Appendix B

Air Quality and Greenhouse Emissions and Energy Report

AIR QUALITY AND GREENHOUSE GAS EMISSIONS AND ENERGY REPORT

T.O. RANCH PROJECT

(325 and 391 Hampshire Road, Thousand Oaks)

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SECTION

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1.0 INTRODUCTION

This Air Quality and Greenhouse Gas Emissions Report ("report") analyzes the potential air quality and greenhouse gas (GHG) emissions impacts of the proposed T.O. Ranch Specific Plan Project ("project") in the City of Thousand Oaks ("City"). The purpose of this analysis is to identify, describe, and evaluate the potential for significant environmental impacts to result from emissions of air pollutants during construction and operation of the project, pursuant to the California Environmental Quality Act (CEQA). The project proposes to redevelop a former shopping center site situated in the southeast portion of the City of Thousand Oaks, California, at 325 and 391 Hampshire Road. The project would consist of the removal of existing structures, and the construction and operation of a mixed-use development with multi-family residential and commercial uses, as well as associated amenities and parking facilities.

2.0 PROJECT SETTING

The City is located within Ventura County and the South Central Coast Air Basin (SCCAB or "Basin") and is within the jurisdictional boundaries of the Ventura County Air Pollution Control District (VCAPCD). The proposed project site is located at 325 and 391 Hampshire Road, at the northwest corner of the intersection of Hampshire Road and Foothill Drive, as shown in **Figure 1, Location Map**.

The project site is a 10.97-acre infill property currently developed with a vacant retail structure that was formerly occupied by a Kmart and some smaller retail uses, a stand-alone fast food drive-through restaurant building, and a paved parking lot that surrounds the existing structures and covers the majority of the site. None of the existing structures are currently in use. Remnant landscaping is located along the property street frontage, in parking lot planters, and along the western site boundary along Foothill Drive. Following Kmart's closure in 2004, a group of stores attached to Kmart also closed a few years later. The parking lot was also used for seasonal Christmas tree sales for a few years following the closure of Kmart. The stand-alone fast food drive-through restaurant located in the southeast portion of the site was in operation until approximately 2019. As the site has remained vacant for a number of years, this evaluation will not consider emissions associated with any previous use and will be based on an assumed baseline of zero existing operational emissions.

Existing land uses adjacent to the site include an assisted living facility, medical offices, and a gas station immediately adjacent to the north; single-family and multi-family residences to the west and southwest; a preschool, gas station, and multi-family residences to the south; and non-residential uses to the east consisting of a former bank building and a Southern California Edison (SCE) equipment/vehicle lot and offices.

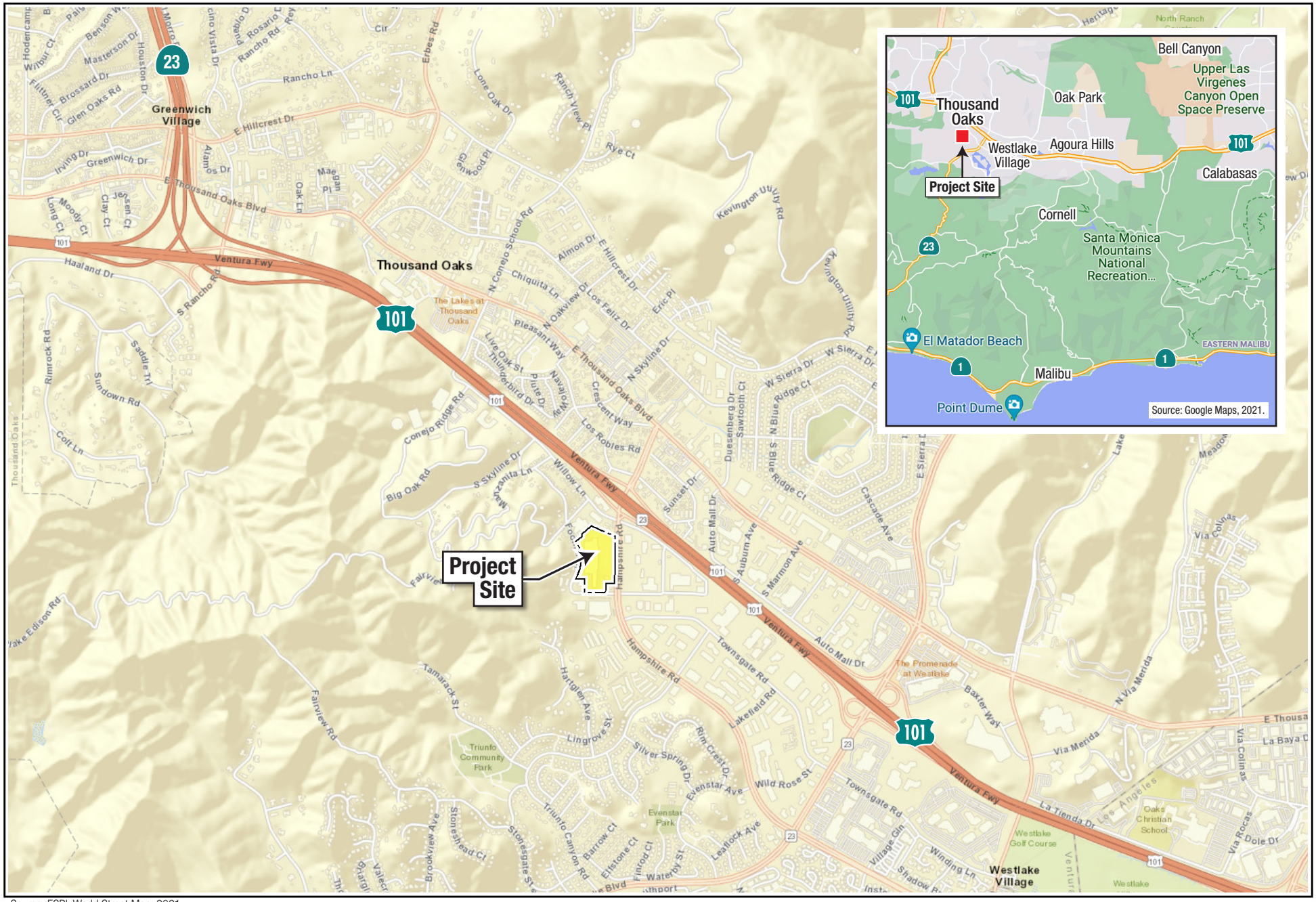
3.0 AIR QUALITY SETTING

Air Pollutants

The criteria pollutants for which federal and State standards have been promulgated and that are most relevant to air quality planning and regulation in the Basin are ozone, and fine suspended particulate matter. These and other common air pollutants are briefly described below.

- Ozone (O_3) is a gas that is typically formed in the atmosphere when volatile organic compounds (VOCs)[1] and nitrogen oxides (NO_X) undergo slow photochemical reactions in the presence of

[1] The Ventura County Air Pollution Control District Ventura County Air Quality Assessment Guidelines specifies that within that document, VOC is synonymous with reactive organic gases (ROG) and reactive organic compounds (ROC).



Source: ESRI, World Street Map, 2021.

envicom

Regional Location Map

FEET 0 1,000 2,000

FIGURE 1

sunlight. As such, emissions of VOCs and NO_X are considered to be O_3 precursors. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O_3 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.

- Particulate Matter PM-10 and PM-2.5 consists of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively, that can lodge in the lungs when inhaled. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. Inhaled particulate matter can contribute to respiratory problems and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance.
- Carbon Monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike sunlight. As such, emissions of VOCs and NO_X are considered to be O_3 precursors. O_3, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. CO is a health concern because it competes with oxygen, often replacing it in the blood and reducing the blood's ability to transport oxygen to vital organs. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.
- Nitrogen dioxide (NO_2) is a compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X, a major contributor to O_3 formation. NO_2 also contributes to the formation of PM-10. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (2-3 years old) has been observed at concentrations below 0.3 parts per million (ppm).
- Lead (Pb) in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, 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 phase-out of leaded gasoline reduced the inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become emission 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.

- Toxic Air Contaminants (TAC) are airborne pollutants that may increase a person's risk of developing cancer or other serious health effects. TACs include over 700 chemical compounds that are identified by State and federal agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process established in 1983 that includes risk identification and risk management.

Table 1, Criteria Pollutant Sources and Health Effects provides a summary of these major criteria pollutants of concern and their effects on public health.

Table 1
Criteria Pollutant Sources and Health Effects

Pollutants	Sources	Primary Health Effects
Ozone (O_3)	• Motor vehicles • Industrial emissions, • Consumer products Note: These sources emit NOx and VOC which are precursors for the formation of O_3 in the atmosphere when they react with sunlight.	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue
Particulate Matter (PM-10)	• Cars and trucks (especially diesels) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture and construction	• Premature death & hospitalization, primarily for worsening of respiratory disease
Particulate Matter (PM-2.5)	• Cars and trucks (especially diesels) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture and construction	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits, increased symptoms, increased inhaler usage
Carbon Monoxide (CO)	• Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Nitrogen Dioxide (NO_2)	• See carbon monoxide sources.	• Lung irritation • Enhanced allergic responses
Sources: California Air Resources Board (CARB). Sources of Air Pollution, https://ww2.arb.ca.gov/resources/sources-air-pollution, and Common Air Pollutants https://ww2.arb.ca.gov/resources/common-air-pollutants.		

Ambient Air Quality Standards

National and State ambient air quality standards (AAQS),[2] shown in **Table 2, Ambient Air Quality Standards**, are the air quality levels that are considered safe, with an adequate margin of safety, to protect the public health and welfare of "sensitive receptors," which include the elderly, young children, the acutely and chronically ill (e.g., those with cardio-respiratory disease, including asthma), and persons engaged in

[2] California Air Resources Board. California and National Ambient Air Quality Standards. Available at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.111850244.1417595818.1550763932-1724706578.1550763932. Accessed on October 23, 2019.

strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone, the primary ingredient in photochemical smog, may lead to adverse respiratory health, even at concentrations close to the ambient standard.

Table 2
Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990 California Air Resources Board (5/4/16)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon 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.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 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 PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (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.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' 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.

13. 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 one 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.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

Baseline Air Quality

Recent ambient air quality measurements of criteria pollutants recorded at monitoring stations in the vicinity are shown in **Table 3, Project Area Air Quality Monitoring Summary**. Ozone and PM-2.5 measurements from a monitoring station located at 2323 Moorpark Road, Thousand Oaks, approximately

3.5 miles northwest of the project site, are provided in Table 3. The NOx and PM-10 measurements shown in Table 3 were taken at 5400 Cochran Street, Simi Valley, California, approximately 11.5 miles to the north of the project site, as these criteria pollutants are not recorded at the Thousand Oaks monitoring station location.

Table 3
Project Area Air Quality Monitoring Summary

Pollutant/Standard	2017	2018	2019	2020
Ozone (O_3)				
Number of Days Standards Exceeded				
1-Hour > 0.09 ppm (S)	0	0	0	1
8-Hour > 0.07 ppm (F)	6	1	1	7
Maximum Observed Concentration				
Max. 1-Hour Conc. (ppm)	0.090	0.080	0.082	0.097
Max. 8-Hour Avg. (ppm)	0.074	0.073	0.074	0.084
Nitrogen Dioxide (NOx)				
Number of Days Standards Exceeded				
1-Hour > 0.18 ppm (S)	0	0	0	0
Maximum Observed Concentration				
Max. 1-Hour Conc. (ppm)	0.0460	0.0430	0.0450	0.0420
Inhalable Particulates (PM-10)				
Number of Days Standards Exceeded				
24-Hour > 50 $\mu g/m^3$ (S)	9.0	6.1	4.0	--
24-Hour > 150 $\mu g/m^3$ (F)	0	0	0	0
Maximum Observed Concentration				
Max. 24-Hr. Conc. ($\mu g/m^3$)	154.3	154.3	127.9	90.5
Ultra-Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu g/m^3$ (F)	0	1	1	1
Max. 24-Hr. Conc. ($\mu g/m^3$)	32.0	41.5	24.5	36.3

Source: California Air Resources Board, iADAM: Air Quality Data Statistics, Accessed at https://www.arb.ca.gov/adam/index.html
Notes: S = State; F = federal; $\mu g/m^3$ = micrograms per cubic meter of air; -- = insufficient data reported

Based on the data documented in Table 3, the air quality data and trends in the project vicinity are summarized below:

1. O_3 levels exceeded 1-hour federal or State standards on one day in 2020, did not exceed the 1-hour standards in 2017-2020, and exceeded 8-hour federal standards on 15 days from 2017-2020.
2. PM-10 levels exceeded the State 24-hour standard on 19 days in 2017-2019 (insufficient data was reported for 2020). The National 24-hour PM-10 standard was not exceeded from 2017-2020.
3. PM-2.5 levels exceeded federal 24-hour standards on three days from 2018-2020 and did not exceed standards in 2017.
4. NOx levels measured from 2016-2019 did not exceed National or State standards.

Regulatory Setting

Federal

Clean Air Act (CAA)

The U.S. EPA is responsible for enforcing the federal CAA, which regulates air quality in the United States. U.S. EPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS) as required under the CAA for seven criteria pollutants: CO, NO_2, O_3, PM-2.5, PM-10, SO_2, and Pb. The U.S. EPA establishes vehicle emission standards for vehicles sold in states other than California, which maintains stricter vehicle emission standards than the U.S. EPA.

Pursuant to the CAA, the U.S. EPA designates areas as attainment, nonattainment, or maintenance for each criteria pollutant based on whether the NAAQS have been achieved. As of December 31, 2021, the U.S. EPA designates Ventura County as a nonattainment area for O_3.

State

California Clean Air Act (CCAA)

The California Air Resources Board (CARB) is responsible for administering the CCAA and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA requires air districts in the State to achieve and maintain the CAAQS. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off -road equipment. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under State standards, Ventura County is designated as a nonattainment area for O_3, PM-10, and PM-2.5. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment.

Local

Air Quality Management Plan (AQMP)

The VCAPCD prepares Air Quality Management Plans (AQMPs) for meeting federal and State air quality standards, the most recent of which is the 2016 AQMP, and develops rules and regulations and permitting requirements.

Ventura County Air Quality Assessment Guidelines

The VCAPCD provides the Ventura County Air Quality Assessment Guidelines, with detailed guidance on how to evaluate and mitigate a project's air quality impacts.

Air Quality Planning

The Clean Air Act (CAA) requires areas that are not attaining the National Ambient Air Quality Standards (NAAQS or federal standards) to develop and implement an emission reduction strategy that will bring the area into attainment in a timely manner. The State of California also requires all feasible measures towards achievement of State of California ambient air quality standards (CAAQS or State standards) at the earliest practicable date. The VCAPCD develops and implements air quality attainment plans for the County that identify the pollution-control measures needed to meet clean air standards, focused on attaining and maintaining both the State and federal ozone standards. These plans influence a range of activities such as the development of rules and regulations, transportation planning, and the allocation of funds for air-quality

projects. Ventura County is designated as non-attainment for the State and federal ozone standards, and State PM-10 standards.[3]

4.0 PROPOSED DEVELOPMENT

The project would demolish approximately 118,782 square feet of existing vacant buildings, as well as associated paving, landscape, and hardscape, resulting in an estimated 14,350 tons of demolition debris to be hauled from the site.

The project would construct a mixed-use development of a total of 420 multi-family residential units and 15,000 square feet of commercial use with associated amenities. A total of 71 of the residential units would be provided as townhome units within 13 three-story structures, and 349 residential units would be provided as apartment units in two 4-story mixed-use buildings with ground-floor retail space and garage parking over one level of basement garage parking. The garage parking facilities would provide a combined 612 vehicle spaces. The project would also include 43 surface lot parking spaces within the site, and each townhome unit would include garage space for two vehicles. The proposed structures would have a total floor area of approximately 841,153 square feet. Grading would require export of 125,800 cubic yards (cy) of excavated soil material. Earth-moving equipment used during construction would meet Tier 4 emissions reduction criteria of the U.S. Environmental Protection Agency (USEPA).

5.0 AIR QUALITY IMPACTS

Significance Criteria

State CEQA Guidelines

Air quality impacts of a project are considered significant if they cause clean air standards to be violated where they are currently met, or if they substantially contribute to an existing violation of standards. Substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, that are generated by a project, would also be considered significant impacts.

As set forth in Appendix G, Environmental Checklist, of the State CEQA Guidelines, a project could have a potentially significant impact if it would:

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

AQMP Consistency

The VCAPCD Guidelines state that project consistency with the AQMP can be determined by comparing the actual population growth in the county with the projected growth rates used in the AQMP. Therefore, a demonstration of consistency with the population forecasts used in the most recently adopted AQMP should be used for assessing project consistency with the AQMP.

[3] Ventura County Air Pollution Control District, Air Quality Standards, Accessed at http://www.vcapcd.org/air_quality_standards.htm on March 3, 2021.

The Ventura County 2021 population is estimated at 835,223 a 0.7 percent growth decrease from 2020.[4] The AQMP estimates that the population will increase to 905,574 by 2025, the projects anticipated buildout year. The project would construct 420 residential units. Based on the County's average household size of 3.08 persons,[5] the project would house approximately 1,294 residents. If all project residents were new to Ventura County, the addition of the project's residents would increase the projected County population in 2025 to 836,517, which would be within the County's anticipated population growth forecast.

The VCAPCD Guidelines also state that "if there are more recent population forecasts that have been adopted by the Ventura Council of Governments (VCOG) where the total county population is lower than that included in the most recently adopted AQMP population forecasts, lead agencies may use the more recent VCOG forecasts for determining AQMP consistency." According to the Southern California Association of Governments (SCAG) Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), the projected population for Ventura County for the years 2020 and 2030 are 877,000 and 906,000, respectively. By interpolation, the County's 2025 population would be 891,500 based on the 2020-2045 RTP/SCS. The project-related population growth over current levels would also be within the more recently adopted population forecasts.

Therefore, the project would not generate growth exceeding the most recently adopted AQMP population forecasts and thus would not be inconsistent with the AQMP. Potential impacts associated with potential inconsistency with the AQMP would be less than significant.

