air Pollution Control District. <0.01 = reported value is less than 0.01.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As described above, the project would have a less-than-significant impact for short-term construction and long-term operations.

The SDAB is a nonattainment area for O_3 under the NAAQS and CAAQS. The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O_3) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If the project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, a project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Additionally, for the basin, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego

region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O_3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SDAB. As discussed previously, the project would not exceed significance thresholds during construction or operation after mitigation. As such, the project would result in **less-than-significant impacts**.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects that involve development consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the project would be consistent with the zoning designation and would not result in significant regional growth that is not accounted for within the RAQS. As a result, the project would not result in a cumulatively considerable contribution to regional O_3 concentrations or other criteria pollutant emissions. Cumulative impacts would be **less than significant** during operation.

Mitigation Measures

The following mitigation measures set forth a program of air pollution control strategies designed to reduce the proposed project's air quality impacts during construction and operation.

MM-AQ-1 **Require Low-Volatile Organic Compound Coatings During Construction.** The project applicant and/or their contractors shall ensure that low-volatile organic compound (VOC) coatings with a VOC content of 50 grams per liter or less are used during construction.

MM-AQ-2 **Wood Burning Stoves and Fireplaces.** No wood burning stoves or fireplaces shall be constructed as part of the project.

Level of Significance After Mitigation

Impacts would be less than significant after mitigation.

2.5.3 Threshold 3

Would the project expose sensitive receptors to substantial pollutant concentrations?

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others,

depending on the population groups and the activities involved. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. There are no sensitive receptors near the project site.

Health Impacts of Toxic Air Contaminants

Construction

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have noncarcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM emitted from heavy-duty construction equipment and heavy-duty trucks. The project will not require the extensive use of heavy-duty construction equipment, which is subject to CARB Airborne Toxic Control Measures to reduce DPM emissions. According to the Office of Environmental Health Hazard Assessment, health risk assessments should be based on a 30-year exposure duration based on typical residency period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 18 months) would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

After construction is completed, there would be no long-term source of TAC emissions during operation. No residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the project. Implementation of the project would not expose sensitive receptors to substantial TAC concentrations and impacts would be **less than significant**.

Valley Fever

As discussed in Section 2.1.2.2, valley fever is not highly endemic to the County, and within the County the incidents rate in the project area is below the County average as well as the statewide average. The project would be consistent with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction and would also control the release of the *Coccidioides immitis* fungus from construction activities by watering two times per day and limiting speed on unpaved roads to 15 miles per hour. Residential properties surround the project site on all sides, the closest known sensitive receptor (residences) is located 80 feet from the project site. Based on the low incidence rate of Coccidioidomycosis in the project area and in greater San Diego County, and the project's implementation of dust control strategies, it is not anticipated that earth-moving activities during project construction would result in exposure of nearby sensitive receptors to valley fever. Therefore, the project would have a **less-than-significant impact** with respect to valley fever exposure to sensitive receptors.

Health Impacts of Carbon Monoxide

The CalEEMod Analysis shows that the single-family residential project would generate less than 1,200 average daily trips which would not likely generate significant daily or peak hour traffic. Therefore, the project operation is not expected to exceed the screening threshold and would not result in a CO hotspot and would not have the potential to result in CO emissions that when totalled with the ambient concentrations would exceed a 1-hour concentration of 20 parts per million or an 8-hour average of 9 parts per million. The impact would be **less than significant.**

Health Effects of Other Criteria Air Pollutants

Project construction and operation would not exceed SDAPCD thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$.

Table 10 presents a list of the criteria pollutants and other related pollutants of concern, emission sources, associated health effects, and current SDAB attainment status.

Table 10. Pollutants, Sources, Health Effects, and Attainment Status

Pollutant	Sources	Health Effects	Attainment Status	
			NAAQS	*CAAQS*
O_3	Formed when VOCs and NO_x react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage.	Breathing difficulties, lung tissue damage, vegetation damage, damage to rubber and some plastics.	Nonattainment	Nonattainment
PM_{10}	Road dust, windblown dust, agriculture and construction, fireplaces. Also formed from other pollutants (NO_x, SO_x, organics). Incomplete combustion.	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling.	Unclassifiable/ Attainment	Nonattainment
$PM_{2.5}$	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning. Also formed from reaction of other pollutants (NO_x, SO_x, organics, and NH_3).	Increases respiratory disease, lung damage, cancer, and premature death, reduced visibility, surface soiling. Particles can aggravate heart diseases such as congestive heart failure and coronary artery disease.	Unclassifiable/ Attainment	Nonattainment
CO	Any source that burns fuel such as automobiles, trucks, heavy construction and farming equipment, residential heating.	Chest pain in heart patients, headaches, reduced mental alertness.	Attainment	Attainment
NO_2	See carbon monoxide.	Lung irritation and damage. Reacts in the atmosphere to form ozone and acid rain.	Unclassifiable/ Attainment	Attainment
Lead	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Learning disabilities, brain and kidney damage.	Unclassifiable/ Attainment	Attainment
SO_2	Coal or oil burning power plants and industries, refineries, diesel engines.	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Unclassifiable/ Attainment	Attainment
Sulfates	Produced by reaction in the air of SO_2, (see SO_2 sources), a component of acid rain.	Breathing difficulties aggravates asthma, reduced visibility.	(no federal standard)	Attainment

Table 10. Pollutants, Sources, Health Effects, and Attainment Status

Pollutant	Sources	Health Effects	Attainment Status	
Hydrogen Sulfide	Geothermal power plants, petroleum production and refining, sewer gas.	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	(no federal standard)	Unclassified
Visibly Reducing Particles	See $PM_{2.5}$	Reduced visibility (e.g., obscures mountains and other scenery), reduced airport safety.	(no federal standard)	Unclassified
Vinyl Chloride	Exhaust gases from factories that manufacture or process vinyl chloride (construction, packaging, and transportation industries)	Central nervous system effects (e.g., dizziness, drowsiness, headaches), kidney irritation, liver damage, liver cancer.	N/A	N/A

Sources: County of San Diego 2007 (pollutant descriptions); EPA 2018b (federal); CARB 2019a (state).
Notes: O_3 = ozone; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide.

VOCs and NO_x are precursors to O_3, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 CAAQS/NAAQS tend to occur between April and October when solar radiation is highest. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. Construction and operation of the project would not exceed SDAPCD thresholds for VOC and NO_x; thus, implementation of the project would not contribute significant health effects associated with O_3. SDAPCD Rule 67.0.1 restricts the VOC content of coatings for both construction and operational applications. Furthermore, the project would utilize low-VOC paints.

Health effects associated with NO_x include lung irritation and enhanced allergic responses (CARB 2019a). Construction of the project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. Health effects that result from NO_2 and NO_x include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. Project construction would be relatively short-term, and off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. In addition, existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Operation of the project would not require use of any stationary sources (e.g., diesel generators and boilers) that would create substantial, localized NO_x impacts.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019a). CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed previously and is determined to be a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Health effects associated with PM_{10} include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2019a). Construction and operation of the project would also not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the SDAB from coming into attainment for these pollutants. The project would also not result in substantial DPM emissions during construction and operation, and therefore would not result in significant health effects related to DPM exposure. Additionally, the project would implement dust control strategies and be required to comply with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction. Due to the minimal contribution of particulate matter during construction and operation, the project is not anticipated to result in health effects associated with PM_{10} or $PM_{2.5}$.

In summary, because construction of the project would not result in exceedances of the SDAPCD significance thresholds, the potential health effects associated with criteria air pollutants would be **less than significant.**

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant without mitigation.

2.5.4 Threshold 4

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

The State of California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 SDAPCD Rule 51 prohibits emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Projects required to obtain permits from SDAPCD are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and due to the fact that their measurements are difficult to quantify. As a result, this guideline is qualitative and will focus on the existing and potential surrounding uses and location of sensitive receptors.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement

application. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with other emissions (such as those leading to odors) during construction would be less than significant.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities. The project entails only residential uses and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would not result in odor emissions, and the project impact would be **less than significant.**

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant without mitigation.

3 Greenhouse Gas Emissions

3.1 Environmental Setting

3.1.1 Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (i.e., decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and are the most significant driver of observed climate change (IPCC 2013; EPA 2017a). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further in Section 3.3.2, Potential Effects of Climate Change.

3.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and

nitrogen trifluoride. (See also 14 CCR 15364.5.)[7] Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[8]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are powerful synthetic GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

[7] Climate-forcing substances include GHGs and other substances such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in California Health and Safety Code Section 38505, as impacts associated with other climate-forcing substances are not evaluated herein.

[8] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change Second Assessment Report (IPCC 1995), Intergovernmental Panel on Climate Change Fourth Assessment Report (2007), CARB's Glossary of Terms Used in GHG Inventories (2018b), and EPA's Glossary of Climate Change Terms (2016d).

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** Nitrogen trifluoride is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.
- **Chlorofluorocarbons.** CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere), and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3.
- **Hydrochlorofluorocarbons**. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter ($PM_{2.5}$) that has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived substance that varies spatially, which makes it difficult to quantify the global warming potential (GWP). DPM emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining DPM from CARB's regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when a gas itself absorbs radiation. Indirect radiative forcing occurs +when chemical transformations of a substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA

2016d). The Intergovernmental Panel on Climate Change developed the GWP concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014a). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in MT CO_2e.

The current version of CalEEMod (version 2020.4.0) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the project.

3.2 Regulatory Setting

3.2.1 Federal Regulations

Massachusetts v. EPA. In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling previously discussed, the Bush administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

On September 27, 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission-vehicle (ZEV) mandates in California. On March 31, 2020, the EPA and NHTSA issued the Part Two Rule, which will go into effect 60 days after being published in the Federal Register. The Part Two Rule sets CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. In March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's March 2022 action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

3.2.2 State Regulations

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes executive orders, legislation, regulations, and other plans

and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues. These regulations come in the form of executive orders (EO)s, legislation, and CARB plans and requirements. These are summarized below.

State Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2016).

Assembly Bill 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB. The bill is referred to as the California Global Warming Solutions Act of 2006. AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

SB 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the senate and three members of the assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the scoping plan.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons [MMT] CO_2e).

CARB's Climate Change Scoping Plan. One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.

2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (17 CCR 95480 et seq.).
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012. The First Update concluded that California is on track to meet the 2020 target, but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level, using more recent GWPs identified by the Intergovernmental Panel on Climate Change, from 427 MMT CO_2e to 431 MMT CO_2e.

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. The governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the legislature affirmed the importance of addressing climate change through passage of SB 32.

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) for public review and comment (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate

Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) (Under 2 2017) and the Paris Agreement, which are developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognizes the benefits of local government GHG planning (e.g., through climate action plans [CAPs]) and provides more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project-level review where there is a legally adequate CAP.[9] The 2030 Scoping Plan was approved by CARB's Governing Board on December 14, 2017.

The 2030 Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with every planning policy or goals to be consistent. A project would be consistent if it would further the objectives and not obstruct their attainment.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (Title 40 Code of Federal Regulations, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per year threshold are required to have their GHG emissions report verified by a CARB-accredited third party.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. To facilitate achieving this

[9] *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490; *San Francisco Tomorrow et al. v. City and County of San Francisco* (2015) 229 Cal.App.4th 498; *San Franciscans Upholding the Downtown Specific Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656; *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 719.

goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

SB 605 and SB 1383. SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCPs) in the state; and SB 1383 (2016) required CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for methane and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

EO B-55-18. EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This executive order directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]) and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

The 2022 Title 24 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the

California Building Standards Code (CALGreen) in December 2021. The 2022 Energy Code will go into effect on January 1, 2023. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses:

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and electric vehicle (EV) charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available on site and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen), and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals.

The 2019 CALGreen standards are the current applicable standards. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting. The Standards are conceptually divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards the energy budgets - that vary by climate zone (of which there are 16 in California) and building type; thus the Standards are tailored to local conditions, and provide flexibility in how energy efficiency in buildings can be achieved. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that provide a recipe or a checklist compliance approach. (24 CCR Part 11).

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Assembly Bill 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption by 50% for indoor residential lighting and by 25% for indoor commercial lighting.

SB 1. SB 1 (August 2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the California Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption, and placing solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

AB 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

Renewable Energy and Energy Procurement

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities. Initially, the RPS required utilities to obtain 20% of their power from renewable sources by 2010. SB X1-2 (2011) subsequently expanded the RPS by establishing that 33% of the total electricity sold to retail customers in California per year by December 31, 2020, and in subsequent years, be secured from qualifying renewable energy sources. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. And SB 100 (2018) further accelerated the RPS, requiring achievement of a 50% RPS by December 31, 2026, and a 60% RPS by December 31, 2030. SB 100 also established a new state policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100% of electricity retail sales and 100% of electricity procured to serve all state agencies by December 31, 2045.

Under the program, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB 350. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy-efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

Mobile Sources

State Vehicle Standards. AB 1493 (July 2002) was enacted in response to the transportation sector accounting for more than one-half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are

primarily used for noncommercial personal transportation in the state. AB 1493 required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. It ordered CARB, CEC, the California Public Utilities Commission, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

Executive Order S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The initial target of the Low Carbon Fuel Standard was to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The Low Carbon Fuel Standard was subsequently amended in 2018 to require a 20% reduction in carbon intensity by 2030. This new requirement aligns with the California's overall 2030 target of reducing climate changing emissions to 40% below 1990 levels by 2030, set by SB 32. CARB has adopted implementing regulations for both the 10% and 20% carbon intensity reduction targets.

Senate Bill 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to California Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets adopted for SANDAG in 2010 are a 7% reduction in per-capita passenger-vehicle GHG emissions by 2020 and a 13% reduction by 2035, measured relative to 2005 GHG emissions. In 2018, CARB adopted the second round of SB 375 reduction targets, and increased SANDAG's 2020 target to a 15% reduction in per-capita passenger-vehicle GHG emissions, and the 2035 target to a 19% reduction using the same 2005 baseline.

SANDAG completed and adopted its 2050 RTP/SCS in October 2011. In November 2011, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others (*Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal. 5th 497). regarding analysis of EO S-3-05's 2050 goal of an 80% reduction in GHG emissions from 1990 levels. The

Supreme Court of California held that the Environmental Impact Report at issue was sufficient to inform the public, based on the information available at the time, about the regional plan's GHG impacts and its potential inconsistency with state climate change goals without including an explicit analysis of the consistency of projected 2050 GHG emissions with the goals in the executive order.

In 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted San Diego Forward: The Regional Plan (SANDAG 2015). Like the 2050 RTP/SCS, San Diego Forward: Regional Plan meets CARB's 2020 and 2035 reduction targets for the region (SANDAG 2015). In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region.

On February 26, 2021, SANDAG's Board of Directors adopted the final 2021 Regional Transportation Improvement Program (RTIP). The 2021 RTIP covers five fiscal years (FY 2021 through FY 2025) and incrementally implements the SANDAG 2019 Federal Regional Transportation Plan. The 2021 RTIP is designed to implement the region's overall strategy for providing mobility and improving the safety, condition, and efficiency of the transportation system while reducing transportation related air pollution. The 2021 RTIP incrementally implements San Diego Forward: The 2019 Federal Regional Transportation Plan (2019 Federal RTP), the long-range transportation plan for the San Diego region approved by the SANDAG Board of Directors on October 25, 2019.

Advanced Clean Cars Program. The Advanced Clean Cars program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold in 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The zero-emissions vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

AB 1236. AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based on substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. AB 1236 provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of electric vehicle charging stations is a matter of statewide concern. The bill required electric vehicle charging stations to meet specified standards. AB 1236 required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations. The bill also required a city, county, or city and county with a population of fewer than 200,000 residents to adopt this ordinance by September 30, 2017.

Executive Order B-16-12. EO B-16-12 (2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution ZEVs. On a statewide basis, EO B-16-12 also establishes a

GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this executive order, the Governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

EO B-37-16. Issued May 2016, EO B-37-16 directed the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The State Water Resources Control Board also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The State Water Resources Control Board and Department of Water Resources will develop new, permanent water use targets that build on the existing state law requirements that the state achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the State Water Resources Control Board permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in fountains and other decorative water features; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Solid Waste

AB 939, AB 341, and AB 1826. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops, and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2015).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste

that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Other State Actions

SB 97. SB 97 (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the

Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018a).

3.2.3 Local Regulations

3.2.3.2 City of Oceanside

General Plan

The City of Oceanside's General Plan Circulation Element includes goals and policies to reduce GHG emissions within the City (City of Oceanside 2002). The City of Oceanside's General Plan Update includes the Energy and Climate Action Element, which establishes additional goals and policies to reduce GHG emissions (City of Oceanside 2019a). The following goals and policies from the City's General Plan are relevant to the project.

Circulation Element

- **Policy 2.5:** The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.
- Pedestrian Facilities
  - **Goal 5:** Support walking as a primary means of transportation that in turn supports transit and bike options. A positive walking environment is essential for supporting smart growth, mixed land uses, transit oriented development, traffic calming and reducing traffic congestion and greenhouse gas emissions.
- Intelligent Transportation System Technologies
  - **Policy 4.1:** The City shall encourage the reduction of vehicle miles traveled, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of transportation demand management (TDM) strategies. These may include, but not limited to, implementation of peak hour trip reduction, encourage staggered work hours, telework programs, increased development of employment centers where transit usage is highly viable, encouragement of ridesharing options in the public and private sector, provision for park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.
- Transportation Demand Management
  - **Policy 4.9:** The City shall look for opportunities to incorporate TDM [transportation demand management] programs into their Energy Roadmap that contributes to state and regional goals for saving energy and reducing greenhouse gas emissions.

Land Use Element

- Air Quality
  - The City will continue to cooperate with the SDAPCD Board. This will include participation in the development of the Regional Air Quality Strategy (RAQS) through cooperation with the San Diego County Air Quality Planning Team.

- Bicycle Facilities
  - **Policy A**: Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.
  - **Policy D**: The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:
    1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
    2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.
- Pedestrian
  - **Policy A**: The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.
- Transit System
  - **Policy A**: The City shall coordinate and encourage the existing bus system to serve newly developed areas.
- Energy
  - **Policy A:** The City shall encourage the design, installation, and use of passive and active solar collection systems.
  - **Policy B**: The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.

Environmental Resource Management Element

- The City will continue to cooperate with the SDAPCD Board. This will include participation in the development of the Regional Air Quality Strategy (RAQS) through cooperation with the San Diego County Air Quality Planning Team.

Energy and Climate Action Element

- **Policy ECAE 1b-4:** The City shall explore opportunities to implement "mobility hub" features within Smart Growth Opportunity Areas and other areas amenable to active transportation and shared mobility option.
- **Policy ECAE 2a-6:** The city shall work with the development community to identify new sources of financing for mixed-use and other forms of urbanized development, including the implementation of the El Corazon Specific Plan.
- **Policy ECAE 2e-4:** Through TDM programs and other means, the City shall encourage employers to participate in regional rideshare programs, including SANDAG's iCommute.
- **Policy ECAE 2f-2:** The City shall explore incentives for electric vehicle charging facilities in multi-family developments.
- **Policy ECAE 2f-4:** The City shall partnership with the local business community, San Diego Gas & Electric, and other stakeholders, explore ways to reduce the cost of electric and other zero emission vehicles to Oceanside residents, specifically low-income households in proximity to air quality hotspots near I-5 and state highways.
- **Policy ECAE 2f-9:** The City shall consider ways to reduce vehicle idling, particularly in proximity to schools and other sensitive receptors.

- **Policy ECAE 5a-2**: The City shall update the City's Street Tree Ordinance to require one-to-one replacement of trees removed from the public right-of-way, parkways, and other public spaces

Oceanside Climate Action Plan and Energy and Climate Action Element

The City adopted its Climate Action Plan (CAP) on May 8, 2019 (City of Oceanside 2019). The CAP acts as a roadmap to address challenges of climate change within the City and outlines measures the City will take to make progress towards meeting the State's GHG reduction goals. The CAP includes a baseline GHG emissions inventory for 2013, GHG emissions forecasts for 2020, 2030, 2035, 2040, and 2050, local GHG emissions reduction strategies and measures to help the City achieve the statewide targets, and implementation and monitoring mechanisms to ensure the City's measures and targets are achieved. The CAP established local GHG emissions reduction targets for future years as follows:

- by 2020, reduce GHG emissions levels to 5 MT CO_2e per capita;
- by 2030, reduce GHG emissions levels to 4 MT CO_2e per capita;
- by 2040, reduce GHG emissions levels to 3 MT CO_2e per capita; and
- by 2050, reduce GHG emissions levels to 2 MT CO_2e per capita.

The CAP was prepared in accordance with the requirements within CEQA Guidelines Section 15183.5, and the CAP Consistency Checklist was used to evaluate the proposed project's significance with respect to GHG emissions.

City of Oceanside Energy Climate Action Element

The Energy Climate Action Element (ECAE) of the City's General Plan was adopted on May 8, 2019 and addresses energy consumption and other activities within the City that may contribute to adverse energy and GHG impacts. The ECAE focuses on activities associated with human-induced climate change. The ECAE outlines sustainability goals and policies for the City's decision-making process including development review protocols. The primary themes and goals of the ECAE are related to energy efficiency and renewable energy, smart growth and multimodal transportation, zero waste, water conservation, urban greening, local agriculture, and sustainable consumption.

3.3 Greenhouse Gas Inventories and Climate Change Conditions

3.3.1 Sources of Greenhouse Gas Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2019 (the most recent year for which data is available) totaled approximately 52,400 million metric tons (MMT) of CO_2e, excluding land use change and forestry (PBL 2018). The top six GHG emitters include China, the United States, the Russian Federation, India, Japan, and the European Union, which accounted for approximately 62% of the total global emissions, or approximately 32,500 MMT CO_2e (PBL 2018). Table 11 presents the top GHG-emissions-producing countries.

Table 11. Six Top GHG Producer Countries

Emitting Countries	2019 GHG Emissions (MMT CO_2e)[a,b]
China	14,000
United States	6,600
European Union	4,300
India	3,700
Russian Federation	2,500
Japan	1,400
Total	**32,500**

Source: PBL 2018.
Notes: MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.
[b] GHG emissions do not include land use change and forestry-related GHG emissions.

National Inventory

Per the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 to 2020 (EPA 2022), total United States GHG emissions were approximately 5,981 million metric tons (MMT) CO_2e in 2020 (EPA 2021). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 78.8% of total GHG emissions (4,716 MMT CO_2e). The largest source of CO2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.1% of CO_2 emissions in 2020 (4,343 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2020 were 7% lower; however, the gross emissions were down from a high of 15.6% above 1990 levels in 2007. GHG emissions decreased from 2019 to 2020 by 9% (590.3 MMT CO_2e) and overall, net emissions in 2020 were 20% below 2005 levels (EPA 2022).

State Inventory

According to California's 2000–2019 GHG emissions inventory (2021 edition), California emitted approximately 418 MMT CO_2e in 2019, including emissions resulting from out-of-state electrical generation (CARB 2022d). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high-GWP substances, and recycling and waste. Table 12 presents California GHG emission source categories and their relative contributions to the emissions inventory in 2019.

Table 12. GHG Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total*
Transportation	166.1	39.7%
Industrial	88.2	21.1%
Electric power	58.8	14.1%
Commercial and residential	43.8	10.5%
Agriculture	31.8	7.6%
High global-warming potential substances	20.6	4.9%
Recycling and waste	8.9	2.1%
Total	**418.2**	**100%**

Source: CARB 2022d.

Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
* Column may not add due to rounding.

Between 2000 and 2019, per-capita GHG emissions in California have dropped from a peak of 14.0 MT CO_2e per person in 2001 to 10.5 MT CO_2e per person in 2019, representing an approximate 25% decrease. In addition, total GHG emissions in 2019 were approximately 7 MMT CO_2e lower than 2018 emissions (CARB 2022d).

Local Inventories

Table 13. City of Oceanside GHG Emissions by Sectors for 2013

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total
Transportation	477,178	48.5
Electricity	251,524	25.6
Natural Gas	162,447	16.5
Solid Waste	40,615	4.1
Water[1]	27,420	2.8
Municipal Operations	24,828	2.5
Total	**984,012**	**100**

Source: City of Oceanside 2019.
Notes: GHG emissions for each category are rounded. Sums may not add up to totals due to rounding.
[1] Emissions associated with water and wastewater treatment at City-operated facilities were accounted for as Municipal emissions. Water emissions include upstream emissions from import of water to the City.

3.3.2 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014b).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental

Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed, including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The CNRA has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (2018) includes reports for nine regions of the state, including the San Diego Region, where the project is located. Key projected climate changes for the San Diego Region include the following (CNRA 2018b):

- Temperature is projected to increase substantially, by 5°F to 10°F by the end of the twenty-first century. Along with mean temperature, heat wave frequency will increase and have more intensity and longer duration. Marine layer clouds can help to mitigate the impacts of temperature change in the coastal regions, though these clouds are not well represented in climate models, requiring further research.
- Precipitation will remain highly variable but will change in character, with wetter winters, drier springs, and more frequent and severe droughts punctuated by more intense individual precipitation events. Effects of an alter precipitation regime on ecosystems, water demand and supply, water quality, and flooding emergencies are incompletely known and will benefit from cross-disciplinary investigation.
- Broadly, wildfire risk will likely increase in the future as climate warms. The risk for large catastrophic wildfires driven by Santa Ana wind events will also likely increase as a result of a drier autumns leading to low antecedent precipitation before the height of the Santa Ana wind season (December and January).

- Sea level along the San Diego County coast is expected to rise approximately 1 foot or by mid-twenty-first century, and 3 feet or potentially much higher by 2100. For the next several decades, high tides combined with elevated shoreline water levels produced by both locally and distantly generated wind-driven waves will drive extreme events. Longer-term sea level rise will increase rapidly in the second half of the century and will be punctuated by short periods of storm-driven extreme sea levels that will imperil existing infrastructure, structures, and ecosystems with increasing frequency. San Diego is testing adaptation approaches, but sustained and improved observations in combination with physics based modeling are needed to evaluate these adaptations measures and guide future planning.
- Development in the San Diego County region is concentrated in the western third of the country with approximately 60% of the land remaining undeveloped. Climate change, along with development and fragmentation, will act as significant stressors to San Diego's natural lands, which are some of the most biodiverse in the United States. SANDAG's regional planning emphasis on smart growth to concentrate urban development near city and transit centers supports conservation while using mitigating GHG emissions.
- The San Diego County Water Authority, the region's water wholesaler, continues to diversify its supply by developing and negotiating local and nearby imported sources, developing more recycled water, and encouraging greater water conservation. There are several coordinated efforts in the region to build resilience to climate change and holistic water management adaptations are becoming more prevalent throughout communities. Continued science and regional coordination to evaluate climate change impacts on future water supply, demand, and quality are needed in order to inform adaptation to future climate changes.
- San Diego's energy supply is rapidly changing with renewable energy sources, mostly photovoltaic arrays, increasing by more than 30% since 2010, which introduces novel sensitivities to weather variation and evolving vulnerability to climate changes. San Diego Gas & Electric (SDG&E) has installed a high-density weather station network that provides a more detailed, real-time awareness of weather conditions that could damage the energy system and/or produce unusual supply or demand.
- Recent work in San Diego showed that heat-related health impacts are observed at lower temperatures in the coastal region than in the inland and desert regions. This is in part due to coastal residents being less acclimated to heat and less likely to have air conditioning.
- Climate changes felt by San Diego County will also occur in northern Baja, Mexico. Binational coordination of climate adaptation measures presents potential for significant benefit to communities on both sides of the border. However, to be effective the approaches must navigate the complexity posed by different governance and community structures.