VCAPCD Significance Thresholds for Ozone Precursors ROC and NO_X

For projects within the City, the VCAPCD Guidelines,[6] provides "reactive organic compounds (ROC) and NOx thresholds that the VCAPCD has determined will individually and cumulatively jeopardize attainment of the federal one-hour ozone standard, and thus have a significant adverse impact on air quality in Ventura County" which are as follows:

1. ROC 25 lbs/day
2. NO_X 25 lbs/day

According to the VCAPCD Guidelines, construction-related emissions (including portable engines and portable engine-driven equipment subject to the CARB's Statewide Portable Equipment Registration Program, and used for construction operations or repair and maintenance activities) of ROC and NOx are not counted towards the two significance thresholds, since these emissions are temporary. However, the VCAPCD Guidelines state that if a project's estimated construction-related emissions of ROC and NOx would exceed 25 lbs/day, APCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles:

1. Minimize equipment idling time.
2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.

[4] California Department of Finance (DOF), E-1: State/County Population Estimates with Annual Percent Change January 1, 2020 and 2021, Accessed at: https://dof.ca.gov/Forecasting/Demographics/Estimates/e-1/ on November 4, 2021.

[5] US Census, QuickFacts Ventura County, California, Accessed at: https://www.census.gov/quickfacts/fact/table/venturacountycalifornia/HSD310219#HSD310219 on November 4, 2021.

[6] Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, Technical Revision October 2003.

4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

For the following evaluations, the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to identify the project's maximum daily emissions for each criteria pollutant during construction activities and operations. CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts and is used by jurisdictions throughout the state to quantify criteria pollutant emissions.

Sensitive Receptors

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive receptors include the elderly, young children, the acutely and chronically ill (e.g., those with cardio-respiratory disease, including asthma), and persons engaged in strenuous work or exercise. As discussed in the Project Setting, surrounding development consists primarily of residential and commercial uses. The nearest sensitive use is the assisted living facility located approximate 20 feet to the north of the site.

Construction Emissions Methodology and Impacts

The proposed project's estimated construction emissions were modeled using CalEEMod Version 2020.4.0 to identify maximum daily emissions for each pollutant during project construction. The output reports from CalEEMod are included as **Appendix A** to this report. Construction emissions were modeled based primarily on the size of the project site and the proposed land use type and floor space, and the estimated duration of construction activities and types of equipment to be used.

Maximum daily pollutant emissions from construction activities include emissions from worker trips, hauling trips, construction vehicle emissions and fugitive dust from Site Preparation, Grading, Paving, Building construction, and Architectural Coating phases. Project details that were applied to CalEEMod are reported in the CalEEMod output sheets provided in Appendix A, including the proposed number of residential units, floor areas of residential and residential amenity spaces, commercial use floor space, parking garage spaces, and surface parking lot spaces. Additional project-specific construction data used in the model include:

- 132,000 cubic yards (cy) soil export.
- 14,350 tons of demolition debris removal.
- Off-road Construction Equipment meeting U.S. EPA Tier 4 standards.
- VCAPCD Rule 55 construction fugitive dust control measures - watering exposed soils twice daily.
- VCAPCD Rule 74.2 limiting architectural coatings applied to residential exteriors and commercial uses to 50 g/L VOC content. Residential interior architectural coatings will be limited to 10 g/L VOC content.

The project's conceptual construction equipment fleet list and approximate duration of each construction activity phase used in estimating construction emissions using CalEEMod is shown in **Table 4, Conceptual Construction Equipment Fleet**.

To reduce potential emissions of ozone precursors during construction, off-road earth moving equipment used on the site will meet the Tier 4 emission reduction standards of USEPA, and in compliance with VCAPCD Rule 74.2 (Architectural Coatings), which became effective July 1, 2021, the project would use paints with a maximum VOC content of 50 grams per liter (g/L). Additionally, residential interior architectural coatings would be limited to 10 g/L VOC content. The project's estimated maximum daily construction emissions, as calculated by CalEEMod are summarized in **Table 5, Construction Emissions**.

Table 4
Conceptual Construction Equipment Fleet

Construction Activity	Duration (Working days) [a]	Equipment Type (Quantity)
Demolition	30	1 Concrete/Industrial Saw
		2 Dozers
		3 Excavators
Site Preparation	15	3 Dozers
		4 Tractor/Loader/Backhoes
Grading	80	2 Excavators
		1 Grader
		1 Dozer
		2 Scrapers
		2 Loaders
		2 Tractor/Loader/Backhoes
Construction	440	1 Crane
		1 Pile Vibration Rig
		3 Forklifts
		3 Tractor/Loader/Backhoes
		1 Generator (solar)
		1 Concrete Pump
		1 Welder (electric)
Paving	20	2 Pavers
		2 Paving Equipment
		2 Rollers
Architectural Coating (painting)	100	1 Air Compressor

Source: IMT Residential, Email Communication March 30, 2022.
[a] To minimize air quality construction emissions, the applicant is committed to utilizing Tier 4 diesel-rating construction off-road equipment as a project design feature.

Table 5
Construction Emissions

	Maximum Daily Emissions (lbs/day) [a]					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Construction Emissions [b, c]	16.1 [d]	18.3	48.7	0.14	9.1	4.6
VCAPCD Thresholds	25	25	-	-	-	-
Exceeds Threshold? Yes/No	No	No	-	-	-	-

Source: CalEEMod output, March 30, 2022.
[a] Maximum daily emissions for all years of construction. Summer or Winter season, whichever is greatest.
[b] Off-Road earth-moving diesel-powered equipment that meets USEPA Tier 4 emissions standards.
[c] Includes watering of exposed surfaces twice daily for dust suppression as required by VCAPCD Rule 55.
[d] Exterior and commercial paints 50 g/L VOC content (APCD Rule 74.2). Residential interior paints 10 g/L VOC content.

As shown in Table 5, based on the duration of construction activities and the equipment to be utilized onsite, the project's short-term construction-related emissions of ROG or NOx would not exceed the VCAPCD guideline of 25 lbs/day and therefore would not trigger the need for mitigation measures. Additionally, VCAPCD Rule 55 requires projects to minimize construction fugitive dust emissions, which includes but is not necessarily limited to the following best management practices:

- Apply water to disturbed soils of the site at least twice daily during construction.
- Require the use of a gravel apron and/or rumble pad at truck exit points to reduce mud and dirt trackout onto area roadways.
- All soil materials transported off-site shall be securely covered during transit.
- Apply non-toxic soil stabilizers according to manufacturers' specifications to all graded areas that remain inactive for ten days or more).
- Limit traffic speeds on all unpaved portions of the site to 15 mph or less by providing worker notification, signage, or other means.

To ensure use of Tier 4 equipment during grading and use of non-diesel welders and generators during construction as committed to by the applicant, the following Project Design Features (PDFs) are included;

PDF-AQ-1 – Tier 4 Grading Equipment
During grading activities, all diesel-powered earthmoving equipment with greater than 100 horsepower used on-site for excavation and grading shall meet U.S. Environmental Protection Agency Tier 4 emissions standards.

PDF-AQ-2 – Electric/Alternative fueled Equipment.
During construction activities, the contractor shall, at a minimum, electrify or use alternative fuels (non-diesel) for the operation of all equipment less than 50 horsepower (welders). In addition, electricity use during the construction activities shall come from the existing electric grid instead of a diesel generator. If a generator is necessary for the completion of construction activities, a non-diesel generator shall be used.

Operational Emissions Methodology and Impacts

During operations, the proposed uses would result in emissions of criteria pollutants from area sources (i.e., consumer products, architectural coatings, and landscaping equipment), energy sources (electricity and natural gas usage), and mobile sources (vehicle use), which were also calculated using CalEEMod. As existing structures on the site have been vacant for several years, this analysis assumes that baseline operational emissions under existing conditions is zero.

Project details that were applied to CalEEMod for determining operational emissions are reported in the CalEEMod output sheets provided in Appendix A, including the proposed number of residential units, floor areas of residential and residential amenity spaces, commercial use floor space, parking garage spaces, and surface parking lot spaces. Adjustments were made in the CalEEMod mobile land screen that were applicable to the project as it would increase the density of use within the infill site, provide a mixed-use development of residential and commercial uses (diversity of uses), would be adjacent to and near commercial, and employment centers (destination accessibility), and will include below market rate housing. An adjustment was made in the CalEEMod mobile commuting screen that was applicable to the project due the proposed inclusion of live/work units and co-work amenity space to encourage telecommuting/alternate work schedules. An adjustment was made in CalEEMod regarding water use that was applied based on input from the project applicant detailing the project's proposed Green Initiatives that

include drought tolerant landscaping, high-efficiency drip irrigation systems, and high efficiency plumbing fixtures to promote water conservation. Although CalEEMod accommodates such adjustments and reports resulting reductions in emissions within output tables labeled "With Mitigation", the items discussed above regarding mobile land use, mobile commute and water use are features of the project site, surroundings, and proposed development. As such, the estimated emissions calculated by CalEEMod with reductions associated with the project site, surroundings, and proposed development would occur as project design features without requiring mitigation measures to be specified within a CEQA document. Additional project-specific operations data used in the model as reported in the attached CalEEMod output sheets (Appendix A) include:

- VCAPCD Rule 74.2 limiting architectural coatings applied for residential and commercial use structures to 50 g/L VOC content. Residential interior coatings of 10 g/L VOC content.
- Hill Canyon Wastewater Treatment Plant details.
- 3,583 average daily trips[7] per the project's Traffic Impact Analysis (TIA).[8]
- Increase Density
- Increase Diversity
- Improve Destination Accessibility
- Integrate Below Market Rate Housing
- Encourage Telecommuting and Alternative Work Schedules
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

Table 6, Maximum Daily Operational Emissions, summarizes the estimated emissions of criteria pollutants during operations of the proposed project. Table 6 also shows the applicable VCAPCD significance thresholds and summarizes if the project's emissions would exceed applicable thresholds.

Table 6
Maximum Daily Operational Emissions

	Emissions (Pounds/Day)					
Emissions Sources	**ROG**	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Summer Emissions						
Area	13.55	0.40	34.70	0.00	0.19	0.19
Energy	0.15	1.29	0.55	0.01	0.10	0.10
Mobile [a]	9.58	9.32	77.90	0.16	18.13	4.92
Total	**23.28**	**11.00**	**113.15**	**0.17**	**18.43**	**5.21**
Winter Emissions						
Area	13.55	0.40	34.7	0.00	0.19	0.19
Energy	0.15	1.29	0.55	0.01	0.10	0.10
Mobile [a]	9.25	10.29	83.38	0.16	18.13	4.92
Total	**22.95**	**11.98**	**118.63**	**0.17**	**18.43**	**5.21**

[7] Trip reduction (-57 trips) due to internal capture are applied to the apartment land use as the TIA does not separate reductions by types of residences, and internal capture applies to residents of the project avoiding trips by patronizing onsite commercial uses.

[8] Iteris, Thousand Oaks Ranch Traffic Impact Analysis Draft Report, January 11, 2022.

	Emissions (Pounds/Day)					
Emissions Sources	**ROG**	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Maximum Total	**23.28**	**11.98**	**118.63**	**0.17**	**18.43**	**5.21**
VCAPCD Thresholds	25	25	-	-	-	-
Significant Impact? Y/N	**No**	**No**				
Source: CalEEMod output, March 30, 2022. Totals may differ from sums due to rounding. [a] CalEEMod default trip rates were adjusted to account for project design features.						

As seen in Table 6, during operations the project would not exceed the thresholds that the VCAPCD has determined for projects that will individually and cumulatively jeopardize attainment of the federal one-hour ozone standard. Therefore, the project would not 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.

Toxic Air Contaminants

Exhaust particulates emitted from diesel powered equipment contains carcinogenic compounds, or toxic air contaminants (TACs). A Health Risk Assessment (HRA) has been conducted by Air Quality Dynamics to evaluate the potential effects of diesel emissions generated at the site during construction. The HRA, which is provided as a separate technical report, determined the potential effects of diesel emission TACs generated during construction would be less than significant.

During operations, multifamily-residential and commercial uses are typically not associated with substantial diesel truck use, and emissions of TACs associated with diesel exhaust during operations would be less than significant.

Carbon Dioxide Hot Spots

A CO hotspot is a localized concentration of CO that is above the State or national 1-hour or eight hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic that could cause local CO concentration to exceed federal or State AAQS. According to the VCAPCD Guidelines, a CO hotspot screening analysis should be conducted for any project with indirect emissions greater than the applicable ozone project significance thresholds that may significantly impact roadway intersections that are currently operating at, or are expected to operate at, Levels of Service E, or F. As shown in Tables 5 and 6, the project's emissions of ozone precursors ROG or NOx would not exceed the VCAPCD significance thresholds. As such, pursuant to VCAPCD Guidelines, a CO hotspot screening analysis for this project would not be warranted and potential impacts would be less than significant.

San Joaquin Valley Fever

San Joaquin Valley Fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus Coccidioides immitis. Infection is caused by inhalation of Coccidioides immitis spores that have become airborne when dry, dusty soil or dirt is disturbed by wind, construction, farming, or other activities. The Valley Fever fungus tends to be found at the base of hillsides, in virgin, undisturbed soil and is found in the southwestern United States. In its primary form, symptoms appear as a mild upper respiratory infection, acute bronchitis, or pneumonia. The most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches, although 60 percent of people infected are asymptomatic and do not seek medical attention. In the remaining 40 percent, symptoms range from mild to severe. There is no recommended threshold for a significant San Joaquin Valley Fever impact; however, according to the

VCAPCD the following factors may indicate a project's potential to create significant Valley Fever impacts:

- Disturbance of the top soil of undeveloped land (to a depth of about 12 inches).
- Dry, alkaline, sandy soils.
- Virgin, undisturbed, non-urban areas.
- Windy areas.
- Archaeological resources probable or known to exist in the area (Native American midden sites).
- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on unvegetated soil (non-grass).
- Non-native population (i.e., out-of-area construction workers).

According to the VCAPCD Guidelines, the lead agency should consider the factors above that are applicable to the project or the project site. Based on these or other factors, if a lead agency determines that a project may create a significant Valley Fever impact, the VCAPCD recommends that the lead agency consider the Valley Fever mitigation measures listed in the VCAPCD Guidelines to minimize fugitive dust as well as minimizing worker exposure. The VCAPCD Guidelines provides the following list of measures to be considered if the lead agency determines a project site poses a risk of San Joaquin Valley Fever:

1. Restrict employment to persons with positive coccidioidin skin tests (since those with positive tests can be considered immune to reinfection).
2. Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.
3. Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.
4. Require that the cabs of grading and construction equipment be air-conditioned.
5. Require crews to work upwind from excavation sites.
6. Pave construction roads.
7. Where acceptable to the fire department, control weed growth by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.
8. During rough grading and construction, the access way into the project site from adjoining paved roadways should be paved or treated with environmentally-safe dust control agents.

The proposed project site is an infill property that is fully developed with buildings and a paved parking lot and planters with remnant landscaping. As such, development of the project would not disturb top soil of undeveloped land, or occur within virgin, undisturbed, non-urban areas. The project site also does not include archaeological resources (Native American midden sites), and the project would not host special events or motorized activities on unvegetated soil during operations. Additionally, the project would be required by VCAPCD Rule 55 to implement measures to minimize fugitive dust during construction, including application of water to exposed soils, which would minimize dust from dry soils or during windy days, which would further reduce the potential for a substantial risk of San Joaquin Valley Fever effects.

As such, the factors that according to VCAPCD may indicate potential Valley Fever impacts do not apply to the project site and proposed activities. Therefore, the potential for the project to result in substantial San Joaquin Valley Fever impacts would be less than significant.

Odor Impacts

Land uses typically associated with objectionable odors that potentially adversely affect a substantial number of people include manufacturing, industrial, agricultural, or sewage treatment processes, and typically are not associated with residential and commercial land uses such as the project.

During construction, the application of certain materials (i.e., asphalt, paints, etc.) may generate odors within various portions of the site that would be temporary in nature and are common to construction projects. For operations, the project will include enclosure for trash and recyclable bins, to be emptied on a regular basis, and therefore would not generate objectionable odors that adversely affect a substantial number of people. As such, odor impacts of the project during construction and operation would be less than significant.

6.0 ENERGY CONSUMPTION

Based on the CEQA Appendix G guidelines, a project would have a potentially significant GHG impact if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Energy Usage

Construction

During construction, the project would consume fuels associated with the onsite use of equipment, off-site hauling of materials and supplies, and worker transportation. The California Code of Regulations requires drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds not to idle the vehicle's primary diesel engine longer than five minutes at any location.[9] Compliance with this regulation would prevent unnecessary consumption of energy from use of diesel fuel during construction.

Electricity use related to lighting and electronic equipment during construction would vary throughout the construction period, depending on the particular construction activities performed at the time. When not in use, electric equipment and devices would be powered off to avoid unnecessary energy consumption. Night lighting of the project Site during construction would also be limited to that needed for safety and security purposes, as the City's Noise Ordinance restricts nighttime construction activity. Electricity necessary to supply water to the construction site is estimated to be 17,724 kilowatt-hours for dust suppression during grading activities. These activities would cease upon completion of the project, and the overall demand for electricity during construction would be negligible when compared to the project operational phase.

The demolition, grading, and building development activities that would be associated with project construction do not typically rely on natural gas as an energy source. Therefore, substantial quantities of natural gas would not be consumed in support of project construction.

The project's demand for transportation fuels, gasoline and diesel, is provided in **Table 7, Project Construction Energy Use**. The fuel consumption that is necessary to power off-road equipment is based

[9] California Code of Regulations, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

on the quantity and type of equipment that would be used for each construction phase, the duration of use each day, the total construction period duration, and the hourly construction equipment fuel consumption factors that are made available by the OFFROAD model. On-road equipment includes haul trucks and vendor trucks, which are powered by diesel fuel, as well as vehicles associated with construction worker commuter trips, which are assumed to be powered by gasoline. The fuel consumption for on-road trucks is based on fuel consumption information from the EMFAC model. The fuel demand for construction worker commuter trips is based on the estimated number of workers for each phase of construction and the average distance that workers travel from CalEEMod, as well as on the emissions factors from the EMFAC model. As shown in Table 7, project construction activities would result in the consumption of 165,543 gallons of diesel fuel and 90,337 gallons of gasoline.