A summary of current and future climate change impacts to resource areas in California, as discussed in the Safeguarding California: Reducing Climate Risk (CNRA 2014), is provided below.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift, and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web

disruptions; and threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurred).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea level rise.

Forestry. The most significant climate change–related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea level rise in addition to more frequent and severe coastal storms and erosion are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands. Water quality and ocean acidification threaten the abundance of seafood and other plant and wildlife habitats throughout California and globally.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies. Additional health impacts that may be impacted by climate change include cardiovascular disease, vector-borne diseases, mental health impacts, and malnutrition injuries. Increased frequency of these ailments is likely to subsequently increase the direct risk of injury and/or mortality

Transportation. While the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the wintertime. Increased risk of flooding has a variety of public health concerns including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively impact groundwater reserves and result in increased overdraft and

subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

3.4 Significance Criteria and Methodology

3.4.1 Thresholds of Significance

The significance criteria used to evaluate the project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines. For the purposes of this GHG emissions analysis, the project would have a significant environmental impact if it would (14 CCR 15000 et seq.):

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The Appendix G thresholds for GHGs do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009a). Additional guidance regarding assessment of GHGs is discussed below.

CEQA Guidelines

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate greenhouse gas emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines specify that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

Governor's Office of Planning and Research Guidance

The Governor's Office of Planning and Research technical advisory titled, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2007). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2007).

City of Oceanside

The City of Oceanside's CAP relies on a screening threshold based on land use size and a CAP Consistency Checklist to determine whether a project's emissions would be consistent with GHG emissions estimated within the City's CAP. Consistent with California's Climate Change Scoping Plan, the City has established a bright line threshold of significance for GHG emissions impacts: 900 MT CO_2e annually, with construction-related emissions amortized over 20 years. Specifically, the City has determined that new development projects emitting less than 900 MT CO_2e annual GHG would not contribute considerably to cumulative climate change impacts, and therefore do not need to demonstrate consistency with the CAP. Projects greater than 900 MT CO_2e would be required to show CAP Checklist consistency.

The CAP Consistency Checklist is used to determine significance in accordance with CEQA Guidelines Section 15183.5; therefore, the CAP Consistency Checklist was used to evaluate the proposed project's significance with respect to GHG emissions.

3.4.2 Approach and Methodology

3.4.2.1 Construction

CalEEMod Version 2020.4.0 was used to estimate potential project-generated GHG emissions during construction. Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 2.4.2.1 are also applicable for the estimation of construction-related GHG emissions. As such, see Section 2.4.2.1 for a discussion of construction emissions calculation methodology and assumptions.

3.4.2.2 Operation

CalEEMod Version 2020.4.0 was used to estimate potential project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (natural gas and electricity), mobile sources, solid waste, and water supply and wastewater treatment. Emissions from each category are discussed in the following text with respect to the project. For additional details, see Section 2.4.2.2, Operational Emissions, for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy (natural gas and electricity), and mobile sources.

Area Sources

CalEEMod was used to estimate GHG emissions from the project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 2.4.2.2 for a discussion of landscaping equipment emissions calculations. Consumer product use and architectural coatings result in VOC emissions, which are analyzed in air quality analysis only, and little to no GHG emissions.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the project's residential land use. The energy use from residences was calculated based on CalEEMod energy intensity values (natural gas usage per square foot per year) from the Residential Appliance Saturation Survey database. The results are conservative as CalEEMod default assumes 2019 Title 24 Building Energy Efficiency Standards. Emissions are calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs. Annual natural gas and electricity emissions were estimated in CalEEMod using the emissions factors for SDG&E, which would be the energy source provider for the project.

CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kilowatt hour) for SDG&E are based on the value for SDG&E's energy mix in 2019. Because SDG&E is striving to meet the 50% RPS by 2030, the CO_2 emissions intensity factor is to be less than assumed in CalEEMod at project operation (2025), which would reflect the increase in percentage of renewable energy in SDG&E's energy portfolio.

Mobile Sources

All details for criteria air pollutants discussed in Section 2.4.2.2 are also applicable for the estimation of operational mobile source GHG emissions.

Regulatory measures related to mobile sources include AB 1493 and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the project's motor vehicles. The effectiveness of fuel economy improvements was evaluated by using the CalEEMod emission factors for motor vehicles in 2025 to the extent it was captured in EMFAC 2017.

Solid Waste

The project would generate solid waste and therefore result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the project would require the use

of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values.

3.5 Impact Analysis

Threshold 1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold 2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction Emissions

Construction of the project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, on-road vendor trucks, and worker vehicles.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 2.4.2.1. Construction of the project is anticipated to commence in January 2023 and reach completion in July 2023, lasting a total of 14 months. Table 14 presents construction emissions for the project in 2023 and 2024 from construction emission sources.

Table 14. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons			
2023	291.70	0.06	<0.01	295.58
2024	462.24	0.0	0.02	469.29
			Total	**764.87**
			20-year Amortized Construction Emissions (MT CO_2e per year)	**38.24**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; MT = metric tons.
See Appendix A for complete results.
Totals may not add due to rounding.

As shown in Table 14, the estimated total GHG emissions during construction of would be approximately 765 MT CO_2e over the construction period. Estimated project-generated construction emissions amortized over 20 years would be approximately 38 MT CO_2e per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short term in nature, lasting only for the duration of the construction period (18 months), and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis in the following text.

Operational Emissions

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution

and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 3.4.2.2, Operation.

The estimated operational (year 2025) project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation are shown in Table 15.

Table 15. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
Area	1.01	<0.01	0.00	1.03
Energy	287.20	0.01	<0.01	288.55
Mobile	733.28	0.05	0.033	744.50
Solid waste	19.74	1.17	0.00	48.90
Water supply and wastewater	30.80	0.18	<0.01	36.55
Operational Emissions				1,119.55
20-Year Amortized Construction Emissions				*38.24*
Operation plus Amortized Construction Total				**1,157.79**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; <0.01 = reported emissions are less than 0.01.
See Appendix A for complete results.
The values shown are the annual emissions for operational year 2025.
Totals may not add due to rounding.

As shown in Table 15, estimated annual project-generated GHG emissions would be approximately 1,158 MT CO_2e per year as a result of project operations only. Estimated annual project-generated operational emissions in 2025 plus amortized project construction emissions would be approximately 1,158 MT CO_2e per year and would exceed the CAP's screening threshold of 900 MT CO_2e and would be required to access using the CAP's Consistency Checklist. Projects that meet one or more of the following locational criteria are eligible for using the CAP Consistency Checklist:

1. The project site is located within a designated Smart Growth Opportunity Area.
2. The project site is located with ¼ mile of a priority TOD corridor, as identified in the City's Smart and Sustainable Corridors Plan.
3. The project is consistent with current land use and zoning designations.
4. The project requires amendment of current land use and zoning designations. As demonstrated through a detailed analysis a) consistent with the precedent in the surrounding zoning district and b) subject to third party expert review, the proposed land uses would generate less GHG emissions than those associated with uses allowed under current land use and zoning designations.

The project site is consistent with the current land use and zoning designation, as described in detail in Section 2.5.1 of this report. As such, the project is eligible for the CAP Consistency Checklist for assessment of GHG emissions impacts. Table 16 includes the CAP Checklist items and the related project consistency analysis.

Table 16 Climate Action Plan Consistency Checklist and Project Consistency

Check List Item	Project Consistency
1. On-Site Renewable Energy Supply. If the project meets one or more of the thresholds outlined in Section 3047 of the City's Zoning Ordinance, will at least 50% of the estimated electricity demand be met with on-site renewable emissions-free energy supply (e.g., solar photovoltaic facilities)?	**Consistent.** The project is a residential project that includes 84 dwelling units and is therefore required to comply with the on-site renewable energy supply provisions of the checklist. The proposed project includes roof-top solar PV, which will accommodate at least 50% of energy demand during operation.
2. Electric Vehicle Charging Facilities. If the project involves new development that requires at least five (5) parking spaces, will the project comply with the requirements of Section 3048 of the City's Zoning Ordinance?	**Consistent.** The proposed project includes single family homes that would be consistent with the Cal Green building code and therefore would be exempt from the requirements of Section 3048 of the City's zoning ordinance.
3. Recycled Water Infrastructure. Does the City's Water Utilities Department require that the project install infrastructure to provide for recycled water service?	**Not Applicable.** The project is not required to use recycled water.
4. Transportation Demand Management (TDM). Per Section 3050 of the City's Zoning Ordinance, does the proposed project expected to generate at least 100 daily employee commute trips, necessitating the preparation and implementation of a TDM Plan?	**Not Applicable.** The project is not expected to generate more than 100 daily employee commute trips, and therefore is not required to prepare a TDM Plan.
5. Urban Forestry. Will the project comply with the minimum tree canopy and permeable surface area requirements outlined in Section 3049 of the City's Zoning Ordinance?	**Consistent.** The proposed project would meet the permeable surface area and tree canopy requirements by preserving open space on the northern portion of the project site and including landscaped areas within the developed southern portion of the project site.

Source: Appendix A

As shown in Table 16, the proposed project is consistent with the CAP Consistency Checklist adopted by the City to ensure that the emission targets identified in the CAP are achieved. Therefore, the proposed project is not expected to generate GHG emissions that may have a significant impact on the environment, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and the impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Impacts would be less than significant without mitigation.

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5 List of Preparers

Nicholas Lorenzen Air Quality Specialist

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Appendix A

CalEEMod Output Files

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Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Annual

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

Guajome Lake Road Residential - Mitigated

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - NA

Land Use - Land Use metrics were modified based on project specific data.

Construction Phase - Construction phasing was modifed based on information provided by the project applicant.

Trips and VMT - CalEEMod defaults.

Vehicle Trips - Trip generation rates based on Transportation Study

Woodstoves - No woodstoves.

Energy Use - CalEEMod defaults.

Construction Off-road Equipment Mitigation - compliance with SDAPCD Rules.

Mobile Land Use Mitigation - NA

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

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Architectural Coating - Compliance with SDACPD Rules

Solid Waste - CalEEMod defaults.

Water And Wastewater - CalEEMod defaults.

Area Coating - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberWood	29.40	0.00
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.44	10.00

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Annual

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

tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1743	1.5887	1.6297	3.7400e-003	0.3185	0.0673	0.3858	0.1276	0.0627	0.1903	0.0000	333.5472	333.5472	0.0654	9.7400e-003	338.0844
2024	0.7397	1.6218	2.0592	4.6900e-003	0.1395	0.0654	0.2049	0.0378	0.0615	0.0993	0.0000	420.8520	420.8520	0.0640	0.0161	427.2564
Maximum	**0.7397**	**1.6218**	**2.0592**	**4.6900e-003**	**0.3185**	**0.0673**	**0.3858**	**0.1276**	**0.0627**	**0.1903**	**0.0000**	**420.8520**	**420.8520**	**0.0654**	**0.0161**	**427.2564**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1743	1.5887	1.6297	3.7400e-003	0.1885	0.0673	0.2558	0.0697	0.0627	0.1324	0.0000	333.5470	333.5470	0.0654	9.7400e-003	338.0841
2024	0.7397	1.6218	2.0592	4.6900e-003	0.1395	0.0654	0.2049	0.0378	0.0615	0.0993	0.0000	420.8517	420.8517	0.0640	0.0161	427.2561

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Annual

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

Maximum	**0.7397**	**1.6218**	**2.0592**	**4.6900e-003**	**0.1885**	**0.0673**	**0.2558**	**0.0697**	**0.0627**	**0.1324**	**0.0000**	**420.8517**	**420.8517**	**0.0654**	**0.0161**	**427.2561**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.38**	**0.00**	**22.01**	**35.02**	**0.00**	**20.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-5-2023**	**9-4-2023**	0.9583	0.9583
2	**9-5-2023**	**12-4-2023**	0.6133	0.6133
3	**12-5-2023**	**3-4-2024**	0.5893	0.5893
4	**3-5-2024**	**6-4-2024**	0.5816	0.5816
5	**6-5-2024**	**9-4-2024**	0.5802	0.5802
6	**9-5-2024**	**9-30-2024**	0.1396	0.1396
		Highest	0.9583	0.9583

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Area	1.0190	0.0386	0.6365	2.3000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	37.4083	37.4083	1.6700e-003	6.7000e-004	37.6490
Energy	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	290.6643	290.6643	0.0124	3.5400e-003	292.0299
Mobile	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Waste						0.0000	0.0000		0.0000	0.0000	19.9885	0.0000	19.9885	1.1813	0.0000	49.5207

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

Water						0.0000	0.0000		0.0000	0.0000	1.7363	29.4049	31.1412	0.1801	4.4300e-003	36.9643
Total	**1.4332**	**0.5945**	**4.4466**	**8.9500e-003**	**0.8865**	**0.0211**	**0.9076**	**0.2366**	**0.0207**	**0.2573**	**21.7248**	**1,099.5932**	**1,121.3181**	**1.4285**	**0.0423**	**1,169.6385**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Area	1.0190	0.0386	0.6365	2.3000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	37.4083	37.4083	1.6700e-003	6.7000e-004	37.6490
Energy	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	290.6643	290.6643	0.0124	3.5400e-003	292.0299
Mobile	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Waste						0.0000	0.0000		0.0000	0.0000	19.9885	0.0000	19.9885	1.1813	0.0000	49.5207
Water						0.0000	0.0000		0.0000	0.0000	1.7363	29.4049	31.1412	0.1801	4.4300e-003	36.9643
Total	**1.4332**	**0.5945**	**4.4466**	**8.9500e-003**	**0.8865**	**0.0211**	**0.9076**	**0.2366**	**0.0207**	**0.2573**	**21.7248**	**1,099.5932**	**1,121.3181**	**1.4285**	**0.0423**	**1,169.6385**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.3300e-003	4.7000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6020	0.6020	2.0000e-005	9.0000e-005	0.6284
Worker	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	**2.8000e-004**	**1.5000e-003**	**2.5200e-003**	**2.0000e-005**	**9.2000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.1731**	**1.1731**	**4.0000e-005**	**1.1000e-004**	**1.2047**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0442**	**6.3300e-003**	**0.0506**	**0.0227**	**5.8200e-003**	**0.0286**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Annual

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.3300e-003	4.7000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6020	0.6020	2.0000e-005	9.0000e-005	0.6284
Worker	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	**2.8000e-004**	**1.5000e-003**	**2.5200e-003**	**2.0000e-005**	**9.2000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.1731**	**1.1731**	**4.0000e-005**	**1.1000e-004**	**1.2047**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1381**	**0.0214**	**0.1594**	**0.0548**	**0.0197**	**0.0745**	**0.0000**	**81.8028**	**81.8028**	**0.0265**	**0.0000**	**82.4642**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.4100e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.2000e-004	1.7000e-004	2.0000e-005	2.0000e-004	0.0000	1.8059	1.8059	5.0000e-005	2.6000e-004	1.8852
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	**9.2000e-004**	**4.5600e-003**	**8.2500e-003**	**4.0000e-005**	**3.0100e-003**	**3.0000e-005**	**3.0400e-003**	**8.1000e-004**	**3.0000e-005**	**8.5000e-004**	**0.0000**	**3.7095**	**3.7095**	**1.1000e-004**	**3.1000e-004**	**3.8061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0621	0.0000	0.0621	0.0247	0.0000	0.0247	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.0621**	**0.0214**	**0.0835**	**0.0247**	**0.0197**	**0.0443**	**0.0000**	**81.8027**	**81.8027**	**0.0265**	**0.0000**	**82.4641**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.4100e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.2000e-004	1.7000e-004	2.0000e-005	2.0000e-004	0.0000	1.8059	1.8059	5.0000e-005	2.6000e-004	1.8852
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	**9.2000e-004**	**4.5600e-003**	**8.2500e-003**	**4.0000e-005**	**3.0100e-003**	**3.0000e-005**	**3.0400e-003**	**8.1000e-004**	**3.0000e-005**	**8.5000e-004**	**0.0000**	**3.7095**	**3.7095**	**1.1000e-004**	**3.1000e-004**	**3.8061**

3.4 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	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4926	127.4926	0.0303	0.0000	128.2508
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4926**	**127.4926**	**0.0303**	**0.0000**	**128.2508**

Unmitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2300e-003	0.1221	0.0431	5.6000e-004	0.0183	7.2000e-004	0.0190	5.2700e-003	6.9000e-004	5.9600e-003	0.0000	55.1789	55.1789	1.6700e-003	8.0000e-003	57.6032
Worker	0.0202	0.0140	0.1705	5.2000e-004	0.0600	3.3000e-004	0.0603	0.0159	3.0000e-004	0.0162	0.0000	47.4650	47.4650	1.4100e-003	1.3200e-003	47.8948
Total	**0.0235**	**0.1361**	**0.2135**	**1.0800e-003**	**0.0782**	**1.0500e-003**	**0.0793**	**0.0212**	**9.9000e-004**	**0.0222**	**0.0000**	**102.6439**	**102.6439**	**3.0800e-003**	**9.3200e-003**	**105.4980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4925	127.4925	0.0303	0.0000	128.2507
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4925**	**127.4925**	**0.0303**	**0.0000**	**128.2507**

Mitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2300e-003	0.1221	0.0431	5.6000e-004	0.0183	7.2000e-004	0.0190	5.2700e-003	6.9000e-004	5.9600e-003	0.0000	55.1789	55.1789	1.6700e-003	8.0000e-003	57.6032
Worker	0.0202	0.0140	0.1705	5.2000e-004	0.0600	3.3000e-004	0.0603	0.0159	3.0000e-004	0.0162	0.0000	47.4650	47.4650	1.4100e-003	1.3200e-003	47.8948
Total	**0.0235**	**0.1361**	**0.2135**	**1.0800e-003**	**0.0782**	**1.0500e-003**	**0.0793**	**0.0212**	**9.9000e-004**	**0.0222**	**0.0000**	**102.6439**	**102.6439**	**3.0800e-003**	**9.3200e-003**	**105.4980**

3.4 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	tons/yr										MT/yr					
Off-Road	0.1398	1.2772	1.5359	2.5600e-003		0.0583	0.0583		0.0548	0.0548	0.0000	220.2567	220.2567	0.0521	0.0000	221.5588
Total	**0.1398**	**1.2772**	**1.5359**	**2.5600e-003**		**0.0583**	**0.0583**		**0.0548**	**0.0548**	**0.0000**	**220.2567**	**220.2567**	**0.0521**	**0.0000**	**221.5588**

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

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2094	0.0727	9.5000e-004	0.0315	1.2500e-003	0.0328	9.1100e-003	1.1900e-003	0.0103	0.0000	93.6489	93.6489	2.9500e-003	0.0136	97.7658
Worker	0.0328	0.0217	0.2751	8.6000e-004	0.1036	5.4000e-004	0.1042	0.0275	5.0000e-004	0.0280	0.0000	79.3002	79.3002	2.2200e-003	2.1400e-003	79.9924
Total	**0.0382**	**0.2312**	**0.3477**	**1.8100e-003**	**0.1352**	**1.7900e-003**	**0.1369**	**0.0366**	**1.6900e-003**	**0.0383**	**0.0000**	**172.9491**	**172.9491**	**5.1700e-003**	**0.0157**	**177.7582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1398	1.2772	1.5359	2.5600e-003		0.0583	0.0583		0.0548	0.0548	0.0000	220.2564	220.2564	0.0521	0.0000	221.5585
Total	**0.1398**	**1.2772**	**1.5359**	**2.5600e-003**		**0.0583**	**0.0583**		**0.0548**	**0.0548**	**0.0000**	**220.2564**	**220.2564**	**0.0521**	**0.0000**	**221.5585**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2094	0.0727	9.5000e-004	0.0315	1.2500e-003	0.0328	9.1100e-003	1.1900e-003	0.0103	0.0000	93.6489	93.6489	2.9500e-003	0.0136	97.7658
Worker	0.0328	0.0217	0.2751	8.6000e-004	0.1036	5.4000e-004	0.1042	0.0275	5.0000e-004	0.0280	0.0000	79.3002	79.3002	2.2200e-003	2.1400e-003	79.9924
Total	**0.0382**	**0.2312**	**0.3477**	**1.8100e-003**	**0.1352**	**1.7900e-003**	**0.1369**	**0.0366**	**1.6900e-003**	**0.0383**	**0.0000**	**172.9491**	**172.9491**	**5.1700e-003**	**0.0157**	**177.7582**

3.5 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	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8800e-003**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

Unmitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	4.1000e-004	2.7000e-004	3.4100e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	0.9821	0.9821	3.0000e-005	3.0000e-005	0.9906
Total	**4.8000e-004**	**2.9200e-003**	**4.3300e-003**	**2.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7000e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1650**	**2.1650**	**7.0000e-005**	**2.0000e-004**	**2.2256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8800e-003**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	4.1000e-004	2.7000e-004	3.4100e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	0.9821	0.9821	3.0000e-005	3.0000e-005	0.9906
Total	**4.8000e-004**	**2.9200e-003**	**4.3300e-003**	**2.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7000e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1650**	**2.1650**	**7.0000e-005**	**2.0000e-004**	**2.2256**

3.6 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	tons/yr										MT/yr					
Archit. Coating	0.5488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	**0.5506**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5569**

Unmitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	7.1000e-004	4.7000e-004	5.9600e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7186	1.7186	5.0000e-005	5.0000e-005	1.7336
Total	**7.8000e-004**	**3.1200e-003**	**6.8800e-003**	**3.0000e-005**	**2.6500e-003**	**3.0000e-005**	**2.6700e-003**	**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9015**	**2.9015**	**9.0000e-005**	**2.2000e-004**	**2.9685**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	**0.5506**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5568**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	7.1000e-004	4.7000e-004	5.9600e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7186	1.7186	5.0000e-005	5.0000e-005	1.7336
Total	**7.8000e-004**	**3.1200e-003**	**6.8800e-003**	**3.0000e-005**	**2.6500e-003**	**3.0000e-005**	**2.6700e-003**	**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9015**	**2.9015**	**9.0000e-005**	**2.2000e-004**	**2.9685**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Mitigated	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Unmitigated	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		

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Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	163.8664	163.8664	0.0100	1.2100e-003	164.4785

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Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	163.8664	163.8664	0.0100	1.2100e-003	164.4785
NaturalGas Mitigated	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
NaturalGas Unmitigated	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.3761e+006	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
Total		**0.0128**	**0.1095**	**0.0466**	**7.0000e-004**		**8.8500e-003**	**8.8500e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**126.7979**	**126.7979**	**2.4300e-003**	**2.3200e-003**	**127.5514**

Mitigated

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

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City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.3761e+006	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
Total		**0.0128**	**0.1095**	**0.0466**	**7.0000e-004**		**8.8500e-003**	**8.8500e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**126.7979**	**126.7979**	**2.4300e-003**	**2.3200e-003**	**127.5514**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	669031	163.8664	0.0100	1.2100e-003	164.4785
Total		**163.8664**	**0.0100**	**1.2100e-003**	**164.4785**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

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

Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	669031	163.8664	0.0100	1.2100e-003	164.4785
Total		**163.8664**	**0.0100**	**1.2100e-003**	**164.4785**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr									MT/yr						
Mitigated	1.0190	0.0386	0.6365	2.3000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	37.4083	37.4083	1.6700e-003	6.7000e-004	37.6490
Unmitigated	1.0190	0.0386	0.6365	2.3000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	37.4083	37.4083	1.6700e-003	6.7000e-004	37.6490

6.2 Area by SubCategory

Unmitigated

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr											MT/yr				
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7525					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.6800e-003	0.0314	0.0134	2.0000e-004		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	36.3894	36.3894	7.0000e-004	6.7000e-004	36.6057
Landscaping	0.0187	7.1800e-003	0.6232	3.0000e-005		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	1.0189	1.0189	9.8000e-004	0.0000	1.0433
Total	**1.0190**	**0.0386**	**0.6365**	**2.3000e-004**		**6.0000e-003**	**6.0000e-003**		**6.0000e-003**	**6.0000e-003**	**0.0000**	**37.4083**	**37.4083**	**1.6800e-003**	**6.7000e-004**	**37.6490**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr											MT/yr				
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7525					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.6800e-003	0.0314	0.0134	2.0000e-004		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	36.3894	36.3894	7.0000e-004	6.7000e-004	36.6057
Landscaping	0.0187	7.1800e-003	0.6232	3.0000e-005		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	1.0189	1.0189	9.8000e-004	0.0000	1.0433
Total	**1.0190**	**0.0386**	**0.6365**	**2.3000e-004**		**6.0000e-003**	**6.0000e-003**		**6.0000e-003**	**6.0000e-003**	**0.0000**	**37.4083**	**37.4083**	**1.6800e-003**	**6.7000e-004**	**37.6490**

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

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	31.1412	0.1801	4.4300e-003	36.9643
Unmitigated	31.1412	0.1801	4.4300e-003	36.9643

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.94127	2.5614	1.6000e-004	2.0000e-005	2.5709
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.47294 / 3.45033	28.5798	0.1800	4.4100e-003	34.3933
Total		**31.1412**	**0.1801**	**4.4300e-003**	**36.9643**

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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.94127	2.5614	1.6000e-004	2.0000e-005	2.5709
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.47294 / 3.45033	28.5798	0.1800	4.4100e-003	34.3933
Total		**31.1412**	**0.1801**	**4.4300e-003**	**36.9643**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.9885	1.1813	0.0000	49.5207

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

Unmitigated	19.9885	1.1813	0.0000	49.5207

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	98.4	19.9743	1.1805	0.0000	49.4855
Total		**19.9885**	**1.1813**	**0.0000**	**49.5207**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

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

Single Family Housing	98.4	19.9743	1.1805	0.0000	49.4855
Total		**19.9885**	**1.1813**	**0.0000**	**49.5207**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Guajome Lake Road Residential - Mitigated

San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - NA

Land Use - Land Use metrics were modified based on project specific data.

Construction Phase - Construction phasing was modifed based on information provided by the project applicant.

Trips and VMT - CalEEMod defaults.

Vehicle Trips - Trip generation rates based on Transportation Study

Woodstoves - No woodstoves.

Energy Use - CalEEMod defaults.

Construction Off-road Equipment Mitigation - compliance with SDAPCD Rules.

Mobile Land Use Mitigation - NA

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

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Architectural Coating - Compliance with SDACPD Rules

Solid Waste - CalEEMod defaults.

Water And Wastewater - CalEEMod defaults.