Table 7
Project Construction Energy Use

Energy Source	Quantity Demanded during Construction
Electricity [a]	
Electricity Total	**17,724 kWh**
Natural Gas	
Natural Gas Total	**N/A** [b]
Transportation Fuels [c]	
Gasoline	
On-road Worker Trips	90,337 gal
Gasoline Total	**90,337 gal**
Diesel	
On-road Haul Trucks	26,395 gal diesel
On-road Vendor Trucks [d]	29,966 gal diesel
Off-road Construction Equipment [e]	109,182 gal diesel
Diesel Total	**165,543 gal diesel**

Source: Construction Fuel Use Worksheet, provided in Appendix B, and CalEEMod Output Sheets, included in Appendix A.

Notes:
kWh = kilowatt-hours
gal = gallons

[a] Water Usage for fugitive dust control during construction calculation:
- Water application rate = 3,020 gallons/acre/day
- Each gallon of delivered potable water in Southern California is associated with 0.009727 kWh of electricity.
- Grading 55 days x 10.97 acres x 3,020 gallons = 276,934 gallons x 0.009727 = 17,724 kWh

Electricity used to power lights and electronic equipment during construction is not quantified, as it is assumed to be negligible relative to project operations.
[b] Construction equipment assumptions do not include liquefied natural gas (LNG) powered vehicles. It is not anticipated that a substantial portion of the construction equipment fleet would consist of LNG-powered vehicles.
[c] On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 web based data.
[d] Vendor trucks assumed to be diesel
[e] All emissions from off-road construction equipment were assumed to be diesel. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Operations

During operations, the project would consume energy for vehicle trips, water conveyance, solid waste disposal systems, lighting, and to operate electronic equipment and devices and HVAC systems. The

project's estimated energy use during operations is summarized in **Table 8, Project Operations Energy Use**.

The project would generate additional demand for electricity from the SCE. As estimated by CalEEMod, the project's total electricity demand would be approximately 3,376,328 kilowatt hours per year (kWh/year) or 3,376.3 megawatt hours per year (MWh/year). The SCE supplies more than more than 87 million MWh/year of electricity to customers.[10] The project would represent approximately 0.004 percent of the yearly electricity demand, which is negligible in relation to the entire electricity demand of the SCE service area. Therefore, the project would not result in substantial increase in electricity demand. In addition, the project would be required to comply with the applicable portions of the California Energy Code and California Green Building Standards Code (CALGreen Code), which establish planning and design standards for sustainable development, energy efficiency, water conservation, and material conservation. By required compliance with applicable regulations and continued energy efficient programs implemented by SCE, the project's potential impacts regarding wasteful or inefficient use of electricity energy supplies would be less than significant.

The project would generate additional demand for natural gas from the Southern California Gas Company (SoCalGas). Total project demand for natural gas would be approximately 5,092,960 thousand British thermal units per year (kBTU/year) as estimated by CalEEMod outputs. According to the California Energy Commission, the County consumed 180.18 million therms or 18,013,671,930 kBTU/year of natural gas in 2020.[11] The project would represent approximately 0.03 percent of the natural gas consumption in the County in 2020, a negligible amount relative to Countywide consumption. In addition, the project is required to comply with applicable portions of the California Energy Code and CALGreen Code, which establish planning and design standards for sustainable development, energy efficiency, water conservation, and material conservation. By required compliance with applicable regulations, the project's potential to result in impacts regarding wasteful or inefficient use of natural gas energy supplies would be less than significant.

According to the CARB on-road vehicle emissions factor model, EMFAC2021, the average fuel economy for the fleet-wide mix of vehicles operating in the County of Ventura for the year 2022 is approximately 24.11 miles per gallon for gasoline-fueled vehicles and approximately 10.29 miles per gallon for diesel-fueled vehicles. As shown in the Operational Fuel Use worksheet provided in Appendix B, based on the CalEEMod Output Sheets, included in Appendix A, the project would generate approximately 7,581,896 VMT annually, 91 percent of which would comprise light-duty vehicles with a gross vehicle weight rating (GVWR) of up to 8,500 pounds, and approximately nine percent of which would comprise heavy-duty vehicles (GVWR > 8,500 pound). For this analysis, light-duty vehicles are considered to be gasoline powered and heavy-duty vehicles are considered to be diesel-fueled. As such, during operations the project would generate approximately 6,901,064 annual VMT with gasoline-fueled vehicles, and approximately 680,824 annual VMT with diesel-fueled vehicles. Based on the State's projected fleet fuel mileage for the year 2022, during operations the project's demand for transportation fuels would be approximately 286,232 gallons of gasoline, and approximately 66,164 gallons of diesel fuel, annually.

[10] Southern California Edison, About Us, Who We Are, Accessed on October 26, 2021, at: https://www.sce.com/about-us/who-we-are.

[11] California Energy Commission, Gas Consumption by County, Ventura, Accessed on October 26, 2021 at: https://ecdms.energy.ca.gov/gasbycounty.aspx.

Table 8
Project Operations Energy Use

Energy Source	Quantity Demanded during Operations per Year
Electricity [a]	**3.38** million kWh
Natural Gas [a]	**5.09** million kBtu
Transportation Fuels [b, c]	
Gasoline	286,232 gallons
Diesel	66,164 gallons

Source: TO Ranch Project Operational Fuel Use Worksheet, provided in Appendix D, and CalEEMod Output Sheets, included in Appendix B.

Notes:
kWh = kilowatt-hours
kBTU = kilo-British Thermal Units
[a] Estimated by CalEEMod. Output Sheets included in Appendix A.
[b] Project gasoline and diesel use during operations are calculated based on the VMT estimated by CalEEMod. Output Sheets included in Appendix A. It is assumed that light-duty vehicles use gasoline, while heavy-duty (Gross Vehicle Weight Rating > 8,500 pounds) use diesel. CalEEMod Output Sheets indicate light-duty vehicles account for approximately 91 percent of project VMT. Calculations shown in Operational Fuel Use Worksheet, provided in Appendix B.
[c] Project gasoline and diesel use are calculated based on fuel consumption factors for calendar year 2022 from EMFAC2021 (24.11 miles per gallon for gasoline-fueled vehicles and 10.29 miles per gallon for diesel-fueled vehicles). Calculations shown in Construction Fuel Consumption Worksheet, provided in Appendix B.

In summary, the project would result in the consumption of energy in the forms of electricity, natural gas, and transportation fuels. The project would be required to comply with federal, State, and local regulations aimed to reduce the inefficient, wasteful, and unnecessary consumption of energy. Therefore, the project's energy requirements and its energy use efficiencies would result in a less-than-significant impact related to the wasteful, inefficient, and unnecessary consumption of energy.

Energy Plan Consistency

The City would review project site plans to verify compliance with the Building and Energy Efficiency Standards in the California Energy Code prior to issuing a building permit. As a regulatory requirement, the project would be reviewed for consistency with applicable State and local plans for renewable energy and efficiency, including CALGreen Code Title 24 standards. CALGreen Code standards require projects to provide energy saving features, establish minimum standards for energy efficient construction practices, and require increased energy efficiency. The project would be built to the codes in effect at the time of construction. In addition, the project proposes a mixed-use development with residential and commercial uses on an infill site, would provide bicycle storage areas with electric bike (e-bike) charging stations to encourage active transportation and reduce VMT, and would install solar panels to supplement electricity supplied by SCE. To reduce use of transportation fuels, 10 percent of the parking facilities would have electric vehicle (EV) chargers installed, and 30 percent of the parking would be EV-ready to facilitate future installation of additional EV charging equipment. As the project would comply with regulatory requirements for building efficiency and incorporate features that encourage a reduction in the use of gasoline-fueled vehicles, the project would not conflict with a State or local plan for renewable energy or energy efficiency.

7.0 GREENHOUSE GAS EMISSIONS SETTING

Global Climate Change Overview

Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer.[12] The Earth's climate has changed throughout history. Just in the last 650,000 years there have been seven cycles of glacial advance and retreat, with the abrupt end of the last ice age about 7,000 years ago marking the beginning of the modern climate era and of human civilization. Most of these climate changes are attributed to very small variations in Earth's orbit that change the amount of solar energy our planet receives.[13]

Earth's temperature depends on the balance between energy entering and leaving the planet's atmospheric system. When incoming energy from the sun passes through the atmosphere, it is absorbed by the Earth and warms the planet. Some of this heat energy is released back into the atmosphere as infrared radiation, where it may pass back into space, cooling the planet, or certain gases in the atmosphere may absorb it before leaving the Earth's atmospheric system. When this heat energy is blocked from escaping into space, heat is retained within Earth's atmospheric system, keeping the planet warmer than if the heat had passed into space. This process is commonly known as the "greenhouse effect", and atmospheric gases that absorb this heat energy are referred to as GHGs.[14]

Since the Industrial Revolution began around 1750, human activities have contributed substantially to climate change by adding carbon dioxide (CO_2) and other heat-trapping gases to the atmosphere. These GHG emissions have increased the greenhouse effect and caused Earth's surface temperature to rise. The primary human activity affecting the amount and rate of climate change is GHG emissions from the burning of fossil fuels.[15]

Greenhouse Gases

Section 38505(g) of the California Health and Safety Code defines GHGs to include the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). Carbon dioxide, followed by CH_4 and N_2O, are the most important GHGs that result from human activity[16] and are the GHGs of primary concern in this analysis. Two important ways in which these gases differ from each other are their ability to absorb energy (their "radiative efficiency"), and how long they stay in the atmosphere (also known as their "lifetime"). The ability of equivalent masses of each GHG to trap heat in the atmosphere is measured by its global warming potential (GWP).[17] CO_2 is the reference gas used for GWP, and it has a GWP of one. The GWP of other GHGs are determined based on their heat trapping potential relative to CO_2. Because of this, GHG emissions are commonly expressed in terms of carbon dioxide equivalents (CO_2e), where CO_2e is calculated by the quantity of each GHG multiplied by its associated GWP factor.

[12] U.S. Environmental Protection Agency, Climate Change: Basic Information, 2017. Accessed on July 17, 2019 at: https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html.
[13] NASA, Global Climate Change Vital Signs of the Planet, Site last updated: July 12, 2019, Accessed on July 17, 2019: https://climate.nasa.gov/evidence/.
[14] U.S. Environmental Protection Agency, Causes of Climate Change, 2017, Accessed on July 17, 2019 at: https://19january2017snapshot.epa.gov/climate-change-science/causes-climate-change_.html#Greenhouse.
[15] Ibid.
[16] Ibid.
[17] U.S. Environmental Protection Agency, Greenhouse Gas Emissions Understanding Global Warming Potentials, 2017, Accessed on July 17, 2019 at: https://19january2017snapshot.epa.gov/ghgemissions/understanding-global-warming-potentials.html.

Below is a description of each GHG emission as described by the California Climate Action Registry (CCAR) General Reporting Protocol.[18]

- Carbon Dioxide (CO_2): Consisting of a single carbon and two oxygen atoms, CO_2 is the most common of the six primary GHG emissions, and it provides the reference point for the GWP of other gases. Thus, the GWP of CO_2 is equal to one.
- Nitrous Oxide (N_2O): Consisting of two nitrogen atoms and a single oxygen atom, N_2O possesses a GWP of 310 and is typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning.
- Methane (CH4): Consisting of a single carbon atom and four hydrogen atoms, CH_4 possesses a GWP of 21 and is produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.
- Hydrofluorocarbons (HFCs): Primarily used as refrigerants, HFCs consist of a class of gases containing hydrogen, fluorine, and carbon. They possess a range of high and very high GWP values from 120 to 12,000.
- Perfluorocarbons (PFCs): PFCs consist of a class of gases containing carbon and fluorine and are originally introduced as alternatives to ozone depleting substances. They are typically emitted as by-products of industrial and manufacturing processes and possess GWPs ranging from 5,700 to 11,900.
- Sulfur Hexafluoride (SF_6): SF_6 consists of a single sulfur atom and six fluoride atoms, possessing a very high GWP of 23,900. SF_6 is primarily used in electrical transmission and distribution systems.

Human Activity and Global Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), global GHG emissions due to human activities have grown since pre-industrial times, with an increase of 70 percent between 1970 and 2004. This increase has resulted from the burning of coal, oil, and natural gas (which generates GHGs, including CO_2), and the depletion of forests (which absorb CO_2) around the world to provide wood products and space for agriculture and other human activities.[19] Human activities result in emissions of four long-lived greenhouse gases: CO_2, CH_4, N_20, and halocarbons (a group of gases containing fluorine, chlorine or bromine). The global atmospheric concentrations of CO_2, CH_4, and N_20 have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values, which has been determined from ice cores spanning many thousands of years.

The IPCC asserts that most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic (related to human activity) GHG concentrations. The observed widespread warming of the atmosphere and ocean, together with ice mass loss, support the conclusion that it is extremely unlikely that global climate change of the past 50 years can be explained without external forcing and very likely that it is not due to known natural causes alone.[20]

[18] California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.
[19] California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
[20] Intergovernmental Panel on Climate Change, Climate Change 2007: Synthesis Report.

Projected Impacts of Global Climate Change in California

The California Climate Action Team (CAT)/California Environmental Protection Agency (Cal EPA) March 2006 Report to Governor Arnold Schwarzenegger and the Legislature states that end-of-century projected climate change impacts may include Sierra snowpack loss, a rise in sea level, a rise in the number of critically dry years, increased large fire risk, increased electricity demand, a rise in the amount of urban area heat waves and heat related deaths, decreased forest yields, and an increase in days meteorologically conducive to ozone (O_3) formation.[21]

Greenhouse Gas Emissions Inventory

In an effort to evaluate and reduce the potential adverse impacts of global climate change, GHG inventories have been compiled to estimate the level of emissions and removals. The global, national, statewide, and Countywide inventories are summarized below.

Global

The Global Carbon Project releases an annual update of the global carbon budget and trends. According to the Global Carbon Budget 2021, the atmospheric CO_2 concentration in 2021 is 415 parts per million (ppm), 49 percent above the concentration at the start of the Industrial Revolution (about 277 ppm in 1750).[22]

United States

In 2019, total gross U.S. GHG emissions were 6,558 million metric tons of CO_2e (MMT CO_2e.)[23] Total U.S. emissions have increased by 1.8 percent from 1990 to 2019, and emissions decreased from 2018 to 2019 by 1.7 percent (113.1 MMT CO_2e.) The decrease in total GHG emissions between 2018 and 2019 was driven in large part by a decrease in CO_2 emissions from fossil fuel combustion, due to factors including a continued shift from coal to natural gas and increased use of renewable energy in the electric power sector.[24]

State of California

According to the CARB, California GHG Emission Inventory - 2021 Edition, total California GHG emissions were 418.2 MMT CO_2e in 2019, 7.2 MMT CO_2e lower than 2018 levels and almost 13 MMT CO_2e below the 2020 GHG Limit of 431 MMT CO_2e.[25] Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 MT CO_2e per person to 10.5 MT CO_2e per person in 2019, a 25 percent decrease. The major source of GHGs in California is transportation, contributing almost 40 percent of the State's total GHG emissions in 2019, or over 50 percent if emissions from extracting, refining and moving transportation fuels in California are included.

City of Thousand Oaks

The total Community GHG emissions for the City of Thousand Oaks for the year 2012 were estimated at 886,369 metric tons of CO_2e (MT CO_2e).[26] Significant strides have been made in reducing community emissions over the past decade even as the City's population has grown, with 2020 emissions 27.7 percent lower than the 2010 City baseline values. This reduction is primarily due to energy conservation, a transition

[21] California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
[22] Global Carbon Project, Global Carbon Budget 2018, December 5, 2018, Accessed on November 5, 2021 at: https://www.globalcarbonproject.org/carbonbudget/21/files/GCP_CarbonBudget_2021.pdf
[23] The tonne is a metric unit of mass equal to 1,000 kilograms, also referred to as a metric ton. It is equivalent to approximately 2,204.6 pounds; 1.102 short tons, and 0.984 long tons.
[24] U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019.
[25] California Air Resources Board, California Greenhouse Gas Emissions for 2000 to 2019, Date of Release: July 28, 2021.
[26] Ventura County Regional Energy Alliance, Climate On the Move, December 2015.

to more renewable energy, and improved vehicle fuel efficiency. The most dramatic reduction in emissions from electricity use resulted from the switch to Clean Power Alliance as the community's electricity provider. The change occurred in early 2019, with the default option set at 100 percent renewable energy for residents and businesses.[27]

Regulatory Setting

The following includes a discussion of the applicable federal, State, and local regulations associated with GHG emissions.

Federal

Federal Clean Air Act

On April 2, 2007, in Massachusetts v. EPA, [549 U.S. 497 (2007)], the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of six 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.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles.[28] In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the US EPA developed emission standards for light-duty vehicles (2012-2025 model years)[29] and heavy-duty vehicles (2014-2027 model years).[30]

Corporate Average Fuel Economy (CAFE) Standards

First enacted by Congress in 1975, the purpose of the Corporate Average Fuel Economy (CAFE) standards was to reduce energy consumption by increasing the fuel economy of passenger cars and light trucks. On April 1, 2010, the NHTSA and US EPA issued a joint final rule establishing a new national program to regulate passenger cars and light trucks in order to improve fuel economy and reduce GHG emissions. According to Midterm Evaluation of Light-Duty Vehicle GHG Emission Standards and Corporate Average

[27] City of Thousand Oaks, Greenhouse Gas Inventory and Targets, September 20, 2021, Accessed on November 8, 2021 at: https://storymaps.arcgis.com/stories/94c3fc9e69244693a56bf222234c506a.

[28] US EPA. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Available at: https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a, Accessed on November 8, 2021.

[29] NHTSA, EPA and ARB, Draft Technical Assessment Report (TAR) of Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025, July 2016.

[30] U.S. Government Publishing Office, NHTSA 49 Code of Federal Regulations Parts 523, 534, 535, and 538, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2, 2016. Federal Register Vol. 81, No. 206. October 25, 2016.

Fuel Economy Standards for Model Years 2022-2025, issued by the NHTSA, US EPA and ARB on July 18, 2016, CAFE standards for passenger cars and light trucks increased from an average fuel economy of 34.1 miles per gallon (mpg) by model year 2016 to 38.3 mpg by model year 2021 and 46.3 mpg by model year 2025.31

State

Senate Bill 1078 and Senate Bill 107, The California Renewables Portfolio Standard

The State enacted Senate Bill (SB) 1078 in 2002, establishing the Renewable Portfolio Standards (RPS) program and requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. The legislation set a target by which 20 percent of the State's electricity would be generated by renewable sources. Senate Bill 1078 requires each electrical corporation to increase its total procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to meet an annual target, it would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall. The State enacted SB 107 in 2006, which modified the RPS to require that at least 20 percent of electricity retail sales be served by renewable energy resources by 2010.[32]

Assembly Bill 1493, The Pavley Standards

In July 2002, the State enacted Assembly Bill (AB) 1493, which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks, beginning with model year 2009. In September 2004, pursuant to this directive, the CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are referred to as the Pavley Standards. In September 2009, the CARB adopted amendments to the Pavley Standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are referred to as the Pavley II Standards. It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, as well as improve fuel efficiency and reduce motorists' costs.[33]

Executive Order S-3-05

Former Governor Schwarzenegger's 2005 Executive Order S-3-05 included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a CAP. The Secretary of the California Environmental Protection Agency (Cal EPA) leads the Climate Action Team (CAT), whose goal is to implement global warming emission reduction programs identified in the CAP and to report biannually on the progress made toward meeting the emission reduction targets established in the Executive Order.[34]

[31] NHTSA, EPA and ARB, Draft Technical Assessment Report (TAR) of Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025, July 2016.
[32] California Energy Commission, Renewables Portfolio Standard Accessed on November 8, 2021 at: http://www.energy.ca.gov/portfolio/.
[33] California Air Resources Board (ARB), California Air Resources Board Approves Advances Clean Car Rules, Accessed on November 8, 2021 at: https://ww2.arb.ca.gov/news/california-air-resources-board-approves-advanced-clean-car-rules.
[34] Office of Governor Arnold Schwarzenegger, Executive Order S-3-05, June 1, 2005.

Assembly Bill 32, The Global Warming Solutions Act of 2006

In September 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32 (California Health and Safety Code, Section 38500 et seq.). As required by AB 32, CARB was directed to determine statewide GHG emissions in 1990, and set that as a limit to be achieved statewide by 2020. AB 32 mandated CARB to establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

By June 30, 2007, CARB was required to publish discrete early action GHG emission reduction measures that could be implemented. After the list was published, CARB had a deadline of January 1, 2010, to adopt regulations to implement these measures. Another deadline imposed on CARB required the approval of a "scoping plan" by January 1, 2009. The scoping plan was required to include recommendations for direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that the ARB found necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of GHGs by 2020. In developing the scoping plan, CARB was also required to identify opportunities for emission reductions measures from verifiable and enforceable voluntary actions, including, but not limited to, carbon sequestration projects and BMPs.[35]

Pursuant to AB 32, CARB identified 427 million MT CO_2e as the total Statewide aggregated 1990 GHG emissions level, which serves as the 2020 emissions limit. The CARB estimates that a GHG emissions reduction of 173 million MT CO_2e below business-as-usual (BAU) would be required to meet the Statewide emissions limit by year 2020.[36] Based on these numbers, CARB published a list of "early actions," adopted regulations implementing such actions, published a scoping plan and updates thereto, and enacted a series of implementing regulations.

Low Carbon Fuel Standard

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB. The Low Carbon Fuel Standard (LCFS) was identified by CARB as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009. In 2009, CARB approved for adoption the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations, Sections 95480-95490. The LCFS will reduce GHG emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. In September 2018, the standards were amended by CARB to require a 20 percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.

Senate Bill 375, the Sustainable Communities and Climate Protection Act

California's Sustainable Communities and Climate Protection Act, also referred to as Senate Bill 375 (SB 375) became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32's GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use. SB 375 requires CARB to develop regional reduction targets for GHGs, and prompts the creation of regional plans to reduce emissions from vehicle use throughout the State. California's 18 Metropolitan Planning

[35] California Legislative Information, California Health and Safety Code, Section 38561, Accessed on November 8, 2021 at: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=38561.&lawCode=HSC.

[36] California Air Resources Board, Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, November 16, 2007.

Organizations (MPOs) have been tasked with creating "Sustainable Community Strategies" (SCS) in an effort to reduce the region's (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the State's 18 MPOs. For the SCAG region, the targets are set at eight percent below 2005 per capita emissions levels by 2020 and 13 percent below 2005 per capita emissions levels by 2035. Beginning October 1, 2018, the target changed to 19 percent for 2035. This new target has been incorporated into SCAG's 2020-2045 Regional Transportation Plan / Sustainable Communities Plan (2020-2045 RTP/SCS), also referred to as the "Connect SoCal" Plan).[37]

Climate Change Scoping Plan

As explained earlier in the discussion of AB 32, one of CARB's first steps in implementing the statutory scheme was to prepare a scoping plan that identified strategies for reducing GHG emissions. The initial Climate Change Scoping Plan (Scoping Plan) was adopted in December 2008. As stated therein, the key elements of the strategy for achieving the 2020 GHG target included:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the LCFS; and
- 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's long-term commitment to AB 32 implementation.

The Scoping Plan differentiated between "capped" and "uncapped" strategies. Capped strategies are subject to the Cap-and-Trade Program. The Scoping Plan stated that the inclusion of these emissions within the Cap-and Trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that would not be subject to the Cap-and-Trade emissions caps and requirements were provided as a margin of safety by accounting for additional GHG emission reductions.

The 2020 target of 427 MMT CO_2e required the reduction of 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020 emissions of 596 MMT CO_2e (business-as-usual, or BAU), and the reduction of 42 MMT CO_2e, or almost 10 percent, from 2002-2004 average emissions. The strategies listed in the Scoping Plan were expected to lead to emissions reductions from both sources within the capped sectors (146.7 MMT CO_2e) and from sources or sectors not covered by cap-and-trade (27.3 MMT CO_2e). The CARB estimated the largest reductions in GHG emissions would be from implementing the following measures and standards for capped sources:

[37] SCAG, 2020-2045 RTP/SCS (Connect SoCal), adopted September 2020.

- Improved emissions standards for light-duty vehicles (31.7 MMT CO_2e);
- Energy efficiency measures in buildings and appliances (26.3 MMT CO_2e);
- The RPS (21.3 MMT CO_2e); and
- The LCFS (15 MMT CO_2e).[38]

The First Update to the Scoping Plan (Update) was approved by the CARB on May 22, 2014. The Update builds upon the initial Scoping Plan with new strategies and recommendations and identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The Update defines near-term 2020 GHG limits but also sets the groundwork for achieving long-term GHG emission reductions.[39] The Update established a broad framework for achieving emission reductions of 80 percent below 1990 levels by 2050. Consequently, the Update recalculated the 1990 GHG emissions level from 427 MMT CO_2e in the initial Scoping Plan to 431 MMT CO_2e According to the Update, GHG reductions that average approximately 5.2 percent per year would be required after 2020 in order to reach the 2050 goal.

The CARB identified six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that would be needed to meet the State's more expansive emission reduction needs by 2050. The focus areas included Energy, Transportation (Vehicles/Equipment, Sustainable Communities, Housing, Fuels, and Infrastructure), Agriculture, Water, Waste Management, and Natural and Working Lands. The final recommendations of the CARB called for a 2030 target of, at a minimum, 40 percent reduction from 1990 levels and a 2040 target of, at a minimum, 60 percent reduction from 1990 levels; a call for California to reduce its energy use and transition to 100 percent renewable energy; financial support for transportation in disadvantaged communities; and amendments to the Cap-and-Trade Regulation that would exclude direct allocation and offset credits.[40]

The Scoping Plan was updated again in 2017 (2017 Scoping Plan) to address how the State can reach its 2030 climate target required by SB 32 (discussed below) to reduce GHG emissions by 40 percent from 1990 levels and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Scoping Plan builds on and integrates efforts that were already underway to reduce the State's GHG, criteria pollutant, and TAC emissions. Enhancing and implementing these ongoing efforts The 2017 Scoping Plan projects that by enhancing and implementing ongoing programs, paired with a more stringent Cap-and-Trade Program, to deliver climate, air quality, and other benefits, California on the path to achieving the 2030 target.[41]

Senate Bill X1-2

Established in 2002 under SB 1078 and accelerated in 2006 under SB 107 and again in 2011 under SB X1-2, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.[42, 43] The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. These mandates apply

[38] California Air Resources Board, Climate Change Scoping Plan, December 2008.
[39] California Air Resources Board, First Update to the AB 32 Scoping Plan. Accessed on November 8, 2021 at: https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.
[40] California Air Resources Board, First Update to the Climate Change Scoping Plan. May 2014.
[41] California Air Resources Board, California's 2017 Climate Change Scoping Plan, November 2017.
[42] Legislative Counsel of California, Senate Bill 1078, September 2002.
[43] Legislative Counsel of California, Senate Bill 1368, September 2006.

directly to investor-owned utilities. Based on the investor-owned utilities (IOU) Annual RPS Compliance Filings in August 2017, the three largest IOUs in the State surpassed this requirement.[44]

The Cap-and-Trade Program

The goal of the Cap-and-Trade Program, which appears in Sections 95800 to 96023 of Title 17 of the California Code of Regulations (CCR), is to reduce GHG emissions from major sources (covered entities) by setting a firm cap on Statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The Statewide cap for GHG emissions from major sources, which is measured in MT CO_2e, commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration. Each covered entity will be required to surrender one permit to emit for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits. The Cap-and-Trade Program relies on data collected through the Mandatory Reporting of GHG Emissions Regulation to identify major sources of GHG emissions in California. Starting in 2012, major GHG-emitting sources, such as electricity generation and large stationary sources (including refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants) that emit more than 25,000 MT CO_2e per year were required to comply with the Cap-and-Trade Program. The program expanded in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase.[45]

The Advanced Clean Cars Program

In 2012, the CARB adopted the Advanced Clean Cars Program, which is aimed at reducing both smog-causing pollutants and GHG emissions from cars and light-duty trucks model years 2017-2025. The set of regulations focus on increasing the number of plug-in hybrid cars and zero-emission vehicles (ZEVs) in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the Advanced Clean Cars Program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. the new standards will reduce GHG emissions by 34 percent in 2025.[46]

Executive Order B-16-12

In March 2012, Governor Brown issued Executive Order B-16-12, which embodied a vision of a future in which ZEV would help the State meet its GHG reduction targets. Executive Order B-16-12 directed the State government to accelerate the market for ZEVs in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be ZEV ready.
- By 2020, the State will have established adequate infrastructure to support one million ZEVs in California.
- By 2025, there will be 1.5 million ZEVs on the road in California.

[44] California Public Utilities Commission, 2017 Annual Report: Renewable Portfolio Standard, November 2017 (at Table 1).
[45] California Air Resources Board, Cap-and-Trade Regulation Instructional Guidance, September 2012.
[46] California Air Resources Board, Facts About the Advanced Clean Cars Program, November 9, 2011.

- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.[47]

Title 24 Building Energy Efficiency Standards

California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standards. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Standards, which took effect on January 1, 2020, improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The most significant efficiency improvements required by the 2019 Building Energy Efficiency Standards include the introduction of photovoltaic power systems requirements for residential uses, as well as improvements for attics, walls, water heating, and lighting. Title 24, Part 6 requires that local agencies determine compliance with the applicable Building Energy Efficiency Standards before issuing building permits for construction.

California Green Building Standards Code

The California Green Building Standards Code, which is Part 11 of Title 24 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The 2019 CALGreen Code became effective on January 1, 2020, and is intended to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices" in the following categories:

1. Planning and design.
2. Energy efficiency.
3. Water efficiency and conservation.
4. Material conservation and resource efficiency.
5. Environmental air quality."

The 2019 CALGreen Code includes both voluntary and mandatory energy efficiency standards for commercial and residential buildings that address site selection, storm water management, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, and irrigation, as well as other topics. As part of Title 24, applicable CalGreen Code requirements are enforced through the building permit process.

Executive Order B-30-15

In 2015, Governor Brown issued Executive Order B-30-15, which created an interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030. The interim

[47] Office of Governor Edmund G. Brown Jr. Executive Order B-16-2012.

standard was established to ensure that California would meet its target of reducing GHG emissions to 80 percent below 1990 levels by 2050.[48]

Senate Bill 743

Governor Brown signed Senate Bill (SB) 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit. The required alternative methodology criteria must promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Measurements of transportation impacts would involve vehicle miles traveled (VMT) per capita or per employee.

Senate Bill 350

In 2015, the State enacted the Clean Energy and Pollution Reduction Act, or SB 350, which increases the State's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This would increase the use of RPS-eligible resources, including solar, wind, biomass, and geothermal sources, among others. In addition, SB 350 requires the State to double its energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure that these goals are met and that GHG emission reductions are achieved, large utilities will be required to develop and submit Integrated Resource Plans (IRPs) that detail how each utility will meet their customers resource needs, reduce GHG emissions, and increase the deployment of clean energy resources.[49]

The "Newhall Ranch Case," Center for Biological Diversity v. California Department of Fish and Wildlife

On November 30, 2015, the California Supreme Court released its opinion on *Center for Biological Diversity v. California Department of Fish and Wildlife*, commonly referred to as the Newhall Ranch Case. Due to the importance of the Supreme Court as the top entity within the California Judiciary, and because of the relative lack of judicial guidance regarding how GHG issues should be addressed in CEQA documents, the opinion provides very important legal guidance to agencies charged with preparing EIRs and evaluating impacts related to GHG emissions.

The case involved a challenge to an EIR prepared by the California Department of Fish and Wildlife (CDFW) for the Newhall Ranch development project in Los Angeles County, which would consist of approximately 20,000 dwelling units, in addition to commercial and business uses, schools, golf courses, parks and other community facilities in the City of Santa Clarita.

In relation to GHG analyses, the Newhall Ranch Case illustrates the difficulty of complying with Statewide GHG reduction targets at the local level using CEQA to determine whether an individual project's GHG emissions will create a significant environmental impact triggering an EIR, mitigation, and/or statement of overriding consideration.[50] The EIR utilized compliance with AB 32's GHG reduction goals as a threshold

[48] Office of Governor Edmund G. Brown Jr, Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America, April 29, 2015, Accessed November 8, 2021 at: https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html.

[49] California Energy Commission, Clean Energy and Pollution Reduction Act, SB 350 Overview. Accessed on July 18, 2019 at: https://www.energy.ca.gov/sb350/.

[50] Kaatz, Joe, Energy Policy Initiative Center, University of San Diego, *Center for Biological Diversity et al., v. California Department of Fish and Wildlife*, and the Newhall Land and Farming Company: the Burden of CEQA Land Use GHG

of significance and modeled its analysis on the CARB's BAU emissions projections from the 2008 Scoping Plan. The EIR quantified the project's annual emissions at buildout and projected emissions in 2020 under a BAU scenario, in which no additional regulatory actions were taken to reduce emissions. Since the Scoping Plan determined that a reduction of 29 percent from BAU was needed to meet AB 32's 2020 reduction goal, the EIR concluded that the project would have a less than significant impact, because the project's annual GHG emissions were projected to be 31 percent below its BAU estimate.

The Supreme Court concluded that the threshold of significance used by the EIR was permissible; however, the BAU analysis lacked substantial evidence to demonstrate that the required percentage reduction from BAU is the same for an individual project as for the entire State. The Court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the Court determined that the EIRs' GHG analysis was not sufficient to support the conclusion that GHG impacts would be less than significant.

The Supreme Court provided the following guidance regarding potential alternative approaches to GHG impact assessments at the project level for lead agencies:

- The lead agency determination of what level of GHG emission reduction from BAU projection that a new land development at the proposed location would need to achieve to comply with statewide goals upon examination of data behind the Scoping Plan's BAU emission projections. The lead agency must provide substantial evidence and account for the disconnect between the Scoping Plan, which dealt with the State as a whole, and an analysis of an individual project's land use emissions.
- The lead agency may use a project's compliance with performance based standards, such as high building efficiency, adopted to fulfill a Statewide plan to reduce or mitigate GHG emissions to assess consistency with AB 32 to the extent that the project features comply with or exceed the regulation. A significance analysis would then need to account for the additional GHG emissions, such as transportation emissions, beyond the regulated activity. Transportation emissions are in part a function of the location, size, and density or intensity of a project, and thus can be affected by local governments' land use decision making. Additionally, the lead agency may use a programmatic effort including a general plan, long range development plan, or a separate plan to reduce GHG emissions (such as a CAP or a SB 375 metropolitan regional transportation impact SCS) that accounts for specific geographical GHG emission reductions to streamline or tier project level CEQA analysis pursuant to CEQA Guidelines Section 15183.5(a) through (b) for land use and PRC Section 21155.2 and 21159.28 and CEQA Guidelines Section 15183.5(c) for transportation.
- The lead agency may rely on existing numerical thresholds of significance for GHG emissions (such as the BAAQMD's proposed threshold of significance of 1,100 MT CO_2E in annual emission for CEQA GHG emission analysis on new land use projects). The use of a numerical value provides what is "normally" considered significant but does not relieve a lead agency from independently determining the significance of the impact for the individual project (CEQA Guidelines Section 15064.7).[51]

Emission Reduction Analysis at the Local Level. January 20, 2016, Accessed on November 8, 2021 at: https://epicenergyblog.com/2016/01/20/center-for-biological-diversity-et-al-v-california-department-of-fish-and-wildlife-and-the-newhall-land-and-farming-company-the-burden-of-ceqa-land-use-ghg-emission-reduction-analysis-at-the-loca/.

[51] Kaatz, Joe, Energy Policy Initiative Center, University of San Diego, *Center for Biological Diversity et al., v. California Department of Fish and Wildlife*, and the Newhall Land and Farming Company: the Burden of CEQA Land Use GHG Emission Reduction Analysis at the Local Level. January 20, 2016, Accessed on November 8, 2021 at: https://epicenergyblog.com/2016/01/20/center-for-biological-diversity-et-al-v-california-department-of-fish-and-wildlife-and-the-newhall-land-and-farming-company-the-burden-of-ceqa-land-use-ghg-emission-reduction-analysis-at-the-loca/.

Senate Bill 32

Effective January 1, 2017, SB 32 added Section 38566 to the California Health and Safety Code, requiring Statewide GHG emissions reductions to 40 percent below those that occurred in 1990 by the year 2030.[52] As outlined in SB 32, achieving the required reductions involves increasing renewable energy use, imposing tighter limits on carbon content of gasoline and diesel fuel, increasing use of electric vehicles (EVs), improving energy efficiency, and reducing emissions from key industries.

Executive Order B-55-18

Executive Order B-55-18, issued by Governor Brown on September 10, 2018, established an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later than 2045, and to achieve and maintain net negative emissions thereafter. The Order states that this new goal is in addition to the prior statewide targets for reduction of GHG emissions.

Senate Bill 100

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

Regional

SCAG Regional Transportation Plan/Sustainable Communities Strategy

SCAG functions as the MPO for six counties, including Los Angeles County, wherein the project Site is located. As the designated MPO, SCAG is required by federal law to prepare and update a long-range regional transportation plan, keep up with CAA requirements, monitor system performance, and develop a sustainable communities strategy to achieve GHG reduction targets set by the CARB.

On September 1, 2020, SCAG's Regional Council adopted an updated RTP/SCS known as the 2020-2045 RTP/SCS, or Connect SoCal.[53] The 2020-2045 RTP/SCS is a long-range visioning plan that builds upon and expands land use and transportation strategies of the 2016-2040 RTP/SCS to increase mobility options and achieve a more sustainable growth pattern. projects growth in employment, population, and households at the regional, county, city, town and neighborhood levels. These projections take into account economic and demographic trends, as well feedback from SCAG's jurisdictions. The 2020-2045 RTP/SCS "Core Vision" centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs and transit closer together and increasing investment in transit and complete streets.[54] The 2020-2045 RTP/SCS continues efforts to better align transportation investments and land use decisions to improve mobility and reduce GHGs by bringing housing, jobs and transit closer together. SCAG has determined that the 2020-2045 RTP/SCS would achieve the applicable GHG emissions reduction target for automobiles and light trucks of 19 percent per capita reduction by 2035, relative to 2005 levels, as established by CARB for the region.[55]

[52] California Legislative Information, Senate Bill No. 32, Accessed on July 18, 2019 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.
[53] Southern California Association of Governments, 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments, Adopted September 3, 2020.
[54] Southern California Association of Governments, A Plan Summary for Connect SoCal, Adopted September 3, 2020.
[55] California Air Resources Board, Executive Order G-20-239 Southern California Association of Governments' (SCAG) 2020 Sustainable Communities Strategy CARB Acceptance of GHG Quantification Determination, October 30, 2020.

Local

The City's General Plan Conservation Element 2013 Update includes the following climate change policy:

CO-39 Support efforts to reduce greenhouse gas emissions, consistent with the intent of the State of California's California Global Warming Solutions Act of 2006 (Assembly Bill 32).

Implementation Measures:

- Prepare Greenhouse Gas Analyses for development projects which require the preparation of Environmental Impact Reports or Mitigated Negative Declarations.
- Reduce energy use and utilize sustainable energy sources at City facilities where feasible, in accordance with City-adopted Energy Action Plan.

Although the City does not have an adopted Climate Action Plan (CAP), the City is now developing its Climate and Environmental Action Plan (CEAP), which will detail the strategies and actions that the City will pursue to protect the environment and address the challenges of climate change. The CEAP is being developed in parallel with the City's General Plan update.

8.0 GREENHOUSE GAS EMISSIONS IMPACT

Thresholds of Significance

Based on the CEQA Appendix G guidelines, a project would have a potentially significant GHG impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Because individual projects do not generate sufficient GHG emissions that would substantially affect climate change; the issue of climate change typically involves an analysis of whether a project's contribution toward an impact is cumulatively considerable. As defined by the California Environmental Quality Act (CEQA Guidelines) Section 15355, "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

The CEQA Guidelines Section 15064.4(a) states that a lead agency shall have discretion to determine, in the context of a particular project, whether to:

1) Quantify greenhouse gas emissions resulting from a project; and/or
2) Rely on a qualitative analysis or performance based standards.

Additionally, the Section 15064.4(b) states that "In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change," and that the following factors should be considered:

1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance for GHG emissions. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts (see CEQA Guidelines Section 15064.7(c)). Pursuant to CEQA Guidelines Section 15064.7(b), "Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence." To date, the City, as lead agency, has not established a quantitative threshold for evaluating the significance of GHG emissions for general use as part of the City's environmental review process.

In 2011, VCAPCD staff provided a report entitled "Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County" to the Ventura County Air Pollution Control Board by way of a letter dated November 8, 2011. This letter notes that the most common approach for determining the significance of GHG emissions for land use projects is a tiered approach involving: (1) applicability of any CEQA exemptions; (2) project consistency with a local climate action plan; and (3) application of an efficiency-based threshold and/or a bright line gap-based threshold based on capturing 90 percent of project GHG emissions. This passage refers to and cites sections from a 2008 CAPCOA white paper titled "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act"[56] that provides "a common platform of information and tools to address climate change in CEQA analyses, including the evaluation and mitigation of GHG emissions from proposed projects and identifying significance threshold options." The VCAPCD letter also states that "Given that Ventura County is adjacent to the South Coast AQMD jurisdiction and a part of the Southern California Association of Governments region, District staff believes it makes sense to set local GHG emission thresholds of significance for land use development projects at levels consistent with those set by the South Coast AQMD," and concludes that "unless directed otherwise by [the Air Pollution Control] Board, District staff will continue to evaluate and develop suitable GHG threshold options for Ventura County with preference for GHG threshold consistency with the South Coast AQMD and the SCAG region." However, to date, VCAPCD has not established quantitative significance thresholds for evaluating GHG emissions in CEQA analyses for non-industrial development projects.

In September 2010, SCAQMD proposed a tiered approach to evaluate potential GHG impacts from non-industrial development projects[57] that also used strategies described in the 2008 CAPCOA white paper titled "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality

[56] CAPCOA, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act, January 2008.
[57] SCAQMD, Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15, September 28, 2010.

Act."[58] However, none of the proposed options for evaluating residential or mixed-use projects were ever adopted by SCAQMD.

To date, no quantitative GHG emissions significance threshold for general use in the environmental review process of non-industrial projects that would be applicable to the proposed project has been adopted by a local, regional, or State agency per the requirements of CEQA Guidelines Section 15064.7(b). As such, for this analysis, the potential significance of the project's GHG emissions will be qualitatively evaluated based on the "extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions" (CEQA Guidelines Section 15064.4(b)). The project would be required by the City to comply with applicable regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of greenhouse gas emissions. The project's consistency with such plans is discussed in the Plan Consistency evaluation provided below.

Project GHG Emissions

As discussed above, no State, regional, or local agency with jurisdiction of the project site has adopted a numeric threshold for determining the potential significance of GHG emissions that would be applicable to the proposed project. However, pursuant to CEQA Guidelines Section 15064.4(a), which states that "A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project," the project's estimated annual GHG emissions were calculated using CalEEMod 2020.4.0, which are presented for discussion purposes. The CalEEMod output data for the proposed project, which also reports input data of project details that were used in the model, is provided in Appendix A. Project-specific details and design features used in CalEEMod to calculate GHG emissions are the same as those used in the analysis of air quality criteria pollutants discussed above.

Construction GHG Emissions Methodology and Analysis

During construction, the project would generate GHG emissions primarily from the use of internal combustion engines to power onsite equipment as well as offsite transportation of workers and materials. The project's total construction activity emissions were modeled using CalEEMod Version 2020.4.0 using the same project-specific data inputs and design features used to model daily emissions of criteria pollutants discussed above. The project's estimated GHG emissions are shown in the CalEEMod output sheets for Annual emissions provided in Appendix A.

As estimated using CalEEMod 2020.4.0, the project's construction activities would generate a total of approximately 2,489 MT CO_2e emissions. As construction emissions occur for a limited period of a project's lifetime, as a standard practice, GHG emissions from construction are amortized over a presumed project lifetime. A project lifetime of 30 years is recommended by SCAQMD[59] for amortizing construction-related GHG emissions.[60] The proposed project's amortized construction-related emissions would therefore be 83.0 MT CO_2e. The amortized construction emissions have been added to the project's annual operational GHG emissions as shown in the following discussion.

Operational GHG Emissions Methodology and Analysis

[58] CAPCOA, CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act, January 2008.
[59] The VCAPCD does not specify a presumed lifetime for development projects in the County.
[60] SCAQMD, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008.

During operations, the project would generate GHG emissions from area sources, energy use, mobile, water use, and waste disposal. Annual emissions from these sources were estimated using CalEEMod Version 2020.4.0 using the same project-specific data and inputs used to model daily emissions of criteria pollutants discussed above. The project's estimated GHG emissions are shown in the CalEEMod output sheets for Annual emissions provided in Appendix A.

Area sources include emissions from consumer product use (i.e., cleaning supplies, kitchen aerosols, cosmetics and toiletries), architectural coatings such as paints (averaged on an annual basis assuming all surface areas are repainted once every 10 years), and landscape maintenance equipment (i.e., lawn mowers, leaf blowers, etc.).

Energy sources include electricity and natural gas use. Electricity uses include operation of equipment for space heating/cooling, water heating, and ventilation, as well as appliances, electronics, other miscellaneous plug-in uses, and lighting. Natural gas usage includes building heating, water heating, cooking, and pool/spa heating.

Mobile sources include on-road motor vehicle use by residents, customers, guests, etc. Vehicle emission factors used in CalEEMod are based on EMFAC2017. Beginning with CalEEMod Version 2020.4.0 (used for this analysis), N_2O emissions from vehicles are included in CalEEMod as EMFAC2017 includes vehicle N_2O emissions. The number of trips generated by the project as well as the CalEEMod default vehicle fleet mix were used to calculate the CO_2e emissions associated with on-road motor vehicle use.

Project-related emissions associated with water/wastewater treatment and solid waste disposal were also calculated by CalEEMod.

Adjustments were made in CalEEMod regarding mobile land use were applied based on the project's proposed increase in density of use within the infill site, the proposed mixed-use of residential and commercial uses (diversity of uses), destination accessibility (adjacent and nearby commercial, and employment centers), and inclusion of below market rate housing. The adjustment in CalEEMod regarding mobile commuting was applied due the proposed inclusion of live/work units and co-work amenity space to encourage telecommuting/alternate work schedules. The adjustment in CalEEMod regarding water use was applied based on input from the project applicant detailing the project's proposed Green Initiatives that include drought tolerant landscaping, high-efficiency drip irrigation systems, and high efficiency plumbing fixtures to promote water conservation. Although CalEEMod accommodates such adjustments and reports resulting reductions in emissions within output tables labeled "With Mitigation", the items discussed above regarding mobile land use, mobile commute and water use are features of the project site, surroundings, and proposed development. As such, the estimated emissions calculated by CalEEMod with reductions associated with the project site, surroundings, and proposed development would other as features of the project without requiring mitigation measures to be specified within a CEQA document.

Table 9, Annual Greenhouse Gas Emissions, summarizes the estimated operational emissions as well as the amortized construction emissions based on the CalEEMod output files provided in Appendix A of this report. The estimated GHG emissions shown in Table 9 represent a conservative evaluation as further reductions that would result from project features that would reduce energy and water use, encourage use of EVs or electric bicycles (e-bikes), or other transportation demand management (TDM) measures which may be required by the City as conditions of approval through the land use entitlement process have not been quantified. Additionally, as future tenants or employees of the project currently generate GHG emissions where they currently reside and/or are employed which cannot be known, the proposed project's estimated emissions shown in Table 9 conservatively do not reflect the net change in global, state, or regional GHG emissions that would result from the project.

Table 9
Annual Greenhouse Gas Emissions

Generation Source	MT CO_2e/year
Project Emissions	
Area Sources	5.2
Energy Utilization	875.3
Mobile Source [a, b]	2,394.4
Solid Waste Generation	105.1
Water Consumption [c]	102.4
Construction (Amortized)	83.0
Total Project Operational Emissions [d]	**3,565.4**

Source: CalEEMod output March 30, 2022. (Appendix A)

[a] CalEEMod Version 2020.4.0 includes N_2O emissions from vehicles.

[b] Increased density, mix of uses, proximity to commercial and employment destinations, below market rate housing, live/work units, and co-work amenity space.

[c] Green Initiatives that include drought tolerant landscaping, high-efficiency drip irrigation systems, and high efficiency plumbing fixtures to promote water conservation are included as project design features.

[d] No building energy efficiency or renewable energy features were assumed in the model. The project emissions related to such features reflect standard default rates of the model only. Additional commitments by the project to achieve LEED Gold certification, use high efficiency LED lighting, install solar PV panels to supplement electric supply, install EV charging stations, provide indoor/outdoor bike parking with electric bike (e-bike) charging stations, and install drought tolerant landscaping, would further reduce the annual GHG emissions. Project-specific data used in the model are reported in the attached CalEEMod output sheets (Appendix A) and are listed above in Section 5.0 Air Quality Impacts.

Note: Totals may differ from sums due to rounding.

The project's estimated emissions shown in Table 9 are provided pursuant to CEQA Guidelines Section 15064.4(a) for informational and disclosure purposes only. However, no numeric threshold for determining the potential significance of GHG emissions, such as a mass emissions rate (bright line threshold), per capita emissions rate (efficiency threshold), or emissions reduction percentage below an unmitigated rate (performance threshold to be generated by a mixed-use project with residential and commercial uses has been adopted by the City, the VCAPCD, the SCAQMD, nor any other State, regional, or local agency with jurisdiction of the project site. As such, there are no applicable numeric standards for determining if the project's estimated emissions shown in Table 9 would cause a cumulatively considerable contribution to an environmental impact under CEQA. Therefore, in accordance with CEQA Guidelines Section 15064.4(b)(3), the determination of the significance of the project's GHG emissions impact is based on a qualitative analysis considering the project's consistency with applicable statewide, regional, and local plans adopted for the purpose of reducing GHG emissions as discussed below under Plan Consistency.

Plan Consistency

The project proposes an in-fill development within an urbanized portion of the City on a site that is surrounded by existing uses, is accessed by existing streets, and is served by existing utilities. The proposed project would replace a vacant commercial development with a new mixed-use development at a centralized location within the City. The site location is accessible to existing transit and is in close proximity to existing shopping and dining options along Thousand Oaks Boulevard and Westlake Boulevard (approximately 0.3 and 0.9 miles, respectively) as well as recreation options including a hiking trailhead for accessing open spaces to the west of the site. The residential uses would include seven live/work units that would allow residents to live in their workspace, and would provide co-working area amenities to facilitate teleworking by residents. Additionally, the project would provide 15,000 square feet of commercial use space, and would include recreation facilities including a dog park within the site. These features would allow residents

to live, work, shop, and recreate without driving to an alternative location. The project would also incorporate EV and e-bike charging facilities to encourage use of electric powered vehicles and bicycles for transportation. Beyond required compliance with California Code of Regulations Building Energy Efficiency Standards (Title 24, Part 6), and California Green Building Standards Code (Title 24, Part 11) that require energy efficient buildings and appliances, and water use conservation, the project would be designed to achieve U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Gold Certification and would incorporate drought tolerant landscaping, high-efficiency drip irrigation systems, high efficiency LED lighting, and rooftop solar PV panels, which would reduce GHG emissions.

The City is developing a CAP as part of the General Plan update process. However, to date the City has not adopted a local CAP or other GHG reduction plan that addresses community-wide emissions that would meet the criteria of the CEQA Guidelines Section 15183.5(b). As such, to demonstrate the extent to which the project complies with such plans, this evaluation provides an analysis of the project's consistency with the following plans that have been adopted on a regional and statewide scale, which include policies that would have the effect of reducing GHG emissions.

SCAG RTP/SCS

The SCAG 2020–2045 RTP/SCS, adopted September 3, 2020, is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The RTP/SCS plans to accommodate future growth through intensification of residential and commercial land uses in urban areas to reduce VMT, which would reduce emissions of GHGs in the transportation sector, the largest contributing sector to statewide GHG emissions. **Table 10, Project Consistency with SCAG RTP/SCS Strategies**, lists the relevant strategies identified in the SCAG 2020-2045 RTP/SCS that could be implemented to help achieve the State-mandated GHG emissions reduction targets and provides an analysis of project consistency with each strategy.

Table 10
Project Consistency with SCAG RTP/SCS Strategies

Connect SoCal Strategies	Consistency Analysis
Focus Growth Near Destinations & Mobility Options • Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets • Plan for growth near transit investments and support implementation of first/last mile strategies • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods • Encourage design and transportation options that reduce the reliance on and number of solo car trips	**Consistent.** The project site is located near existing transit facilities, including bus stops for the Metro Commuter Express 423 Route adjacent to the project site on Hampshire Road, bus stops for the Metro Commuter Express 422 Route approximately 650 feet from the project site on Hampshire Road, and is nearby existing bus stops for Metro Local Route 161 and Thousand Oaks Transit Route 43 on Thousand Oaks Boulevard. The project would construct a mixed-use development that would include residential and commercial uses, which would provide employment opportunities near transit as well as the residential uses on the site and in the surrounding vicinity. The project would replace an underperforming retail development that currently is developed with vacant commercial buildings including a big-box retail structure that has been unoccupied for many years. The project would redevelop an underutilized infill site providing new housing units to

Connect SoCal Strategies	Consistency Analysis
(this could include mixed uses or locating and orienting close to existing destinations) • Identify way to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	accommodate new growth and increase amenities and connectivity in the existing neighborhoods. As a mixed-use development providing residential and commercial uses in proximity to existing transit, shopping, dining, and employment opportunities, and indoor/outdoor bicycle parking with e-bike charging stations, the project has been designed to reduce reliance on solo vehicle trips.
Promote Diverse Housing Choices • Preserve and rehabilitate affordable housing and prevent displacement • Identify funding opportunities for new workforce and affordable housing development • Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of GHG emissions	**Consistent.** The project would not eliminate existing housing, nor would it displace residents. The project would provide diverse housing choices by including residential apartment units consisting of studios, one-bedroom, and two-bedroom units, and townhome units with two to four bedrooms. The project would also include 50 residential units for low income affordable housing. The project would not impede SCAG's ability to provide funding opportunities for new workforce and affordable housing development or to create incentives and reduce regulatory barriers for building accessory dwelling units or other housing.
Leverage Technology Innovations • Promote low emission technologies such as neighborhood EVs, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology – such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	**Consistent.** The project would be consistent with these strategies by providing EV chargers at 10 percent of onsite parking spaces, and EV-ready parking spaces for future installation of EV chargers at 30 percent of onsite parking spaces. The project would also provide indoor/outdoor bicycle parking with electric bike charging stations, and the project would provide up to seven live-work apartment units, and both apartment buildings would include amenity/co-working spaces to facilitate telework and work from home uses. Although providing a community micro-power grid is not within the purview of the proposed project, it would provide solar panels to code that would supplement electricity supplies for the project.
Support Implementation of Sustainability Policies • Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts, Community Revitalization and Investment Authorities, or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space	**Consistent.** The funding, support, and implementation of these sustainability policies and strategies is the responsibility of SCAG. Nevertheless, the project supports these policies and strategies by providing a mixed-use, urban infill development in proximity to bus stops, shopping and dining opportunities, indoor/outdoor bicycle storage with e-bike charging stations, live-work units and amenity/co-working spaces, rooftop solar panels, and EV chargers at 10 percent of onsite parking spaces, and EV-ready parking spaces for future installation of EV chargers at 30 percent of onsite parking spaces as sustainability features.

Connect SoCal Strategies	Consistency Analysis
• Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region • Continue to support long range planning efforts by local jurisdictions • Provide educational opportunities to local decisions makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	
Promote a Green Region • Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration • Integrate local food production into the regional landscape • Promote more resource efficient development focused on conservation, recycling and reclamation • Preserve, enhance and restore regional wildlife connectivity • Reduce consumption of resource areas, including agricultural land • Identify ways to improve access to public park space	**No Conflict.** The project would redevelop an infill property currently occupied by vacant commercial buildings and an asphalt parking lot with remnant landscaping planter islands which would be removed by the project. Proposed landscaping would provide a net increase in trees and tree canopy onsite to reduce urban heat island effects relative to existing conditions while also providing carbon sequestration. The project would install rooftop solar panels as required by code to support policies for renewable energy production. The project would be designed to meet or exceed Title 24 Building Energy Efficiency Standards and Green Building Standards, as well as obtain LEED Gold certification. The project would include open space areas including a dog park for resident and public use, and would not remove any existing park space, agricultural land, or other open spaces.
Source: Southern California Association of Governments, Connect SoCal (The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments), September 3, 2020.	

Climate Change Scoping Plan

In 2008, the CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which establishes an overall framework for measures to reduce statewide GHG emissions for various sources/sectors to 1990 levels by 2020, consistent with the reduction targets of Assembly Bill 32 (AB 32). **Table 11, 2008 Scoping Plan Consistency,** provides an analysis of project consistency with these strategies.

Table 11
2008 Scoping Plan Consistency

Strategy	Project Consistency
California Cap-and-Trade Program Implement a broad-based California Cap-and-Trade Program to provide a firm limit on emissions. Link the California Cap-and-Trade Program other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not Applicable.** The Statewide Cap-and-Trade Program is aimed at government agencies and does not apply directly to the project. Further, the goal of the Program is to reduce GHG emissions from major sources (covered entities), such as electricity generation and large stationary sources (including refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants), rather than from private mixed-use development such as the project.
California Light-Duty Vehicle GHG Standards Implement the adopted Pavley Standards and the planned second phase of the program. Align zero emission vehicle (ZEV), alternative, and renewable fuel and vehicle technology programs with long-term climate change goals.	**Consistent.** The development and implementation of Statewide Pavley Standards is not the responsibility of individual development or the project. However, the proposed infill development would be near bus stops and shopping, dining, and employment opportunities that would encourage pedestrian or transit travel. The project would also provide bicycle storage with e-bike chargers, and would provide EV chargers at 10 percent of onsite parking spaces, and EV-ready parking spaces for future installation of EV chargers at 30 percent of onsite parking spaces that would support ZEV phase in and alternative transportation options.
Energy Efficiency Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts, including new technologies and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** The project would comply with the performance standards of CALGreen and Title 24 building efficiency standards, including installation of Energy Star rated appliances, high-efficiency wall and/or roof insulation, and/or high efficiency LED lighting to maximize energy efficiency. The project would be designed to achieve LEED Gold certification for sustainable design, which would include energy efficiency.
Renewable Portfolio Standard Achieve a 33 percent renewable energy mix Statewide.	**No Conflict.** The project would utilize energy supplied by SCE, which reports carbon-free resources comprised 43 percent of its power mix as of calendar year 2020.[61] Additionally, the project would provide solar panels as required by code to supplement electrical energy demands.
Low Carbon Fuel Standard Develop and adopt the Low Carbon Fuel Standard (LCFS), which would reduce the carbon intensity of California's transportation fuels by at least ten percent by 2020.	**Not Applicable**. Development and adoption of the LCFS would not be within the purview of the development project.

[61] Edison International, 2020 Sustainability Report, 2020, Accessed on October 22, 2021 at https://www.edison.com/home/sustainability/sustainability-report.html

Strategy	Project Consistency
Regional Transportation-Related GHG Targets Develop regional GHG emissions reduction targets for passenger vehicles.	**Not Applicable.** Development of GHG targets for vehicles would not be within the purview of the project. However, the project provides a mixed-use development located near bus stops, would include bicycle parking and e-bike charging facilities, live-work units and amenity/co-working spaces, and would include EV chargers at 10 percent of onsite parking spaces, and EV-ready parking spaces for future installation of EV chargers at 30 percent of onsite parking spaces to facilitate phase in of ZEV use. All of these features would reduce transportation related GHG emissions.
Vehicle Efficiency Measures Implement light-duty vehicle efficiency measures.	**Not Applicable.** The implementation of vehicle efficiency measures would not be within the purview of the project. However, as more efficient vehicles, including EVs become available, project residents and customers would likely begin utilizing more efficient vehicles.
Goods Movement Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not Applicable.** The implementation of shore power for ships and improving the efficiency of goods movement would not be within the purview of the project.
Million Solar Roofs Program Install 3,000 megawatts (MW) of solar-electric capacity under California's existing solar programs.	**Consistent.** The project would install solar panels, participating in this Statewide effort.
Medium/Heavy-Duty Vehicles Adopt medium and heavy-duty vehicle efficiency measures.	**Not Applicable.** The implementation of vehicle efficiency measures is the responsibility of State agencies and does not directly apply to the project.
Industrial Emissions Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Not Applicable.** The project does not include large industrial sources and therefore would not generate substantial emissions from industrial facilities.
High Speed Rail Support implementation of a high speed rail system.	**Not Applicable.** This measure does not directly apply to the project.
Green Building Strategy Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The project would comply with CALGreen building standards and would include sustainability features, such as low flow water fixtures and energy star appliances. The project would include photovoltaic panels, as required by the California solar mandate. The project would also be designed to achieve LEED Gold certification of the USGBC.
High GWP Gases Adopt measures to reduce high GWPs.	**Not Applicable.** This measure is addressed to government agencies and does not directly apply to the project.
Recycling and Waste Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of	**Consistent.** The project is anticipated to comprise a small percentage of Citywide waste during operations and therefore would have a minimal impact on waste facilities. Additionally, the project is subject to the current City

Strategy	Project Consistency
organic materials, and mandate commercial recycling. Move toward zero-waste.	waste diversion program, which requires that construction waste be reduced by at least 65 percent[62] and would be required by State law to provide recycling carts/dumpsters and organics collection for tenants during operations.[63] The project design would include separate trash and recycling bins for sorting to facilitate diversion of recyclable items from the waste stream.
Sustainable Forests Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not Applicable.** This measure does not directly apply to the project as it would redevelop an infill site, is not in or adjacent to a forest area, and thus would not reduce forest sequestration of carbon. The project would remove existing vacant structures and a parking lot and construct a mixed-use development with landscaping that would provide a net increase in trees and tree canopy on the site.
Water Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The project would include low flow plumbing features and fittings, as well as drought resistant landscaping and efficient drip irrigation to reduce GHG emissions associated with water conveyance and wastewater processing.
Agriculture In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update, determine if the program should be made mandatory by 2020.	**Not Applicable.** The project does not contain agricultural facilities, and therefore this measure is not directly applicable.
Source: California Air Resources Board. 2008. Climate Change Scoping Plan: A Framework for Change. December.	

The Scoping Plan was updated in 2014, and again in 2017. The 2017 update to the Scoping Plan proposes CARB's strategy for achieving the State's 2030 GHG reduction target as established in Senate Bill 32 (SB 32). **Table 12, 2017 Scoping Plan Update Consistency**, provides an analysis of the project's consistency with the latest Scoping Plan Update (2017) policies and primary objectives.

Table 12
2017 Scoping Plan Update Consistency

Policy	Primary Objective	Consistency
SB 350	Reduce GHG emissions in the electricity sector through the implementation of the 50 percent RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan (IRP) process.	**Consistent.** SCE would be the electricity provider for the project and would be responsible for meeting the applicable RPS standards. The project would support this policy and objective with energy saving features to meet or exceed performance standards prescribed by Title 24 Building Energy Efficiency Standards and Green Building Standards. Additionally, the project would be designed to achieve USGBC

[62] City of Thousand Oaks, Department of Public Works, Construction and Demolition Debris, Accessed on October 26, 2021 at https://www.toaks.org/departments/public-works/sustainability/trash-recycling/trash-recycling-businesses/c-d-recycling-permits.

[63] City of Thousand Oaks, Department of Public Works, Business Recycling: It's Mandatory, Accessed on October 26, 2021 at https://www.toaks.org/departments/public-works/sustainability/trash-recycling/trash-recycling-businesses/biz-recycling-it-s-mandatory.

Policy	Primary Objective	Consistency
		LEED Gold certification and would install solar panels to supplement electricity supplied by SCE. Thus, the project would support efforts of the energy sector to achieve GHG emissions reduction planning targets.
Low Carbon Fuel Standard (LCFS)	Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	**Consistent**. The LCFS would reduce the carbon intensity of transportation fuels consumed in California, and it is generally the responsibility of fuel producers, importers, or dispensers to achieve applicable benchmarks. The mixed-use project would install EV charging equipment to encourage use of EVs which would reduce GHG emissions from the transportation sector and thus not conflict with the LCFS program.
Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario)	Reduce GHGs and other pollutants from the transportation sector through transition to zero emission and (low emission vehicles (LEVs), cleaner transit systems and reduction of VMT.	**Consistent.** This objective would be the responsibility of public agencies. It is not the responsibility of the project to introduce ZEVs or LEVs. However, the project would provide EV chargers at 10 percent of onsite parking spaces, and EV-ready parking spaces for future installation of EV chargers at 30 percent of onsite parking spaces to support transition to ZEV and LEV use. In addition, the proposed mixed-use development would provide multi-family and commercial uses within an infill site located near existing bus stops, shopping, dining, and employment opportunities, and is served by pedestrian sidewalks and bike lanes. The project would include live-work units and amenity/co-working spaces to facilitate telework for residents to work from home and would provide bicycle storage with e-bike charging stations which would reduce VMT. As such, the project would support the objective of this policy.
SB 1383	Approve and Implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs	**Not Applicable**. This objective would be the responsibility of public agencies. The project would not be responsible for implementing a Short-Lived Climate Pollutant strategy to reduce highly potent GHGs.

Policy	Primary Objective	Consistency
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero emission technologies, and increase competitiveness of California's freight system.	**Not Applicable**. This objective would be the responsibility of public agencies. The project would not be responsible for improving freight efficiency, transitioning to zero emission technologies, and increasing the competitiveness of California's freight system. Additionally, the proposed residential and commercial uses would not be anticipated to generate substantial freight traffic.
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emissions sources	**Not Applicable**. This objective would be the responsibility of public agencies. The project would not be responsible for implementing a cap-and-trade program for large GHG emissions sources.
Source: California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan, November		

GHG CEQA Conclusion

In the absence of an adopted quantitative threshold for determining the potential significance of GHG emissions that would be applicable to the project, in accordance with CEQA Guidelines Section 15064.4(b)(3), the determination of the significance of the project's GHG emissions impact is based on a qualitative analysis considering the project's consistency with applicable statewide, regional, and local plans adopted for the purpose of reducing GHG emissions**.** The project would be required to comply with applicable regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions including solar panel and EV parking space provision as well as energy conservation standards of Title 24 Building Energy Efficiency Standards (Part 6) and Green Building Standards (Part 11). The project would also be designed to meet or exceed "green" building standards including energy efficiency to achieve equivalency to USGBC LEED Gold Certification. As shown in Table 10, the project would be consistent with the 2020-2045 RTP/SCS, the implementation of which CARB has stated would achieve the per capita reduction by 2035, relative to 2005 levels, as established by CARB for the region.[64] The project also would be consistent with the policies of the 2008 Scoping Plan or the 2017 Scoping Plan Update as shown in Tables 11 and 12. Therefore, based on the CEQA Guidelines for determining the significance of GHG emissions, the currently available adopted plans for reducing GHG emissions applicable to the project, and the absence of applicable adopted quantitative significance thresholds, potential impacts would be less than significant.

[64] California Air Resources Board, Executive Order G-20-239 Southern California Association of Governments' (SCAG) 2020 Sustainable Communities Strategy CARB Acceptance of GHG Quantification Determination, October 30, 2020.

APPENDIX A

CalEEMod Version 2020.4.0
Computer Model Output

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

325 and 391 Hampshire MU

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	142.00	Space	0.00	34,913.00	0
Enclosed Parking with Elevator	617.00	Space	0.00	246,133.00	0
Parking Lot	43.00	Space	0.00	17,200.00	0
Apartments Mid Rise	349.00	Dwelling Unit	10.97	398,622.00	1068
Condo/Townhouse	71.00	Dwelling Unit	0.00	146,485.00	217
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 10.97 ac; mid rise apt 349 du + comm. 398,622 sf; townhome 71 du + amenity 146,485 sf; retail 15 ksf; MU garage 617 space 246,133 sf; 43 space parking lot; townhome garages 142 spaces 34,913 sf

Construction Phase - 30 demo, 15 prep, 80 grad, 440 bldg, 20 pav, 100 coating

Off-road Equipment -

Off-road Equipment - Project data. Add 1 bore rig, concrete pump. Welder to be electric. Generator to be electric (solar) solar

Off-road Equipment - Project data. Add 2 loaders, 1 water truck

325 and 391 Hampshire MU - Ventura County, Winter

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

Off-road Equipment -

Trips and VMT - 9 mile haul route

Demolition - 14,350 tons

Grading - 132,000 cy export

Architectural Coating - 10 g/L VOC interior residential, 50 g/L residential exterior and commercial use. VCAPCD Rule 74.2 and project features

Vehicle Trips - Adjusted per trip generation table

Area Coating - 10 g/L VOC residential interior, 50 g/L VOC residential exterior and commercial use. VCAPCD Rule 74.2 and project feature

Water And Wastewater - Hill Canyon Treatment Plant facility.

Construction Off-road Equipment Mitigation - Rule 55 dust control. Tier 4 diesel equipment. electric welder. solar generator

Mobile Land Use Mitigation - Mixed Use with affordable units

Mobile Commute Mitigation - Live/work units and co-working amenity space

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	75.00	10.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Residential_Exterior	100	50
tblAreaCoating	Area_EF_Residential_Interior	75	10
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	30.00	80.00
tblConstructionPhase	NumDays	300.00	440.00
tblConstructionPhase	NumDays	20.00	100.00
tblGrading	MaterialExported	0.00	132,000.00
tblLandUse	LandUseSquareFeet	56,800.00	34,913.00

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

tblLandUse	LandUseSquareFeet	246,800.00	246,133.00
tblLandUse	LandUseSquareFeet	349,000.00	398,622.00
tblLandUse	LandUseSquareFeet	71,000.00	146,485.00
tblLandUse	LotAcreage	1.28	0.00
tblLandUse	LotAcreage	5.55	0.00
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	9.18	10.97
tblLandUse	LotAcreage	4.44	0.00
tblLandUse	LotAcreage	0.34	0.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblVehicleTrips	WD_TR	5.44	7.18
tblVehicleTrips	WD_TR	7.32	7.18
tblVehicleTrips	WD_TR	44.32	37.73
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

325 and 391 Hampshire MU - Ventura County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.6022	56.3435	39.0726	0.1416	19.8049	1.7841	21.0717	10.1417	1.6444	11.3072	0.0000	14,491.5448	14,491.5448	3.0562	0.9802	14,860.0553
2024	3.3324	22.5099	33.3773	0.0886	4.1984	0.8334	5.0318	1.1283	0.7896	1.9178	0.0000	8,837.3751	8,837.3751	1.0999	0.3688	8,974.7688
2025	16.5294	21.2263	32.6193	0.0873	4.1985	0.7289	4.9274	1.1283	0.6904	1.8187	0.0000	8,705.9434	8,705.9434	1.0884	0.3581	8,839.8744
Maximum	**16.5294**	**56.3435**	**39.0726**	**0.1416**	**19.8049**	**1.7841**	**21.0717**	**10.1417**	**1.6444**	**11.3072**	**0.0000**	**14,491.5448**	**14,491.5448**	**3.0562**	**0.9802**	**14,860.0553**

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	2.3945	18.3383	48.6514	0.1416	8.9935	0.2778	9.0564	4.5853	0.2753	4.6481	0.0000	14,491.5448	14,491.5448	3.0562	0.9802	14,860.0553
2024	2.2662	10.2493	37.0308	0.0886	4.1984	0.2518	4.4502	1.1283	0.2494	1.3777	0.0000	8,837.3751	8,837.3751	1.0999	0.3688	8,974.7688
2025	16.0877	9.9400	36.3450	0.0873	4.1985	0.2290	4.4274	1.1283	0.2266	1.3549	0.0000	8,705.9434	8,705.9434	1.0884	0.3581	8,839.8744
Maximum	**16.0877**	**18.3383**	**48.6514**	**0.1416**	**8.9935**	**0.2778**	**9.0564**	**4.5853**	**0.2753**	**4.6481**	**0.0000**	**14,491.5448**	**14,491.5448**	**3.0562**	**0.9802**	**14,860.0553**

325 and 391 Hampshire MU - Ventura County, 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	N20	CO2e
Percent Reduction	15.19	61.50	-16.14	0.00	38.34	77.33	42.21	44.82	75.95	50.94	0.00	0.00	0.00	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

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	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Energy	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
Mobile	9.7173	11.1677	90.2199	0.1741	20.0058	0.1399	20.1457	5.3329	0.1305	5.4635		17,731.3459	17,731.3459	1.3088	0.8846	18,027.6839
Total	**23.4223**	**12.8536**	**125.4715**	**0.1842**	**20.0058**	**0.4362**	**20.4420**	**5.3329**	**0.4269**	**5.7598**	**0.0000**	**19,435.4810**	**19,435.4810**	**1.4005**	**0.9147**	**19,743.0795**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Energy	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
Mobile	9.2484	10.2941	83.3833	0.1572	18.0052	0.1273	18.1325	4.7996	0.1188	4.9184		16,009.1824	16,009.1824	1.2263	0.8183	16,283.6894
Total	**22.9534**	**11.9799**	**118.6349**	**0.1673**	**18.0052**	**0.4236**	**18.4289**	**4.7996**	**0.4151**	**5.2148**	**0.0000**	**17,713.3176**	**17,713.3176**	**1.3180**	**0.8484**	**17,999.0849**

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	N20	CO2e
Percent Reduction	2.00	6.80	5.45	9.19	10.00	2.88	9.85	10.00	2.75	9.46	0.00	8.86	8.86	5.89	7.25	8.83

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	5/12/2023	5	30	
2	Site Preparation	Site Preparation	5/15/2023	6/2/2023	5	15	
3	Grading	Grading	6/5/2023	9/22/2023	5	80	
4	Building Construction	Building Construction	9/25/2023	5/30/2025	5	440	
5	Paving	Paving	6/2/2025	6/27/2025	5	20	
6	Architectural Coating	Architectural Coating	6/2/2025	10/17/2025	5	100	

Acres of Grading (Site Preparation Phase): 22.5

Acres of Grading (Grading Phase): 240

Acres of Paving: 0

Residential Indoor: 1,103,842; Residential Outdoor: 367,947; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 17,895 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	1	6.00	402	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
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	Pumps	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
Demolition	6	15.00	0.00	1,419.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	28.00	0.00	16,500.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	432.00	96.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	86.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.3636	0.0000	10.3636	1.5694	0.0000	1.5694			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**10.3636**	**0.9975**	**11.3611**	**1.5694**	**0.9280**	**2.4974**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0630	3.1612	1.1081	0.0127	0.3721	0.0192	0.3914	0.1020	0.0184	0.1204		1,403.3455	1,403.3455	0.0925	0.2235	1,472.2492
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0466	0.0312	0.3771	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		101.6729	101.6729	3.4400e-003	3.1200e-003	102.6899
Total	**0.1096**	**3.1924**	**1.4851**	**0.0137**	**0.4954**	**0.0199**	**0.5152**	**0.1347**	**0.0190**	**0.1537**		**1,505.0184**	**1,505.0184**	**0.0960**	**0.2266**	**1,574.9391**

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					4.6636	0.0000	4.6636	0.7062	0.0000	0.7062			0.0000			0.0000
Off-Road	0.7334	4.3163	23.0786	0.0388		0.1816	0.1816		0.1816	0.1816	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**0.7334**	**4.3163**	**23.0786**	**0.0388**	**4.6636**	**0.1816**	**4.8452**	**0.7062**	**0.1816**	**0.8878**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0630	3.1612	1.1081	0.0127	0.3721	0.0192	0.3914	0.1020	0.0184	0.1204		1,403.3455	1,403.3455	0.0925	0.2235	1,472.2492
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0466	0.0312	0.3771	1.0100e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		101.6729	101.6729	3.4400e-003	3.1200e-003	102.6899
Total	**0.1096**	**3.1924**	**1.4851**	**0.0137**	**0.4954**	**0.0199**	**0.5152**	**0.1347**	**0.0190**	**0.1537**		**1,505.0184**	**1,505.0184**	**0.0960**	**0.2266**	**1,574.9391**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

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

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

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0559	0.0375	0.4525	1.2100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.4000e-004	0.0400		122.0075	122.0075	4.1300e-003	3.7500e-003	123.2279
Total	**0.0559**	**0.0375**	**0.4525**	**1.2100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.4000e-004**	**0.0400**		**122.0075**	**122.0075**	**4.1300e-003**	**3.7500e-003**	**123.2279**

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	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0559	0.0375	0.4525	1.2100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.4000e-004	0.0400		122.0075	122.0075	4.1300e-003	3.7500e-003	123.2279
Total	**0.0559**	**0.0375**	**0.4525**	**1.2100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.4000e-004**	**0.0400**		**122.0075**	**122.0075**	**4.1300e-003**	**3.7500e-003**	**123.2279**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.4355	0.0000	9.4355	3.6889	0.0000	3.6889			0.0000			0.0000
Off-Road	4.2406	42.5009	33.5371	0.0845		1.6990	1.6990		1.5631	1.5631		8,182.5164	8,182.5164	2.6464		8,248.6762
Total	**4.2406**	**42.5009**	**33.5371**	**0.0845**	**9.4355**	**1.6990**	**11.1345**	**3.6889**	**1.5631**	**5.2520**		**8,182.5164**	**8,182.5164**	**2.6464**		**8,248.6762**

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

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2746	13.7844	4.8317	0.0552	1.6227	0.0838	1.7065	0.4447	0.0801	0.5249		6,119.2390	6,119.2390	0.4034	0.9744	6,419.6913
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0869	0.0583	0.7038	1.8800e-003	0.2300	1.2400e-003	0.2313	0.0610	1.1400e-003	0.0622		189.7894	189.7894	6.4200e-003	5.8300e-003	191.6879
Total	**0.3615**	**13.8427**	**5.5355**	**0.0571**	**1.8527**	**0.0850**	**1.9377**	**0.5057**	**0.0813**	**0.5870**		**6,309.0284**	**6,309.0284**	**0.4098**	**0.9802**	**6,611.3791**

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					4.2460	0.0000	4.2460	1.6600	0.0000	1.6600			0.0000			0.0000
Off-Road	1.0375	4.4957	43.1158	0.0845		0.1383	0.1383		0.1383	0.1383	0.0000	8,182.5164	8,182.5164	2.6464		8,248.6762
Total	**1.0375**	**4.4957**	**43.1158**	**0.0845**	**4.2460**	**0.1383**	**4.3843**	**1.6600**	**0.1383**	**1.7983**	**0.0000**	**8,182.5164**	**8,182.5164**	**2.6464**		**8,248.6762**

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

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2746	13.7844	4.8317	0.0552	1.6227	0.0838	1.7065	0.4447	0.0801	0.5249		6,119.2390	6,119.2390	0.4034	0.9744	6,419.6913
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0869	0.0583	0.7038	1.8800e-003	0.2300	1.2400e-003	0.2313	0.0610	1.1400e-003	0.0622		189.7894	189.7894	6.4200e-003	5.8300e-003	191.6879
Total	**0.3615**	**13.8427**	**5.5355**	**0.0571**	**1.8527**	**0.0850**	**1.9377**	**0.5057**	**0.0813**	**0.5870**		**6,309.0284**	**6,309.0284**	**0.4098**	**0.9802**	**6,611.3791**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1157	19.1773	22.0022	0.0430		0.9006	0.9006		0.8540	0.8540		4,093.6478	4,093.6478	0.9324		4,116.9580
Total	**2.1157**	**19.1773**	**22.0022**	**0.0430**		**0.9006**	**0.9006**		**0.8540**	**0.8540**		**4,093.6478**	**4,093.6478**	**0.9324**		**4,116.9580**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0918	3.7974	1.3336	0.0178	0.6496	0.0218	0.6714	0.1870	0.0208	0.2078		1,931.9266	1,931.9266	0.0791	0.2893	2,020.1119
Worker	1.3414	0.8991	10.8591	0.0290	3.5488	0.0192	3.5680	0.9413	0.0177	0.9590		2,928.1793	2,928.1793	0.0990	0.0900	2,957.4700
Total	**1.4332**	**4.6965**	**12.1927**	**0.0468**	**4.1984**	**0.0409**	**4.2393**	**1.1283**	**0.0385**	**1.1667**		**4,860.1059**	**4,860.1059**	**0.1781**	**0.3793**	**4,977.5818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9613	5.8736	25.5983	0.0430		0.2369	0.2369		0.2369	0.2369	0.0000	4,093.6477	4,093.6477	0.9324		4,116.9580
Total	**0.9613**	**5.8736**	**25.5983**	**0.0430**		**0.2369**	**0.2369**		**0.2369**	**0.2369**	**0.0000**	**4,093.6477**	**4,093.6477**	**0.9324**		**4,116.9580**

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0918	3.7974	1.3336	0.0178	0.6496	0.0218	0.6714	0.1870	0.0208	0.2078		1,931.9266	1,931.9266	0.0791	0.2893	2,020.1119
Worker	1.3414	0.8991	10.8591	0.0290	3.5488	0.0192	3.5680	0.9413	0.0177	0.9590		2,928.1793	2,928.1793	0.0990	0.0900	2,957.4700
Total	**1.4332**	**4.6965**	**12.1927**	**0.0468**	**4.1984**	**0.0409**	**4.2393**	**1.1283**	**0.0385**	**1.1667**		**4,860.1059**	**4,860.1059**	**0.1781**	**0.3793**	**4,977.5818**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9880	17.9233	21.9250	0.0430		0.7933	0.7933		0.7518	0.7518		4,096.0968	4,096.0968	0.9285		4,119.3081
Total	**1.9880**	**17.9233**	**21.9250**	**0.0430**		**0.7933**	**0.7933**		**0.7518**	**0.7518**		**4,096.0968**	**4,096.0968**	**0.9285**		**4,119.3081**

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

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0893	3.7802	1.3265	0.0175	0.6496	0.0218	0.6714	0.1870	0.0209	0.2078		1,902.8437	1,902.8437	0.0811	0.2849	1,989.7581
Worker	1.2551	0.8064	10.1258	0.0281	3.5488	0.0183	3.5671	0.9413	0.0169	0.9582		2,838.4347	2,838.4347	0.0903	0.0839	2,865.7026
Total	**1.3444**	**4.5866**	**11.4523**	**0.0456**	**4.1984**	**0.0401**	**4.2385**	**1.1283**	**0.0377**	**1.1660**		**4,741.2783**	**4,741.2783**	**0.1714**	**0.3688**	**4,855.4606**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9218	5.6627	25.5785	0.0430		0.2117	0.2117		0.2117	0.2117	0.0000	4,096.0968	4,096.0968	0.9285		4,119.3081
Total	**0.9218**	**5.6627**	**25.5785**	**0.0430**		**0.2117**	**0.2117**		**0.2117**	**0.2117**	**0.0000**	**4,096.0968**	**4,096.0968**	**0.9285**		**4,119.3081**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0893	3.7802	1.3265	0.0175	0.6496	0.0218	0.6714	0.1870	0.0209	0.2078		1,902.8437	1,902.8437	0.0811	0.2849	1,989.7581
Worker	1.2551	0.8064	10.1258	0.0281	3.5488	0.0183	3.5671	0.9413	0.0169	0.9582		2,838.4347	2,838.4347	0.0903	0.0839	2,865.7026
Total	**1.3444**	**4.5866**	**11.4523**	**0.0456**	**4.1984**	**0.0401**	**4.2385**	**1.1283**	**0.0377**	**1.1660**		**4,741.2783**	**4,741.2783**	**0.1714**	**0.3688**	**4,855.4606**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8628	16.7612	21.8364	0.0430		0.6897	0.6897		0.6535	0.6535		4,096.7591	4,096.7591	0.9228		4,119.8296
Total	**1.8628**	**16.7612**	**21.8364**	**0.0430**		**0.6897**	**0.6897**		**0.6535**	**0.6535**		**4,096.7591**	**4,096.7591**	**0.9228**		**4,119.8296**

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

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	3.7379	1.3213	0.0172	0.6497	0.0218	0.6715	0.1870	0.0209	0.2079		1,868.1622	1,868.1622	0.0834	0.2796	1,953.5516
Worker	1.1770	0.7272	9.4617	0.0271	3.5488	0.0174	3.5662	0.9413	0.0161	0.9574		2,741.0220	2,741.0220	0.0822	0.0786	2,766.4932
Total	**1.2641**	**4.4650**	**10.7829**	**0.0443**	**4.1985**	**0.0392**	**4.2377**	**1.1283**	**0.0369**	**1.1652**		**4,609.1843**	**4,609.1843**	**0.1656**	**0.3581**	**4,720.0447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8871	5.4749	25.5621	0.0430		0.1897	0.1897		0.1897	0.1897	0.0000	4,096.7591	4,096.7591	0.9228		4,119.8296
Total	**0.8871**	**5.4749**	**25.5621**	**0.0430**		**0.1897**	**0.1897**		**0.1897**	**0.1897**	**0.0000**	**4,096.7591**	**4,096.7591**	**0.9228**		**4,119.8296**

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

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0871	3.7379	1.3213	0.0172	0.6497	0.0218	0.6715	0.1870	0.0209	0.2079		1,868.1622	1,868.1622	0.0834	0.2796	1,953.5516
Worker	1.1770	0.7272	9.4617	0.0271	3.5488	0.0174	3.5662	0.9413	0.0161	0.9574		2,741.0220	2,741.0220	0.0822	0.0786	2,766.4932
Total	**1.2641**	**4.4650**	**10.7829**	**0.0443**	**4.1985**	**0.0392**	**4.2377**	**1.1283**	**0.0369**	**1.1652**		**4,609.1843**	**4,609.1843**	**0.1656**	**0.3581**	**4,720.0447**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0253	0.3285	9.4000e-004	0.1232	6.1000e-004	0.1238	0.0327	5.6000e-004	0.0332		95.1744	95.1744	2.8600e-003	2.7300e-003	96.0588
Total	**0.0409**	**0.0253**	**0.3285**	**9.4000e-004**	**0.1232**	**6.1000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**95.1744**	**95.1744**	**2.8600e-003**	**2.7300e-003**	**96.0588**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4735	3.3090	16.1866	0.0228		0.1491	0.1491		0.1391	0.1391	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4735**	**3.3090**	**16.1866**	**0.0228**		**0.1491**	**0.1491**		**0.1391**	**0.1391**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0253	0.3285	9.4000e-004	0.1232	6.1000e-004	0.1238	0.0327	5.6000e-004	0.0332		95.1744	95.1744	2.8600e-003	2.7300e-003	96.0588
Total	**0.0409**	**0.0253**	**0.3285**	**9.4000e-004**	**0.1232**	**6.1000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**95.1744**	**95.1744**	**2.8600e-003**	**2.7300e-003**	**96.0588**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.1682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**15.3390**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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

3.7 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2343	0.1448	1.8836	5.4000e-003	0.7065	3.4700e-003	0.7099	0.1874	3.1900e-003	0.1906		545.6664	545.6664	0.0164	0.0156	550.7371
Total	**0.2343**	**0.1448**	**1.8836**	**5.4000e-003**	**0.7065**	**3.4700e-003**	**0.7099**	**0.1874**	**3.1900e-003**	**0.1906**		**545.6664**	**545.6664**	**0.0164**	**0.0156**	**550.7371**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.1682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**15.3390**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2343	0.1448	1.8836	5.4000e-003	0.7065	3.4700e-003	0.7099	0.1874	3.1900e-003	0.1906		545.6664	545.6664	0.0164	0.0156	550.7371
Total	**0.2343**	**0.1448**	**1.8836**	**5.4000e-003**	**0.7065**	**3.4700e-003**	**0.7099**	**0.1874**	**3.1900e-003**	**0.1906**		**545.6664**	**545.6664**	**0.0164**	**0.0156**	**550.7371**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Integrate Below Market Rate Housing

Encourage Telecommuting and Alternative Work Schedules

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	9.2484	10.2941	83.3833	0.1572	18.0052	0.1273	18.1325	4.7996	0.1188	4.9184		16,009.1824	16,009.1824	1.2263	0.8183	16,283.6894
Unmitigated	9.7173	11.1677	90.2199	0.1741	20.0058	0.1399	20.1457	5.3329	0.1305	5.4635		17,731.3459	17,731.3459	1.3088	0.8846	18,027.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,505.82	1,713.59	1427.41	6,185,375	5,566,837
Condo/Townhouse	509.78	577.94	445.88	1,410,241	1,269,217
Enclosed Parking Structure	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	565.95	630.60	306.45	828,714	745,842
Total	3,581.55	2,922.13	2,179.74	8,424,329	7,581,896

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
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Condo/Townhouse	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Condo/Townhouse	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking Structure	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking with Elevator	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Parking Lot	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Strip Mall	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629

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	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
NaturalGas Unmitigated	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194

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

5.2 Energy by Land Use - NaturalGas

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					
Apartments Mid Rise	10660.9	0.1150	0.9825	0.4181	6.2700e-003		0.0794	0.0794		0.0794	0.0794		1,254.2200	1,254.2200	0.0240	0.0230	1,261.6732
Condo/Townhouse	3210.65	0.0346	0.2959	0.1259	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.7232	377.7232	7.2400e-003	6.9200e-003	379.9678
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	81.7808	8.8000e-004	8.0200e-003	6.7300e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004		9.6213	9.6213	1.8000e-004	1.8000e-004	9.6785
Total		**0.1505**	**1.2864**	**0.5507**	**8.2100e-003**		**0.1040**	**0.1040**		**0.1040**	**0.1040**		**1,641.5644**	**1,641.5644**	**0.0315**	**0.0301**	**1,651.3194**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	10.6609	0.1150	0.9825	0.4181	6.2700e-003		0.0794	0.0794		0.0794	0.0794		1,254.2200	1,254.2200	0.0240	0.0230	1,261.6732
Condo/Townhouse	3.21065	0.0346	0.2959	0.1259	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.7232	377.7232	7.2400e-003	6.9200e-003	379.9678
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0817808	8.8000e-004	8.0200e-003	6.7300e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004		9.6213	9.6213	1.8000e-004	1.8000e-004	9.6785
Total		**0.1505**	**1.2864**	**0.5507**	**8.2100e-003**		**0.1040**	**0.1040**		**0.1040**	**0.1040**		**1,641.5644**	**1,641.5644**	**0.0315**	**0.0301**	**1,651.3194**

6.0 Area Detail

6.1 Mitigation Measures Area

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	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Unmitigated	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.0919					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0470	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924		62.5708	62.5708	0.0602		64.0761
Total	**13.5545**	**0.3995**	**34.7009**	**1.8400e-003**		**0.1924**	**0.1924**		**0.1924**	**0.1924**	**0.0000**	**62.5708**	**62.5708**	**0.0602**	**0.0000**	**64.0761**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.0919					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0470	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924		62.5708	62.5708	0.0602		64.0761
Total	**13.5545**	**0.3995**	**34.7009**	**1.8400e-003**		**0.1924**	**0.1924**		**0.1924**	**0.1924**	**0.0000**	**62.5708**	**62.5708**	**0.0602**	**0.0000**	**64.0761**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

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

325 and 391 Hampshire MU

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	142.00	Space	0.00	34,913.00	0
Enclosed Parking with Elevator	617.00	Space	0.00	246,133.00	0
Parking Lot	43.00	Space	0.00	17,200.00	0
Apartments Mid Rise	349.00	Dwelling Unit	10.97	398,622.00	1068
Condo/Townhouse	71.00	Dwelling Unit	0.00	146,485.00	217
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 10.97 ac; mid rise apt 349 du + comm. 398,622 sf; townhome 71 du + amenity 146,485 sf; retail 15 ksf; MU garage 617 space 246,133 sf; 43 space parking lot; townhome garages 142 spaces 34,913 sf

Construction Phase - 30 demo, 15 prep, 80 grad, 440 bldg, 20 pav, 100 coating

Off-road Equipment -

Off-road Equipment - Project data. Add 1 bore rig, concrete pump. Welder to be electric. Generator to be electric (solar) solar

Off-road Equipment - Project data. Add 2 loaders, 1 water truck

325 and 391 Hampshire MU - Ventura County, Summer

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

Off-road Equipment -

Trips and VMT - 9 mile haul route

Demolition - 14,350 tons

Grading - 132,000 cy export

Architectural Coating - 10 g/L VOC interior residential, 50 g/L residential exterior and commercial use. VCAPCD Rule 74.2 and project features

Vehicle Trips - Adjusted per trip generation table

Area Coating - 10 g/L VOC residential interior, 50 g/L VOC residential exterior and commercial use. VCAPCD Rule 74.2 and project feature

Water And Wastewater - Hill Canyon Treatment Plant facility.

Construction Off-road Equipment Mitigation - Rule 55 dust control. Tier 4 diesel equipment. electric welder. solar generator

Mobile Land Use Mitigation - Mixed Use with affordable units

Mobile Commute Mitigation - Live/work units and co-working amenity space

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	75.00	10.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Residential_Exterior	100	50
tblAreaCoating	Area_EF_Residential_Interior	75	10
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	30.00	80.00
tblConstructionPhase	NumDays	300.00	440.00
tblConstructionPhase	NumDays	20.00	100.00
tblGrading	MaterialExported	0.00	132,000.00
tblLandUse	LandUseSquareFeet	56,800.00	34,913.00

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

tblLandUse	LandUseSquareFeet	246,800.00	246,133.00
tblLandUse	LandUseSquareFeet	349,000.00	398,622.00
tblLandUse	LandUseSquareFeet	71,000.00	146,485.00
tblLandUse	LotAcreage	1.28	0.00
tblLandUse	LotAcreage	5.55	0.00
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	9.18	10.97
tblLandUse	LotAcreage	4.44	0.00
tblLandUse	LotAcreage	0.34	0.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblVehicleTrips	WD_TR	5.44	7.18
tblVehicleTrips	WD_TR	7.32	7.18
tblVehicleTrips	WD_TR	44.32	37.73
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.6218	55.7249	38.9860	0.1416	19.8049	1.7835	21.0717	10.1417	1.6439	11.3072	0.0000	14,488.3389	14,488.3389	3.0572	0.9778	14,856.1356
2024	3.2411	22.2320	33.5057	0.0899	4.1984	0.8333	5.0317	1.1283	0.7894	1.9177	0.0000	8,962.6952	8,962.6952	1.0926	0.3598	9,097.2158
2025	16.5081	20.9611	32.7199	0.0885	4.1985	0.7288	4.9272	1.1283	0.6903	1.8185	0.0000	8,826.5868	8,826.5868	1.0817	0.3497	8,957.8266
Maximum	**16.5081**	**55.7249**	**38.9860**	**0.1416**	**19.8049**	**1.7835**	**21.0717**	**10.1417**	**1.6439**	**11.3072**	**0.0000**	**14,488.3389**	**14,488.3389**	**3.0572**	**0.9778**	**14,856.1356**

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	2.2987	17.7197	48.5647	0.1416	8.9935	0.2776	9.0564	4.5853	0.2752	4.6481	0.0000	14,488.3389	14,488.3389	3.0572	0.9778	14,856.1356
2024	2.1750	9.9715	37.1592	0.0899	4.1984	0.2516	4.4501	1.1283	0.2493	1.3775	0.0000	8,962.6952	8,962.6952	1.0926	0.3598	9,097.2158
2025	16.0665	9.6748	36.4457	0.0885	4.1985	0.2289	4.4273	1.1283	0.2265	1.3548	0.0000	8,826.5868	8,826.5868	1.0817	0.3497	8,957.8266
Maximum	**16.0665**	**17.7197**	**48.5647**	**0.1416**	**8.9935**	**0.2776**	**9.0564**	**4.5853**	**0.2752**	**4.6481**	**0.0000**	**14,488.3389**	**14,488.3389**	**3.0572**	**0.9778**	**14,856.1356**

325 and 391 Hampshire MU - Ventura County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.72	62.23	-16.12	0.00	38.34	77.34	42.21	44.82	75.96	50.94	0.00	0.00	0.00	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

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	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Energy	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
Mobile	10.0270	10.1147	84.7315	0.1801	20.0058	0.1398	20.1456	5.3329	0.1304	5.4634		18,339.8190	18,339.8190	1.2059	0.8266	18,616.2935
Total	**23.7320**	**11.8006**	**119.9832**	**0.1902**	**20.0058**	**0.4361**	**20.4419**	**5.3329**	**0.4268**	**5.7597**	**0.0000**	**20,043.9542**	**20,043.9542**	**1.2976**	**0.8567**	**20,331.6890**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Energy	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
Mobile	9.5792	9.3190	77.9027	0.1626	18.0052	0.1272	18.1324	4.7996	0.1187	4.9183		16,555.6653	16,555.6653	1.1249	0.7639	16,811.4359
Total	**23.2842**	**11.0049**	**113.1543**	**0.1727**	**18.0052**	**0.4236**	**18.4288**	**4.7996**	**0.4151**	**5.2147**	**0.0000**	**18,259.8004**	**18,259.8004**	**1.2165**	**0.7940**	**18,526.8314**

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	N20	CO2e
Percent Reduction	1.89	6.74	5.69	9.21	10.00	2.88	9.85	10.00	2.75	9.46	0.00	8.90	8.90	6.25	7.32	8.88

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	5/12/2023	5	30	
2	Site Preparation	Site Preparation	5/15/2023	6/2/2023	5	15	
3	Grading	Grading	6/5/2023	9/22/2023	5	80	
4	Building Construction	Building Construction	9/25/2023	5/30/2025	5	440	
5	Paving	Paving	6/2/2025	6/27/2025	5	20	
6	Architectural Coating	Architectural Coating	6/2/2025	10/17/2025	5	100	

Acres of Grading (Site Preparation Phase): 22.5

Acres of Grading (Grading Phase): 240

Acres of Paving: 0

Residential Indoor: 1,103,842; Residential Outdoor: 367,947; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 17,895 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	1	6.00	402	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
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	Pumps	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
Demolition	6	15.00	0.00	1,419.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	28.00	0.00	16,500.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	432.00	96.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	86.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.3636	0.0000	10.3636	1.5694	0.0000	1.5694			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**10.3636**	**0.9975**	**11.3611**	**1.5694**	**0.9280**	**2.4974**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0690	3.0213	1.0852	0.0126	0.3721	0.0191	0.3912	0.1020	0.0183	0.1203		1,400.6418	1,400.6418	0.0929	0.2230	1,469.4249
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0267	0.3841	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		106.2712	106.2712	3.1600e-003	2.8100e-003	107.1876
Total	**0.1121**	**3.0480**	**1.4693**	**0.0137**	**0.4954**	**0.0198**	**0.5151**	**0.1347**	**0.0189**	**0.1536**		**1,506.9130**	**1,506.9130**	**0.0960**	**0.2258**	**1,576.6125**

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					4.6636	0.0000	4.6636	0.7062	0.0000	0.7062			0.0000			0.0000
Off-Road	0.7334	4.3163	23.0786	0.0388		0.1816	0.1816		0.1816	0.1816	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**0.7334**	**4.3163**	**23.0786**	**0.0388**	**4.6636**	**0.1816**	**4.8452**	**0.7062**	**0.1816**	**0.8878**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0690	3.0213	1.0852	0.0126	0.3721	0.0191	0.3912	0.1020	0.0183	0.1203		1,400.6418	1,400.6418	0.0929	0.2230	1,469.4249
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0267	0.3841	1.0500e-003	0.1232	6.7000e-004	0.1239	0.0327	6.1000e-004	0.0333		106.2712	106.2712	3.1600e-003	2.8100e-003	107.1876
Total	**0.1121**	**3.0480**	**1.4693**	**0.0137**	**0.4954**	**0.0198**	**0.5151**	**0.1347**	**0.0189**	**0.1536**		**1,506.9130**	**1,506.9130**	**0.0960**	**0.2258**	**1,576.6125**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

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

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

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0518	0.0320	0.4609	1.2600e-003	0.1479	8.0000e-004	0.1487	0.0392	7.4000e-004	0.0400		127.5255	127.5255	3.7900e-003	3.3700e-003	128.6252
Total	**0.0518**	**0.0320**	**0.4609**	**1.2600e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.4000e-004**	**0.0400**		**127.5255**	**127.5255**	**3.7900e-003**	**3.3700e-003**	**128.6252**

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	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0518	0.0320	0.4609	1.2600e-003	0.1479	8.0000e-004	0.1487	0.0392	7.4000e-004	0.0400		127.5255	127.5255	3.7900e-003	3.3700e-003	128.6252
Total	**0.0518**	**0.0320**	**0.4609**	**1.2600e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.4000e-004**	**0.0400**		**127.5255**	**127.5255**	**3.7900e-003**	**3.3700e-003**	**128.6252**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.4355	0.0000	9.4355	3.6889	0.0000	3.6889			0.0000			0.0000
Off-Road	4.2406	42.5009	33.5371	0.0845		1.6990	1.6990		1.5631	1.5631		8,182.5164	8,182.5164	2.6464		8,248.6762
Total	**4.2406**	**42.5009**	**33.5371**	**0.0845**	**9.4355**	**1.6990**	**11.1345**	**3.6889**	**1.5631**	**5.2520**		**8,182.5164**	**8,182.5164**	**2.6464**		**8,248.6762**

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

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3007	13.1743	4.7319	0.0551	1.6227	0.0832	1.7060	0.4447	0.0796	0.5244		6,107.4496	6,107.4496	0.4049	0.9725	6,407.3759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0805	0.0498	0.7170	1.9600e-003	0.2300	1.2400e-003	0.2313	0.0610	1.1400e-003	0.0622		198.3729	198.3729	5.8900e-003	5.2500e-003	200.0836
Total	**0.3812**	**13.2240**	**5.4489**	**0.0571**	**1.8527**	**0.0845**	**1.9372**	**0.5057**	**0.0808**	**0.5865**		**6,305.8225**	**6,305.8225**	**0.4108**	**0.9778**	**6,607.4595**

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					4.2460	0.0000	4.2460	1.6600	0.0000	1.6600			0.0000			0.0000
Off-Road	1.0375	4.4957	43.1158	0.0845		0.1383	0.1383		0.1383	0.1383	0.0000	8,182.5164	8,182.5164	2.6464		8,248.6762
Total	**1.0375**	**4.4957**	**43.1158**	**0.0845**	**4.2460**	**0.1383**	**4.3843**	**1.6600**	**0.1383**	**1.7983**	**0.0000**	**8,182.5164**	**8,182.5164**	**2.6464**		**8,248.6762**

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

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3007	13.1743	4.7319	0.0551	1.6227	0.0832	1.7060	0.4447	0.0796	0.5244		6,107.4496	6,107.4496	0.4049	0.9725	6,407.3759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0805	0.0498	0.7170	1.9600e-003	0.2300	1.2400e-003	0.2313	0.0610	1.1400e-003	0.0622		198.3729	198.3729	5.8900e-003	5.2500e-003	200.0836
Total	**0.3812**	**13.2240**	**5.4489**	**0.0571**	**1.8527**	**0.0845**	**1.9372**	**0.5057**	**0.0808**	**0.5865**		**6,305.8225**	**6,305.8225**	**0.4108**	**0.9778**	**6,607.4595**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1157	19.1773	22.0022	0.0430		0.9006	0.9006		0.8540	0.8540		4,093.6478	4,093.6478	0.9324		4,116.9580
Total	**2.1157**	**19.1773**	**22.0022**	**0.0430**		**0.9006**	**0.9006**		**0.8540**	**0.8540**		**4,093.6478**	**4,093.6478**	**0.9324**		**4,116.9580**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0953	3.6372	1.2922	0.0178	0.6496	0.0216	0.6712	0.1870	0.0207	0.2077		1,929.1645	1,929.1645	0.0794	0.2887	2,017.1676
Worker	1.2422	0.7678	11.0621	0.0303	3.5488	0.0192	3.5680	0.9413	0.0177	0.9590		3,060.6111	3,060.6111	0.0909	0.0809	3,087.0037
Total	**1.3374**	**4.4050**	**12.3543**	**0.0481**	**4.1984**	**0.0408**	**4.2392**	**1.1283**	**0.0383**	**1.1666**		**4,989.7756**	**4,989.7756**	**0.1703**	**0.3696**	**5,104.1713**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9613	5.8736	25.5983	0.0430		0.2369	0.2369		0.2369	0.2369	0.0000	4,093.6477	4,093.6477	0.9324		4,116.9580
Total	**0.9613**	**5.8736**	**25.5983**	**0.0430**		**0.2369**	**0.2369**		**0.2369**	**0.2369**	**0.0000**	**4,093.6477**	**4,093.6477**	**0.9324**		**4,116.9580**

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0953	3.6372	1.2922	0.0178	0.6496	0.0216	0.6712	0.1870	0.0207	0.2077		1,929.1645	1,929.1645	0.0794	0.2887	2,017.1676
Worker	1.2422	0.7678	11.0621	0.0303	3.5488	0.0192	3.5680	0.9413	0.0177	0.9590		3,060.6111	3,060.6111	0.0909	0.0809	3,087.0037
Total	**1.3374**	**4.4050**	**12.3543**	**0.0481**	**4.1984**	**0.0408**	**4.2392**	**1.1283**	**0.0383**	**1.1666**		**4,989.7756**	**4,989.7756**	**0.1703**	**0.3696**	**5,104.1713**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9880	17.9233	21.9250	0.0430		0.7933	0.7933		0.7518	0.7518		4,096.0968	4,096.0968	0.9285		4,119.3081
Total	**1.9880**	**17.9233**	**21.9250**	**0.0430**		**0.7933**	**0.7933**		**0.7518**	**0.7518**		**4,096.0968**	**4,096.0968**	**0.9285**		**4,119.3081**

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

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0930	3.6200	1.2858	0.0175	0.6496	0.0217	0.6713	0.1870	0.0207	0.2077		1,900.0331	1,900.0331	0.0814	0.2842	1,986.7687
Worker	1.1602	0.6888	10.2949	0.0294	3.5488	0.0183	3.5671	0.9413	0.0169	0.9582		2,966.5653	2,966.5653	0.0828	0.0755	2,991.1390
Total	**1.2532**	**4.3087**	**11.5807**	**0.0468**	**4.1984**	**0.0400**	**4.2384**	**1.1283**	**0.0376**	**1.1659**		**4,866.5984**	**4,866.5984**	**0.1642**	**0.3598**	**4,977.9077**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9218	5.6627	25.5785	0.0430		0.2117	0.2117		0.2117	0.2117	0.0000	4,096.0968	4,096.0968	0.9285		4,119.3081
Total	**0.9218**	**5.6627**	**25.5785**	**0.0430**		**0.2117**	**0.2117**		**0.2117**	**0.2117**	**0.0000**	**4,096.0968**	**4,096.0968**	**0.9285**		**4,119.3081**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0930	3.6200	1.2858	0.0175	0.6496	0.0217	0.6713	0.1870	0.0207	0.2077		1,900.0331	1,900.0331	0.0814	0.2842	1,986.7687
Worker	1.1602	0.6888	10.2949	0.0294	3.5488	0.0183	3.5671	0.9413	0.0169	0.9582		2,966.5653	2,966.5653	0.0828	0.0755	2,991.1390
Total	**1.2532**	**4.3087**	**11.5807**	**0.0468**	**4.1984**	**0.0400**	**4.2384**	**1.1283**	**0.0376**	**1.1659**		**4,866.5984**	**4,866.5984**	**0.1642**	**0.3598**	**4,977.9077**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8628	16.7612	21.8364	0.0430		0.6897	0.6897		0.6535	0.6535		4,096.7591	4,096.7591	0.9228		4,119.8296
Total