Area Coating - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberWood	29.40	0.00
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.44	10.00

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

tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3836	34.8068	28.6238	0.0648	19.8455	1.4269	21.1139	10.1534	1.3128	11.3203	0.0000	6,290.8387	6,290.8387	1.9522	0.1849	6,346.4571
2024	55.1356	15.7801	19.9661	0.0466	1.4559	0.6321	2.0880	0.3938	0.5947	0.9885	0.0000	4,606.6641	4,606.6641	0.7210	0.1805	4,677.0262
Maximum	**55.1356**	**34.8068**	**28.6238**	**0.0648**	**19.8455**	**1.4269**	**21.1139**	**10.1534**	**1.3128**	**11.3203**	**0.0000**	**6,290.8387**	**6,290.8387**	**1.9522**	**0.1849**	**6,346.4571**

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	3.3836	34.8068	28.6238	0.0648	9.0342	1.4269	10.3025	4.5970	1.3128	5.7640	0.0000	6,290.8387	6,290.8387	1.9522	0.1849	6,346.4571
2024	55.1356	15.7801	19.9661	0.0466	1.4559	0.6321	2.0880	0.3938	0.5947	0.9885	0.0000	4,606.6641	4,606.6641	0.7210	0.1805	4,677.0262

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

Maximum	**55.1356**	**34.8068**	**28.6238**	**0.0648**	**9.0342**	**1.4269**	**10.3025**	**4.5970**	**1.3128**	**5.7640**	**0.0000**	**6,290.8387**	**6,290.8387**	**1.9522**	**0.1849**	**6,346.4571**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.60**	**52.68**	**0.00**	**45.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Total	**8.1821**	**3.7888**	**28.5427**	**0.0560**	**5.1044**	**0.1839**	**5.2883**	**1.3597**	**0.1815**	**1.5412**	**0.0000**	**6,536.4268**	**6,536.4268**	**0.3622**	**0.2322**	**6,614.6733**

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Category	lb/day										lb/day					
Area	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Total	**8.1821**	**3.7888**	**28.5427**	**0.0560**	**5.1044**	**0.1839**	**5.2883**	**1.3597**	**0.1815**	**1.5412**	**0.0000**	**6,536.4268**	**6,536.4268**	**0.3622**	**0.2322**	**6,614.6733**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Total	**0.0564**	**0.2878**	**0.5247**	**2.5400e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2300e-003**	**0.0532**		**264.6877**	**264.6877**	**7.6000e-003**	**0.0225**	**271.5814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

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

Total	**0.0564**	**0.2878**	**0.5247**	**2.5400e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2300e-003**	**0.0532**		**264.6877**	**264.6877**	**7.6000e-003**	**0.0225**	**271.5814**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Total	**0.0618**	**0.2912**	**0.5727**	**2.6800e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3100e-003**	**0.0576**		**279.3610**	**279.3610**	**8.0000e-003**	**0.0229**	**286.3736**

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223

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

Total	**0.0618**	**0.2912**	**0.5727**	**2.6800e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3100e-003**	**0.0576**		**279.3610**	**279.3610**	**8.0000e-003**	**0.0229**	**286.3736**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0597	2.1434	0.7724	0.0102	0.3386	0.0131	0.3517	0.0975	0.0125	0.1100		1,105.2348	1,105.2348	0.0335	0.1600	1,153.7610
Worker	0.3717	0.2308	3.2639	9.8700e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		997.7831	997.7831	0.0270	0.0249	1,005.8713
Total	**0.4314**	**2.3742**	**4.0363**	**0.0201**	**1.4558**	**0.0191**	**1.4749**	**0.3938**	**0.0180**	**0.4118**		**2,103.0179**	**2,103.0179**	**0.0605**	**0.1849**	**2,159.6323**

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0597	2.1434	0.7724	0.0102	0.3386	0.0131	0.3517	0.0975	0.0125	0.1100		1,105.2348	1,105.2348	0.0335	0.1600	1,153.7610
Worker	0.3717	0.2308	3.2639	9.8700e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		997.7831	997.7831	0.0270	0.0249	1,005.8713
Total	**0.4314**	**2.3742**	**4.0363**	**0.0201**	**1.4558**	**0.0191**	**1.4749**	**0.3938**	**0.0180**	**0.4118**		**2,103.0179**	**2,103.0179**	**0.0605**	**0.1849**	**2,159.6323**

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0575	2.1288	0.7544	0.0101	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,085.9653	1,085.9653	0.0343	0.1572	1,133.6765
Worker	0.3490	0.2075	3.0449	9.5500e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		964.9998	964.9998	0.0246	0.0232	972.5420
Total	**0.4065**	**2.3363**	**3.7993**	**0.0196**	**1.4559**	**0.0188**	**1.4747**	**0.3938**	**0.0178**	**0.4116**		**2,050.9652**	**2,050.9652**	**0.0589**	**0.1805**	**2,106.2185**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0575	2.1288	0.7544	0.0101	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,085.9653	1,085.9653	0.0343	0.1572	1,133.6765
Worker	0.3490	0.2075	3.0449	9.5500e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		964.9998	964.9998	0.0246	0.0232	972.5420
Total	**0.4065**	**2.3363**	**3.7993**	**0.0196**	**1.4559**	**0.0188**	**1.4747**	**0.3938**	**0.0178**	**0.4116**		**2,050.9652**	**2,050.9652**	**0.0589**	**0.1805**	**2,106.2185**

3.5 Paving - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0411	0.0244	0.3582	1.1200e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		113.5294	113.5294	2.9000e-003	2.7300e-003	114.4167
Total	**0.0480**	**0.2799**	**0.4487**	**2.3300e-003**	**0.1721**	**2.2400e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**243.8452**	**243.8452**	**7.0100e-003**	**0.0216**	**250.4579**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0411	0.0244	0.3582	1.1200e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		113.5294	113.5294	2.9000e-003	2.7300e-003	114.4167
Total	**0.0480**	**0.2799**	**0.4487**	**2.3300e-003**	**0.1721**	**2.2400e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**243.8452**	**243.8452**	**7.0100e-003**	**0.0216**	**250.4579**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.8761					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	**55.0568**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0719	0.0427	0.6269	1.9700e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		198.6764	198.6764	5.0700e-003	4.7900e-003	200.2292
Total	**0.0788**	**0.2982**	**0.7174**	**3.1800e-003**	**0.2707**	**2.7400e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**328.9923**	**328.9923**	**9.1800e-003**	**0.0237**	**336.2704**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.8761					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	**55.0568**	**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**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0719	0.0427	0.6269	1.9700e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		198.6764	198.6764	5.0700e-003	4.7900e-003	200.2292
Total	**0.0788**	**0.2982**	**0.7174**	**3.1800e-003**	**0.2707**	**2.7400e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**328.9923**	**328.9923**	**9.1800e-003**	**0.0237**	**336.2704**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Unmitigated	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
NaturalGas Unmitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6509.87	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.50987	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

6.0 Area Detail

6.1 Mitigation Measures Area

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

Category	lb/day										lb/day					
Mitigated	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Unmitigated	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453

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	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0897	0.7664	0.3261	4.8900e-003		0.0620	0.0620		0.0620	0.0620	0.0000	978.3529	978.3529	0.0188	0.0179	984.1668
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**5.7586**	**0.8461**	**7.2503**	**5.2600e-003**		**0.1004**	**0.1004**		**0.1004**	**0.1004**	**0.0000**	**990.8326**	**990.8326**	**0.0307**	**0.0179**	**996.9453**

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

SubCategory	lb/day										lb/day					
Architectural Coating	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0897	0.7664	0.3261	4.8900e-003		0.0620	0.0620		0.0620	0.0620	0.0000	978.3529	978.3529	0.0188	0.0179	984.1668
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**5.7586**	**0.8461**	**7.2503**	**5.2600e-003**		**0.1004**	**0.1004**		**0.1004**	**0.1004**	**0.0000**	**990.8326**	**990.8326**	**0.0307**	**0.0179**	**996.9453**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Summer

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Guajome Lake Road Residential - Mitigated

San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - NA

Land Use - Land Use metrics were modified based on project specific data.

Construction Phase - Construction phasing was modifed based on information provided by the project applicant.

Trips and VMT - CalEEMod defaults.

Vehicle Trips - Trip generation rates based on Transportation Study

Woodstoves - No woodstoves.

Energy Use - CalEEMod defaults.

Construction Off-road Equipment Mitigation - compliance with SDAPCD Rules.

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Mobile Land Use Mitigation - NA

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Architectural Coating - Compliance with SDACPD Rules

Solid Waste - CalEEMod defaults.

Water And Wastewater - CalEEMod defaults.

Area Coating - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblFireplaces	NumberWood	29.40	0.00
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.44	10.00

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3880	34.8218	28.6028	0.0647	19.8455	1.4270	21.1139	10.1534	1.3129	11.3203	0.0000	6,282.9622	6,282.9622	1.9525	0.1873	6,338.6889
2024	55.1416	15.8957	19.8435	0.0460	1.4559	0.6322	2.0880	0.3938	0.5948	0.9886	0.0000	4,555.3325	4,555.3325	0.7212	0.1827	4,626.4037
Maximum	**55.1416**	**34.8218**	**28.6028**	**0.0647**	**19.8455**	**1.4270**	**21.1139**	**10.1534**	**1.3129**	**11.3203**	**0.0000**	**6,282.9622**	**6,282.9622**	**1.9525**	**0.1873**	**6,338.6889**

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	3.3880	34.8218	28.6028	0.0647	9.0342	1.4270	10.3025	4.5970	1.3129	5.7640	0.0000	6,282.9622	6,282.9622	1.9525	0.1873	6,338.6889
2024	55.1416	15.8957	19.8435	0.0460	1.4559	0.6322	2.0880	0.3938	0.5948	0.9886	0.0000	4,555.3325	4,555.3325	0.7212	0.1827	4,626.4037

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Maximum	**55.1416**	**34.8218**	**28.6028**	**0.0647**	**9.0342**	**1.4270**	**10.3025**	**4.5970**	**1.3129**	**5.7640**	**0.0000**	**6,282.9622**	**6,282.9622**	**1.9525**	**0.1873**	**6,338.6889**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.60**	**52.68**	**0.00**	**45.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Total	**8.1265**	**3.9838**	**29.0944**	**0.0540**	**5.1044**	**0.1839**	**5.2883**	**1.3597**	**0.1816**	**1.5413**	**0.0000**	**6,329.9560**	**6,329.9560**	**0.3800**	**0.2427**	**6,411.7891**

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Category	lb/day										lb/day					
Area	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Total	**8.1265**	**3.9838**	**29.0944**	**0.0540**	**5.1044**	**0.1839**	**5.2883**	**1.3597**	**0.1816**	**1.5413**	**0.0000**	**6,329.9560**	**6,329.9560**	**0.3800**	**0.2427**	**6,411.7891**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

Date: 12/19/2022 10:56 AM

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Total	**0.0603**	**0.3024**	**0.5060**	**2.4600e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2400e-003**	**0.0532**		**257.6177**	**257.6177**	**7.8100e-003**	**0.0228**	**264.6101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Total	**0.0603**	**0.3024**	**0.5060**	**2.4600e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2400e-003**	**0.0532**		**257.6177**	**257.6177**	**7.8100e-003**	**0.0228**	**264.6101**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Total	**0.0662**	**0.3062**	**0.5516**	**2.6000e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3200e-003**	**0.0576**		**271.4845**	**271.4845**	**8.2400e-003**	**0.0232**	**278.6054**

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Total	**0.0662**	**0.3062**	**0.5516**	**2.6000e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3200e-003**	**0.0576**		**271.4845**	**271.4845**	**8.2400e-003**	**0.0232**	**278.6054**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0581	2.2336	0.7957	0.0103	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,106.8061	1,106.8061	0.0333	0.1604	1,155.4398
Worker	0.4030	0.2596	3.1014	9.3300e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		942.9409	942.9409	0.0288	0.0269	951.6775
Total	**0.4611**	**2.4931**	**3.8972**	**0.0196**	**1.4558**	**0.0191**	**1.4750**	**0.3938**	**0.0181**	**0.4119**		**2,049.7470**	**2,049.7470**	**0.0621**	**0.1873**	**2,107.1173**

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0581	2.2336	0.7957	0.0103	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,106.8061	1,106.8061	0.0333	0.1604	1,155.4398
Worker	0.4030	0.2596	3.1014	9.3300e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		942.9409	942.9409	0.0288	0.0269	951.6775
Total	**0.4611**	**2.4931**	**3.8972**	**0.0196**	**1.4558**	**0.0191**	**1.4750**	**0.3938**	**0.0181**	**0.4119**		**2,049.7470**	**2,049.7470**	**0.0621**	**0.1873**	**2,107.1173**

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0558	2.2185	0.7776	0.0101	0.3386	0.0132	0.3518	0.0975	0.0126	0.1101		1,087.5534	1,087.5534	0.0341	0.1576	1,135.3692
Worker	0.3794	0.2334	2.8991	9.0200e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		912.0802	912.0802	0.0263	0.0251	920.2269
Total	**0.4351**	**2.4519**	**3.6766**	**0.0191**	**1.4559**	**0.0189**	**1.4747**	**0.3938**	**0.0179**	**0.4117**		**1,999.6336**	**1,999.6336**	**0.0604**	**0.1827**	**2,055.5961**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0558	2.2185	0.7776	0.0101	0.3386	0.0132	0.3518	0.0975	0.0126	0.1101		1,087.5534	1,087.5534	0.0341	0.1576	1,135.3692
Worker	0.3794	0.2334	2.8991	9.0200e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		912.0802	912.0802	0.0263	0.0251	920.2269
Total	**0.4351**	**2.4519**	**3.6766**	**0.0191**	**1.4559**	**0.0189**	**1.4747**	**0.3938**	**0.0179**	**0.4117**		**1,999.6336**	**1,999.6336**	**0.0604**	**0.1827**	**2,055.5961**

3.5 Paving - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0446	0.0275	0.3411	1.0600e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		107.3036	107.3036	3.0900e-003	2.9600e-003	108.2620
Total	**0.0513**	**0.2937**	**0.4344**	**2.2700e-003**	**0.1721**	**2.2500e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**237.8100**	**237.8100**	**7.1800e-003**	**0.0219**	**244.5063**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0446	0.0275	0.3411	1.0600e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		107.3036	107.3036	3.0900e-003	2.9600e-003	108.2620
Total	**0.0513**	**0.2937**	**0.4344**	**2.2700e-003**	**0.1721**	**2.2500e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**237.8100**	**237.8100**	**7.1800e-003**	**0.0219**	**244.5063**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.8761					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	**55.0568**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0781	0.0481	0.5969	1.8600e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		187.7812	187.7812	5.4100e-003	5.1700e-003	189.4585
Total	**0.0848**	**0.3143**	**0.6902**	**3.0700e-003**	**0.2707**	**2.7500e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**318.2876**	**318.2876**	**9.5000e-003**	**0.0241**	**325.7028**

Mitigated Construction On-Site

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	54.8761					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	**55.0568**	**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**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0781	0.0481	0.5969	1.8600e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		187.7812	187.7812	5.4100e-003	5.1700e-003	189.4585
Total	**0.0848**	**0.3143**	**0.6902**	**3.0700e-003**	**0.2707**	**2.7500e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**318.2876**	**318.2876**	**9.5000e-003**	**0.0241**	**325.7028**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Unmitigated	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
NaturalGas Unmitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6509.87	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.50987	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

6.0 Area Detail

6.1 Mitigation Measures Area

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

Category	lb/day										lb/day					
Mitigated	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453
Unmitigated	5.7586	0.8461	7.2503	5.2600e-003		0.1004	0.1004		0.1004	0.1004	0.0000	990.8326	990.8326	0.0307	0.0179	996.9453

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	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0897	0.7664	0.3261	4.8900e-003		0.0620	0.0620		0.0620	0.0620	0.0000	978.3529	978.3529	0.0188	0.0179	984.1668
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**5.7586**	**0.8461**	**7.2503**	**5.2600e-003**		**0.1004**	**0.1004**		**0.1004**	**0.1004**	**0.0000**	**990.8326**	**990.8326**	**0.0307**	**0.0179**	**996.9453**

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

SubCategory	lb/day										lb/day					
Architectural Coating	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0897	0.7664	0.3261	4.8900e-003		0.0620	0.0620		0.0620	0.0620	0.0000	978.3529	978.3529	0.0188	0.0179	984.1668
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**5.7586**	**0.8461**	**7.2503**	**5.2600e-003**		**0.1004**	**0.1004**		**0.1004**	**0.1004**	**0.0000**	**990.8326**	**990.8326**	**0.0307**	**0.0179**	**996.9453**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Guajome Lake Road Residential - Mitigated - San Diego County APCD Air District, Winter

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Guajome Lake Road Residential - Unmitigated

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - NA

Land Use - Land Use metrics were modified based on project specific data.

Construction Phase - Construction phasing was modifed based on information provided by the project applicant.

Trips and VMT - CalEEMod defaults.

Architectural Coating - compliance with SDAPCD Rules.

Vehicle Trips - CalEEMod defaults.

Woodstoves - No Woodstoves

Area Coating - CalEEMod defaults.

Energy Use - CalEEMod defaults.

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

Water And Wastewater - CalEEMod defaults.

Solid Waste - CalEEMod defaults.

Construction Off-road Equipment Mitigation - compliance with SDAPCD Rules.

Mobile Land Use Mitigation - NA

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	127,575.00	102,060.00
tblArchitecturalCoating	ConstArea_Residential_Interior	382,725.00	306,180.00
tblAreaCoating	Area_Residential_Exterior	127575	102060
tblAreaCoating	Area_Residential_Interior	382725	306180
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00

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

tblVehicleTrips	WD_TR	9.44	10.00
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1743	1.5887	1.6297	3.7400e-003	0.3185	0.0673	0.3858	0.1276	0.0627	0.1903	0.0000	333.5472	333.5472	0.0654	9.7400e-003	338.0844
2024	2.6319	1.6218	2.0592	4.6900e-003	0.1395	0.0654	0.2049	0.0378	0.0615	0.0993	0.0000	420.8520	420.8520	0.0640	0.0161	427.2564
Maximum	**2.6319**	**1.6218**	**2.0592**	**4.6900e-003**	**0.3185**	**0.0673**	**0.3858**	**0.1276**	**0.0627**	**0.1903**	**0.0000**	**420.8520**	**420.8520**	**0.0654**	**0.0161**	**427.2564**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1743	1.5887	1.6297	3.7400e-003	0.1885	0.0673	0.2558	0.0697	0.0627	0.1324	0.0000	333.5470	333.5470	0.0654	9.7400e-003	338.0841
2024	2.6319	1.6218	2.0592	4.6900e-003	0.1395	0.0654	0.2049	0.0378	0.0615	0.0993	0.0000	420.8517	420.8517	0.0640	0.0161	427.2561

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

Maximum	**2.6319**	**1.6218**	**2.0592**	**4.6900e-003**	**0.1885**	**0.0673**	**0.2558**	**0.0697**	**0.0627**	**0.1324**	**0.0000**	**420.8517**	**420.8517**	**0.0654**	**0.0161**	**427.2561**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.38**	**0.00**	**22.01**	**35.02**	**0.00**	**20.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-5-2023**	**9-4-2023**	0.9583	0.9583
2	**9-5-2023**	**12-4-2023**	0.6133	0.6133
3	**12-5-2023**	**3-4-2024**	0.5893	0.5893
4	**3-5-2024**	**6-4-2024**	0.5816	0.5816
5	**6-5-2024**	**9-4-2024**	0.5802	0.5802
6	**9-5-2024**	**9-30-2024**	0.1396	0.1396
		Highest	0.9583	0.9583

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.2004	0.0974	6.3519	9.2800e-003		0.7889	0.7889		0.7889	0.7889	69.7890	37.4083	107.1974	1.6700e-003	6.8200e-003	109.2730
Energy	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	290.6643	290.6643	0.0124	3.5400e-003	292.0299
Mobile	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Waste						0.0000	0.0000		0.0000	0.0000	19.9885	0.0000	19.9885	1.1813	0.0000	49.5207

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Water						0.0000	0.0000		0.0000	0.0000	1.7363	29.4049	31.1412	0.1801	4.4300e-003	36.9643
Total	**6.6146**	**0.6533**	**10.1620**	**0.0180**	**0.8865**	**0.8039**	**1.6905**	**0.2366**	**0.8035**	**1.0401**	**91.5138**	**1,099.5932**	**1,191.1071**	**1.4285**	**0.0485**	**1,241.2626**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.2004	0.0974	6.3519	9.2800e-003		0.7889	0.7889		0.7889	0.7889	69.7890	37.4083	107.1974	1.6700e-003	6.8200e-003	109.2730
Energy	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	290.6643	290.6643	0.0124	3.5400e-003	292.0299
Mobile	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Waste						0.0000	0.0000		0.0000	0.0000	19.9885	0.0000	19.9885	1.1813	0.0000	49.5207
Water						0.0000	0.0000		0.0000	0.0000	1.7363	29.4049	31.1412	0.1801	4.4300e-003	36.9643
Total	**6.6146**	**0.6533**	**10.1620**	**0.0180**	**0.8865**	**0.8039**	**1.6905**	**0.2366**	**0.8035**	**1.0401**	**91.5138**	**1,099.5932**	**1,191.1071**	**1.4285**	**0.0485**	**1,241.2626**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.3300e-003	4.7000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6020	0.6020	2.0000e-005	9.0000e-005	0.6284
Worker	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	**2.8000e-004**	**1.5000e-003**	**2.5200e-003**	**2.0000e-005**	**9.2000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.1731**	**1.1731**	**4.0000e-005**	**1.1000e-004**	**1.2047**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0442**	**6.3300e-003**	**0.0506**	**0.0227**	**5.8200e-003**	**0.0286**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.3300e-003	4.7000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6020	0.6020	2.0000e-005	9.0000e-005	0.6284
Worker	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	**2.8000e-004**	**1.5000e-003**	**2.5200e-003**	**2.0000e-005**	**9.2000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.1731**	**1.1731**	**4.0000e-005**	**1.1000e-004**	**1.2047**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1381**	**0.0214**	**0.1594**	**0.0548**	**0.0197**	**0.0745**	**0.0000**	**81.8028**	**81.8028**	**0.0265**	**0.0000**	**82.4642**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.4100e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.2000e-004	1.7000e-004	2.0000e-005	2.0000e-004	0.0000	1.8059	1.8059	5.0000e-005	2.6000e-004	1.8852
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	**9.2000e-004**	**4.5600e-003**	**8.2500e-003**	**4.0000e-005**	**3.0100e-003**	**3.0000e-005**	**3.0400e-003**	**8.1000e-004**	**3.0000e-005**	**8.5000e-004**	**0.0000**	**3.7095**	**3.7095**	**1.1000e-004**	**3.1000e-004**	**3.8061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0621	0.0000	0.0621	0.0247	0.0000	0.0247	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.0621**	**0.0214**	**0.0835**	**0.0247**	**0.0197**	**0.0443**	**0.0000**	**81.8027**	**81.8027**	**0.0265**	**0.0000**	**82.4641**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.4100e-003	2.0000e-005	6.0000e-004	2.0000e-005	6.2000e-004	1.7000e-004	2.0000e-005	2.0000e-004	0.0000	1.8059	1.8059	5.0000e-005	2.6000e-004	1.8852
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	**9.2000e-004**	**4.5600e-003**	**8.2500e-003**	**4.0000e-005**	**3.0100e-003**	**3.0000e-005**	**3.0400e-003**	**8.1000e-004**	**3.0000e-005**	**8.5000e-004**	**0.0000**	**3.7095**	**3.7095**	**1.1000e-004**	**3.1000e-004**	**3.8061**

3.4 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	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4926	127.4926	0.0303	0.0000	128.2508
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4926**	**127.4926**	**0.0303**	**0.0000**	**128.2508**

Unmitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2300e-003	0.1221	0.0431	5.6000e-004	0.0183	7.2000e-004	0.0190	5.2700e-003	6.9000e-004	5.9600e-003	0.0000	55.1789	55.1789	1.6700e-003	8.0000e-003	57.6032
Worker	0.0202	0.0140	0.1705	5.2000e-004	0.0600	3.3000e-004	0.0603	0.0159	3.0000e-004	0.0162	0.0000	47.4650	47.4650	1.4100e-003	1.3200e-003	47.8948
Total	**0.0235**	**0.1361**	**0.2135**	**1.0800e-003**	**0.0782**	**1.0500e-003**	**0.0793**	**0.0212**	**9.9000e-004**	**0.0222**	**0.0000**	**102.6439**	**102.6439**	**3.0800e-003**	**9.3200e-003**	**105.4980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4925	127.4925	0.0303	0.0000	128.2507
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4925**	**127.4925**	**0.0303**	**0.0000**	**128.2507**

Mitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2300e-003	0.1221	0.0431	5.6000e-004	0.0183	7.2000e-004	0.0190	5.2700e-003	6.9000e-004	5.9600e-003	0.0000	55.1789	55.1789	1.6700e-003	8.0000e-003	57.6032
Worker	0.0202	0.0140	0.1705	5.2000e-004	0.0600	3.3000e-004	0.0603	0.0159	3.0000e-004	0.0162	0.0000	47.4650	47.4650	1.4100e-003	1.3200e-003	47.8948
Total	**0.0235**	**0.1361**	**0.2135**	**1.0800e-003**	**0.0782**	**1.0500e-003**	**0.0793**	**0.0212**	**9.9000e-004**	**0.0222**	**0.0000**	**102.6439**	**102.6439**	**3.0800e-003**	**9.3200e-003**	**105.4980**

3.4 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	tons/yr										MT/yr					
Off-Road	0.1398	1.2772	1.5359	2.5600e-003		0.0583	0.0583		0.0548	0.0548	0.0000	220.2567	220.2567	0.0521	0.0000	221.5588
Total	**0.1398**	**1.2772**	**1.5359**	**2.5600e-003**		**0.0583**	**0.0583**		**0.0548**	**0.0548**	**0.0000**	**220.2567**	**220.2567**	**0.0521**	**0.0000**	**221.5588**

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

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2094	0.0727	9.5000e-004	0.0315	1.2500e-003	0.0328	9.1100e-003	1.1900e-003	0.0103	0.0000	93.6489	93.6489	2.9500e-003	0.0136	97.7658
Worker	0.0328	0.0217	0.2751	8.6000e-004	0.1036	5.4000e-004	0.1042	0.0275	5.0000e-004	0.0280	0.0000	79.3002	79.3002	2.2200e-003	2.1400e-003	79.9924
Total	**0.0382**	**0.2312**	**0.3477**	**1.8100e-003**	**0.1352**	**1.7900e-003**	**0.1369**	**0.0366**	**1.6900e-003**	**0.0383**	**0.0000**	**172.9491**	**172.9491**	**5.1700e-003**	**0.0157**	**177.7582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1398	1.2772	1.5359	2.5600e-003		0.0583	0.0583		0.0548	0.0548	0.0000	220.2564	220.2564	0.0521	0.0000	221.5585
Total	**0.1398**	**1.2772**	**1.5359**	**2.5600e-003**		**0.0583**	**0.0583**		**0.0548**	**0.0548**	**0.0000**	**220.2564**	**220.2564**	**0.0521**	**0.0000**	**221.5585**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.2094	0.0727	9.5000e-004	0.0315	1.2500e-003	0.0328	9.1100e-003	1.1900e-003	0.0103	0.0000	93.6489	93.6489	2.9500e-003	0.0136	97.7658
Worker	0.0328	0.0217	0.2751	8.6000e-004	0.1036	5.4000e-004	0.1042	0.0275	5.0000e-004	0.0280	0.0000	79.3002	79.3002	2.2200e-003	2.1400e-003	79.9924
Total	**0.0382**	**0.2312**	**0.3477**	**1.8100e-003**	**0.1352**	**1.7900e-003**	**0.1369**	**0.0366**	**1.6900e-003**	**0.0383**	**0.0000**	**172.9491**	**172.9491**	**5.1700e-003**	**0.0157**	**177.7582**

3.5 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	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8800e-003**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

Unmitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	4.1000e-004	2.7000e-004	3.4100e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	0.9821	0.9821	3.0000e-005	3.0000e-005	0.9906
Total	**4.8000e-004**	**2.9200e-003**	**4.3300e-003**	**2.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7000e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1650**	**2.1650**	**7.0000e-005**	**2.0000e-004**	**2.2256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8800e-003**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	4.1000e-004	2.7000e-004	3.4100e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	0.9821	0.9821	3.0000e-005	3.0000e-005	0.9906
Total	**4.8000e-004**	**2.9200e-003**	**4.3300e-003**	**2.0000e-005**	**1.6800e-003**	**3.0000e-005**	**1.7000e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**2.1650**	**2.1650**	**7.0000e-005**	**2.0000e-004**	**2.2256**

3.6 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	tons/yr										MT/yr					
Archit. Coating	2.4410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	**2.4428**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5569**

Unmitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	7.1000e-004	4.7000e-004	5.9600e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7186	1.7186	5.0000e-005	5.0000e-005	1.7336
Total	**7.8000e-004**	**3.1200e-003**	**6.8800e-003**	**3.0000e-005**	**2.6500e-003**	**3.0000e-005**	**2.6700e-003**	**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9015**	**2.9015**	**9.0000e-005**	**2.2000e-004**	**2.9685**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.4410					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	**2.4428**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5568**

Mitigated Construction Off-Site

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

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.6500e-003	9.2000e-004	1.0000e-005	4.0000e-004	2.0000e-005	4.1000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.1829	1.1829	4.0000e-005	1.7000e-004	1.2349
Worker	7.1000e-004	4.7000e-004	5.9600e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2600e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7186	1.7186	5.0000e-005	5.0000e-005	1.7336
Total	**7.8000e-004**	**3.1200e-003**	**6.8800e-003**	**3.0000e-005**	**2.6500e-003**	**3.0000e-005**	**2.6700e-003**	**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**0.0000**	**2.9015**	**2.9015**	**9.0000e-005**	**2.2000e-004**	**2.9685**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747
Unmitigated	0.4013	0.4464	3.7635	8.0200e-003	0.8865	6.2200e-003	0.8928	0.2366	5.8000e-003	0.2424	0.0000	742.1157	742.1157	0.0530	0.0337	753.4747

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		

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

Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	163.8664	163.8664	0.0100	1.2100e-003	164.4785

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

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	163.8664	163.8664	0.0100	1.2100e-003	164.4785
NaturalGas Mitigated	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
NaturalGas Unmitigated	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.3761e+006	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
Total		**0.0128**	**0.1095**	**0.0466**	**7.0000e-004**		**8.8500e-003**	**8.8500e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**126.7979**	**126.7979**	**2.4300e-003**	**2.3200e-003**	**127.5514**

Mitigated

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

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

City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.3761e+006	0.0128	0.1095	0.0466	7.0000e-004		8.8500e-003	8.8500e-003		8.8500e-003	8.8500e-003	0.0000	126.7979	126.7979	2.4300e-003	2.3200e-003	127.5514
Total		**0.0128**	**0.1095**	**0.0466**	**7.0000e-004**		**8.8500e-003**	**8.8500e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**126.7979**	**126.7979**	**2.4300e-003**	**2.3200e-003**	**127.5514**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	669031	163.8664	0.0100	1.2100e-003	164.4785
Total		**163.8664**	**0.0100**	**1.2100e-003**	**164.4785**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

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

Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	669031	163.8664	0.0100	1.2100e-003	164.4785
Total		**163.8664**	**0.0100**	**1.2100e-003**	**164.4785**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.2004	0.0974	6.3519	9.2800e-003		0.7889	0.7889		0.7889	0.7889	69.7890	37.4083	107.1974	1.6700e-003	6.8200e-003	109.2730
Unmitigated	6.2004	0.0974	6.3519	9.2800e-003		0.7889	0.7889		0.7889	0.7889	69.7890	37.4083	107.1974	1.6700e-003	6.8200e-003	109.2730

6.2 Area by SubCategory

Unmitigated

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7525					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.1851	0.0903	5.7288	9.2500e-003		0.7854	0.7854		0.7854	0.7854	69.7890	36.3894	106.1784	7.0000e-004	6.8200e-003	108.2297
Landscaping	0.0187	7.1800e-003	0.6232	3.0000e-005		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	1.0189	1.0189	9.8000e-004	0.0000	1.0433
Total	**6.2004**	**0.0974**	**6.3519**	**9.2800e-003**		**0.7889**	**0.7889**		**0.7889**	**0.7889**	**69.7890**	**37.4083**	**107.1974**	**1.6800e-003**	**6.8200e-003**	**109.2730**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7525					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.1851	0.0903	5.7288	9.2500e-003		0.7854	0.7854		0.7854	0.7854	69.7890	36.3894	106.1784	7.0000e-004	6.8200e-003	108.2297
Landscaping	0.0187	7.1800e-003	0.6232	3.0000e-005		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	1.0189	1.0189	9.8000e-004	0.0000	1.0433
Total	**6.2004**	**0.0974**	**6.3519**	**9.2800e-003**		**0.7889**	**0.7889**		**0.7889**	**0.7889**	**69.7890**	**37.4083**	**107.1974**	**1.6800e-003**	**6.8200e-003**	**109.2730**

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

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	31.1412	0.1801	4.4300e-003	36.9643
Unmitigated	31.1412	0.1801	4.4300e-003	36.9643

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.94127	2.5614	1.6000e-004	2.0000e-005	2.5709
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.47294 / 3.45033	28.5798	0.1800	4.4100e-003	34.3933
Total		**31.1412**	**0.1801**	**4.4300e-003**	**36.9643**

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

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.94127	2.5614	1.6000e-004	2.0000e-005	2.5709
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.47294 / 3.45033	28.5798	0.1800	4.4100e-003	34.3933
Total		**31.1412**	**0.1801**	**4.4300e-003**	**36.9643**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.9885	1.1813	0.0000	49.5207

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

Unmitigated	19.9885	1.1813	0.0000	49.5207

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	98.4	19.9743	1.1805	0.0000	49.4855
Total		**19.9885**	**1.1813**	**0.0000**	**49.5207**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.07	0.0142	8.4000e-004	0.0000	0.0352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

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

Single Family Housing	98.4	19.9743	1.1805	0.0000	49.4855
Total		**19.9885**	**1.1813**	**0.0000**	**49.5207**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Guajome Lake Road Residential - Unmitigated

San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - a

Construction Phase -

Trips and VMT - a

Architectural Coating - SDACPD

Vehicle Trips - a

Woodstoves - a

Area Coating -

Energy Use - z

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

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	127,575.00	102,060.00
tblArchitecturalCoating	ConstArea_Residential_Interior	382,725.00	306,180.00
tblAreaCoating	Area_Residential_Exterior	127575	102060
tblAreaCoating	Area_Residential_Interior	382725	306180
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00

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

tblVehicleTrips	WD_TR	9.44	10.00
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3836	34.8068	28.6238	0.0648	19.8455	1.4269	21.1139	10.1534	1.3128	11.3203	0.0000	6,290.8387	6,290.8387	1.9522	0.1849	6,346.4571
2024	244.3548	15.7801	19.9661	0.0466	1.4559	0.6321	2.0880	0.3938	0.5947	0.9885	0.0000	4,606.6641	4,606.6641	0.7210	0.1805	4,677.0262
Maximum	**244.3548**	**34.8068**	**28.6238**	**0.0648**	**19.8455**	**1.4269**	**21.1139**	**10.1534**	**1.3128**	**11.3203**	**0.0000**	**6,290.8387**	**6,290.8387**	**1.9522**	**0.1849**	**6,346.4571**

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	3.3836	34.8068	28.6238	0.0648	9.0342	1.4269	10.3025	4.5970	1.3128	5.7640	0.0000	6,290.8387	6,290.8387	1.9522	0.1849	6,346.4571
2024	244.3548	15.7801	19.9661	0.0466	1.4559	0.6321	2.0880	0.3938	0.5947	0.9885	0.0000	4,606.6641	4,606.6641	0.7210	0.1805	4,677.0262

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Maximum	**244.3548**	**34.8068**	**28.6238**	**0.0648**	**9.0342**	**1.4269**	**10.3025**	**4.5970**	**1.3128**	**5.7640**	**0.0000**	**6,290.8387**	**6,290.8387**	**1.9522**	**0.1849**	**6,346.4571**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.60**	**52.68**	**0.00**	**45.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Total	**134.5579**	**5.2236**	**167.9424**	**0.2767**	**5.1044**	**19.2782**	**24.3826**	**1.3597**	**19.2759**	**20.6356**	**1,876.3223**	**6,536.4268**	**8,412.7491**	**0.3622**	**0.3977**	**8,540.3319**

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Category	lb/day										lb/day					
Area	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Total	**134.5579**	**5.2236**	**167.9424**	**0.2767**	**5.1044**	**19.2782**	**24.3826**	**1.3597**	**19.2759**	**20.6356**	**1,876.3223**	**6,536.4268**	**8,412.7491**	**0.3622**	**0.3977**	**8,540.3319**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Total	**0.0564**	**0.2878**	**0.5247**	**2.5400e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2300e-003**	**0.0532**		**264.6877**	**264.6877**	**7.6000e-003**	**0.0225**	**271.5814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

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

Total	**0.0564**	**0.2878**	**0.5247**	**2.5400e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2300e-003**	**0.0532**		**264.6877**	**264.6877**	**7.6000e-003**	**0.0225**	**271.5814**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Total	**0.0618**	**0.2912**	**0.5727**	**2.6800e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3100e-003**	**0.0576**		**279.3610**	**279.3610**	**8.0000e-003**	**0.0229**	**286.3736**

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	7.1700e-003	0.2572	0.0927	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5000e-003	0.0132		132.6282	132.6282	4.0200e-003	0.0192	138.4513
Worker	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Total	**0.0618**	**0.2912**	**0.5727**	**2.6800e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3100e-003**	**0.0576**		**279.3610**	**279.3610**	**8.0000e-003**	**0.0229**	**286.3736**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0597	2.1434	0.7724	0.0102	0.3386	0.0131	0.3517	0.0975	0.0125	0.1100		1,105.2348	1,105.2348	0.0335	0.1600	1,153.7610
Worker	0.3717	0.2308	3.2639	9.8700e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		997.7831	997.7831	0.0270	0.0249	1,005.8713
Total	**0.4314**	**2.3742**	**4.0363**	**0.0201**	**1.4558**	**0.0191**	**1.4749**	**0.3938**	**0.0180**	**0.4118**		**2,103.0179**	**2,103.0179**	**0.0605**	**0.1849**	**2,159.6323**

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0597	2.1434	0.7724	0.0102	0.3386	0.0131	0.3517	0.0975	0.0125	0.1100		1,105.2348	1,105.2348	0.0335	0.1600	1,153.7610
Worker	0.3717	0.2308	3.2639	9.8700e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		997.7831	997.7831	0.0270	0.0249	1,005.8713
Total	**0.4314**	**2.3742**	**4.0363**	**0.0201**	**1.4558**	**0.0191**	**1.4749**	**0.3938**	**0.0180**	**0.4118**		**2,103.0179**	**2,103.0179**	**0.0605**	**0.1849**	**2,159.6323**

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0575	2.1288	0.7544	0.0101	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,085.9653	1,085.9653	0.0343	0.1572	1,133.6765
Worker	0.3490	0.2075	3.0449	9.5500e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		964.9998	964.9998	0.0246	0.0232	972.5420
Total	**0.4065**	**2.3363**	**3.7993**	**0.0196**	**1.4559**	**0.0188**	**1.4747**	**0.3938**	**0.0178**	**0.4116**		**2,050.9652**	**2,050.9652**	**0.0589**	**0.1805**	**2,106.2185**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0575	2.1288	0.7544	0.0101	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,085.9653	1,085.9653	0.0343	0.1572	1,133.6765
Worker	0.3490	0.2075	3.0449	9.5500e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		964.9998	964.9998	0.0246	0.0232	972.5420
Total	**0.4065**	**2.3363**	**3.7993**	**0.0196**	**1.4559**	**0.0188**	**1.4747**	**0.3938**	**0.0178**	**0.4116**		**2,050.9652**	**2,050.9652**	**0.0589**	**0.1805**	**2,106.2185**

3.5 Paving - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0411	0.0244	0.3582	1.1200e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		113.5294	113.5294	2.9000e-003	2.7300e-003	114.4167
Total	**0.0480**	**0.2799**	**0.4487**	**2.3300e-003**	**0.1721**	**2.2400e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**243.8452**	**243.8452**	**7.0100e-003**	**0.0216**	**250.4579**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0411	0.0244	0.3582	1.1200e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		113.5294	113.5294	2.9000e-003	2.7300e-003	114.4167
Total	**0.0480**	**0.2799**	**0.4487**	**2.3300e-003**	**0.1721**	**2.2400e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**243.8452**	**243.8452**	**7.0100e-003**	**0.0216**	**250.4579**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	244.0953					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	**244.2761**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0719	0.0427	0.6269	1.9700e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		198.6764	198.6764	5.0700e-003	4.7900e-003	200.2292
Total	**0.0788**	**0.2982**	**0.7174**	**3.1800e-003**	**0.2707**	**2.7400e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**328.9923**	**328.9923**	**9.1800e-003**	**0.0237**	**336.2704**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	244.0953					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	**244.2761**	**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**

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	6.9000e-003	0.2555	0.0905	1.2100e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		130.3158	130.3158	4.1100e-003	0.0189	136.0412
Worker	0.0719	0.0427	0.6269	1.9700e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		198.6764	198.6764	5.0700e-003	4.7900e-003	200.2292
Total	**0.0788**	**0.2982**	**0.7174**	**3.1800e-003**	**0.2707**	**2.7400e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**328.9923**	**328.9923**	**9.1800e-003**	**0.0237**	**336.2704**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096
Unmitigated	2.3532	2.3427	21.0371	0.0469	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,779.7270	4,779.7270	0.3169	0.2002	4,847.3096

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
NaturalGas Unmitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6509.87	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.50987	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

6.0 Area Detail

6.1 Mitigation Measures Area

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

Category	lb/day										lb/day					
Mitigated	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Unmitigated	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039

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	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	126.4655	2.2012	139.7258	0.2256		19.1563	19.1563		19.1563	19.1563	1,876.3223	978.3529	2,854.6753	0.0188	0.1835	2,909.8254
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**132.1345**	**2.2810**	**146.6500**	**0.2260**		**19.1947**	**19.1947**		**19.1947**	**19.1947**	**1,876.3223**	**990.8326**	**2,867.1549**	**0.0307**	**0.1835**	**2,922.6039**

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

SubCategory	lb/day										lb/day					
Architectural Coating	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	126.4655	2.2012	139.7258	0.2256		19.1563	19.1563		19.1563	19.1563	1,876.3223	978.3529	2,854.6753	0.0188	0.1835	2,909.8254
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**132.1345**	**2.2810**	**146.6500**	**0.2260**		**19.1947**	**19.1947**		**19.1947**	**19.1947**	**1,876.3223**	**990.8326**	**2,867.1549**	**0.0307**	**0.1835**	**2,922.6039**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Summer

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Guajome Lake Road Residential - Unmitigated

San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.00	Acre	5.00	217,800.00	0
City Park	0.79	Acre	0.79	34,391.00	0
Single Family Housing	84.00	Dwelling Unit	10.99	189,000.00	240

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	10			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - NA

Land Use - Land Use metrics were modified based on project specific data.

Construction Phase - Construction phasing was modifed based on information provided by the project applicant.

Trips and VMT - CalEEMod defaults.

Vehicle Trips - Trip generation rates based on Transportation Study

Woodstoves - No woodstoves.

Energy Use - CalEEMod defaults.

Construction Off-road Equipment Mitigation - compliance with SDAPCD Rules.

Mobile Land Use Mitigation - NA

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Architectural Coating - Compliance with SDACPD Rules

Solid Waste - CalEEMod defaults.

Water And Wastewater - CalEEMod defaults.

Area Coating - CalEEMod defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	127,575.00	102,060.00
tblArchitecturalCoating	ConstArea_Residential_Interior	382,725.00	306,180.00
tblAreaCoating	Area_Residential_Exterior	127575	102060
tblAreaCoating	Area_Residential_Interior	382725	306180
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	34,412.40	34,391.00
tblLandUse	LandUseSquareFeet	151,200.00	189,000.00
tblLandUse	LotAcreage	27.27	10.99
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	27.00	28.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	10.11
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.06
tblVehicleTrips	WD_TR	0.78	0.00

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

tblVehicleTrips	WD_TR	9.44	10.00
tblWoodstoves	NumberCatalytic	4.20	0.00
tblWoodstoves	NumberNoncatalytic	4.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.3880	34.8218	28.6028	0.0647	19.8455	1.4270	21.1139	10.1534	1.3129	11.3203	0.0000	6,282.9622	6,282.9622	1.9525	0.1873	6,338.6889
2024	244.3609	15.8957	19.8435	0.0460	1.4559	0.6322	2.0880	0.3938	0.5948	0.9886	0.0000	4,555.3325	4,555.3325	0.7212	0.1827	4,626.4037
Maximum	**244.3609**	**34.8218**	**28.6028**	**0.0647**	**19.8455**	**1.4270**	**21.1139**	**10.1534**	**1.3129**	**11.3203**	**0.0000**	**6,282.9622**	**6,282.9622**	**1.9525**	**0.1873**	**6,338.6889**

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	3.3880	34.8218	28.6028	0.0647	9.0342	1.4270	10.3025	4.5970	1.3129	5.7640	0.0000	6,282.9622	6,282.9622	1.9525	0.1873	6,338.6889
2024	244.3609	15.8957	19.8435	0.0460	1.4559	0.6322	2.0880	0.3938	0.5948	0.9886	0.0000	4,555.3325	4,555.3325	0.7212	0.1827	4,626.4037

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Maximum	**244.3609**	**34.8218**	**28.6028**	**0.0647**	**9.0342**	**1.4270**	**10.3025**	**4.5970**	**1.3129**	**5.7640**	**0.0000**	**6,282.9622**	**6,282.9622**	**1.9525**	**0.1873**	**6,338.6889**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.60**	**52.68**	**0.00**	**45.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Total	**134.5024**	**5.4186**	**168.4941**	**0.2747**	**5.1044**	**19.2783**	**24.3827**	**1.3597**	**19.2759**	**20.6356**	**1,876.3223**	**6,329.9560**	**8,206.2783**	**0.3800**	**0.4083**	**8,337.4477**

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Category	lb/day										lb/day					
Area	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Energy	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Mobile	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Total	**134.5024**	**5.4186**	**168.4941**	**0.2747**	**5.1044**	**19.2783**	**24.3827**	**1.3597**	**19.2759**	**20.6356**	**1,876.3223**	**6,329.9560**	**8,206.2783**	**0.3800**	**0.4083**	**8,337.4477**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/5/2023	6/16/2023	5	10	
2	Grading	Grading	6/17/2023	7/28/2023	5	30	
3	Building Construction	Building Construction	7/29/2023	9/20/2024	5	300	
4	Paving	Paving	9/21/2024	10/18/2024	5	20	
5	Architectural Coating	Architectural Coating	10/19/2024	11/15/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 5

Residential Indoor: 306,180; Residential Outdoor: 102,060; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,068

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	136.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Total	**0.0603**	**0.3024**	**0.5060**	**2.4600e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2400e-003**	**0.0532**		**257.6177**	**257.6177**	**7.8100e-003**	**0.0228**	**264.6101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Total	**0.0603**	**0.3024**	**0.5060**	**2.4600e-003**	**0.1885**	**2.3600e-003**	**0.1909**	**0.0509**	**2.2400e-003**	**0.0532**		**257.6177**	**257.6177**	**7.8100e-003**	**0.0228**	**264.6101**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Total	**0.0662**	**0.3062**	**0.5516**	**2.6000e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3200e-003**	**0.0576**		**271.4845**	**271.4845**	**8.2400e-003**	**0.0232**	**278.6054**

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	6.9700e-003	0.2680	0.0955	1.2300e-003	0.0406	1.5700e-003	0.0422	0.0117	1.5100e-003	0.0132		132.8167	132.8167	4.0000e-003	0.0193	138.6528
Worker	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Total	**0.0662**	**0.3062**	**0.5516**	**2.6000e-003**	**0.2049**	**2.4500e-003**	**0.2074**	**0.0553**	**2.3200e-003**	**0.0576**		**271.4845**	**271.4845**	**8.2400e-003**	**0.0232**	**278.6054**

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0581	2.2336	0.7957	0.0103	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,106.8061	1,106.8061	0.0333	0.1604	1,155.4398
Worker	0.4030	0.2596	3.1014	9.3300e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		942.9409	942.9409	0.0288	0.0269	951.6775
Total	**0.4611**	**2.4931**	**3.8972**	**0.0196**	**1.4558**	**0.0191**	**1.4750**	**0.3938**	**0.0181**	**0.4119**		**2,049.7470**	**2,049.7470**	**0.0621**	**0.1873**	**2,107.1173**

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.0581	2.2336	0.7957	0.0103	0.3386	0.0131	0.3518	0.0975	0.0126	0.1100		1,106.8061	1,106.8061	0.0333	0.1604	1,155.4398
Worker	0.4030	0.2596	3.1014	9.3300e-003	1.1172	5.9900e-003	1.1232	0.2963	5.5200e-003	0.3019		942.9409	942.9409	0.0288	0.0269	951.6775
Total	**0.4611**	**2.4931**	**3.8972**	**0.0196**	**1.4558**	**0.0191**	**1.4750**	**0.3938**	**0.0181**	**0.4119**		**2,049.7470**	**2,049.7470**	**0.0621**	**0.1873**	**2,107.1173**

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

3.4 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0558	2.2185	0.7776	0.0101	0.3386	0.0132	0.3518	0.0975	0.0126	0.1101		1,087.5534	1,087.5534	0.0341	0.1576	1,135.3692
Worker	0.3794	0.2334	2.8991	9.0200e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		912.0802	912.0802	0.0263	0.0251	920.2269
Total	**0.4351**	**2.4519**	**3.6766**	**0.0191**	**1.4559**	**0.0189**	**1.4747**	**0.3938**	**0.0179**	**0.4117**		**1,999.6336**	**1,999.6336**	**0.0604**	**0.1827**	**2,055.5961**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0558	2.2185	0.7776	0.0101	0.3386	0.0132	0.3518	0.0975	0.0126	0.1101		1,087.5534	1,087.5534	0.0341	0.1576	1,135.3692
Worker	0.3794	0.2334	2.8991	9.0200e-003	1.1172	5.7000e-003	1.1229	0.2963	5.2500e-003	0.3016		912.0802	912.0802	0.0263	0.0251	920.2269
Total	**0.4351**	**2.4519**	**3.6766**	**0.0191**	**1.4559**	**0.0189**	**1.4747**	**0.3938**	**0.0179**	**0.4117**		**1,999.6336**	**1,999.6336**	**0.0604**	**0.1827**	**2,055.5961**

3.5 Paving - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0446	0.0275	0.3411	1.0600e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		107.3036	107.3036	3.0900e-003	2.9600e-003	108.2620
Total	**0.0513**	**0.2937**	**0.4344**	**2.2700e-003**	**0.1721**	**2.2500e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**237.8100**	**237.8100**	**7.1800e-003**	**0.0219**	**244.5063**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0446	0.0275	0.3411	1.0600e-003	0.1314	6.7000e-004	0.1321	0.0349	6.2000e-004	0.0355		107.3036	107.3036	3.0900e-003	2.9600e-003	108.2620
Total	**0.0513**	**0.2937**	**0.4344**	**2.2700e-003**	**0.1721**	**2.2500e-003**	**0.1743**	**0.0466**	**2.1300e-003**	**0.0487**		**237.8100**	**237.8100**	**7.1800e-003**	**0.0219**	**244.5063**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	244.0953					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	**244.2761**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0781	0.0481	0.5969	1.8600e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		187.7812	187.7812	5.4100e-003	5.1700e-003	189.4585
Total	**0.0848**	**0.3143**	**0.6902**	**3.0700e-003**	**0.2707**	**2.7500e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**318.2876**	**318.2876**	**9.5000e-003**	**0.0241**	**325.7028**

Mitigated Construction On-Site

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	244.0953					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	**244.2761**	**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**

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	6.6900e-003	0.2662	0.0933	1.2100e-003	0.0406	1.5800e-003	0.0422	0.0117	1.5100e-003	0.0132		130.5064	130.5064	4.0900e-003	0.0189	136.2443
Worker	0.0781	0.0481	0.5969	1.8600e-003	0.2300	1.1700e-003	0.2312	0.0610	1.0800e-003	0.0621		187.7812	187.7812	5.4100e-003	5.1700e-003	189.4585
Total	**0.0848**	**0.3143**	**0.6902**	**3.0700e-003**	**0.2707**	**2.7500e-003**	**0.2734**	**0.0727**	**2.5900e-003**	**0.0753**		**318.2876**	**318.2876**	**9.5000e-003**	**0.0241**	**325.7028**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255
Unmitigated	2.2977	2.5377	21.5889	0.0449	5.1044	0.0350	5.1394	1.3597	0.0327	1.3924		4,573.2562	4,573.2562	0.3346	0.2108	4,644.4255

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	840.00	849.24	761.04	2,370,016	2,370,016
Total	840.00	849.24	761.04	2,370,016	2,370,016

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Other Non-Asphalt Surfaces	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00
Single Family Housing	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.00

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
NaturalGas Unmitigated	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6509.87	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.50987	0.0702	0.5999	0.2553	3.8300e-003		0.0485	0.0485		0.0485	0.0485		765.8672	765.8672	0.0147	0.0140	770.4184
Total		**0.0702**	**0.5999**	**0.2553**	**3.8300e-003**		**0.0485**	**0.0485**		**0.0485**	**0.0485**		**765.8672**	**765.8672**	**0.0147**	**0.0140**	**770.4184**

6.0 Area Detail

6.1 Mitigation Measures Area

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

Category	lb/day										lb/day					
Mitigated	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039
Unmitigated	132.1345	2.2810	146.6500	0.2260		19.1947	19.1947		19.1947	19.1947	1,876.3223	990.8326	2,867.1549	0.0307	0.1835	2,922.6039

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	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	126.4655	2.2012	139.7258	0.2256		19.1563	19.1563		19.1563	19.1563	1,876.3223	978.3529	2,854.6753	0.0188	0.1835	2,909.8254
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**132.1345**	**2.2810**	**146.6500**	**0.2260**		**19.1947**	**19.1947**		**19.1947**	**19.1947**	**1,876.3223**	**990.8326**	**2,867.1549**	**0.0307**	**0.1835**	**2,922.6039**

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

SubCategory	lb/day										lb/day					
Architectural Coating	1.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	126.4655	2.2012	139.7258	0.2256		19.1563	19.1563		19.1563	19.1563	1,876.3223	978.3529	2,854.6753	0.0188	0.1835	2,909.8254
Landscaping	0.2079	0.0798	6.9241	3.7000e-004		0.0384	0.0384		0.0384	0.0384		12.4797	12.4797	0.0120		12.7785
Total	**132.1345**	**2.2810**	**146.6500**	**0.2260**		**19.1947**	**19.1947**		**19.1947**	**19.1947**	**1,876.3223**	**990.8326**	**2,867.1549**	**0.0307**	**0.1835**	**2,922.6039**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

Guajome Lake Road Residential - Unmitigated - San Diego County APCD Air District, Winter

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation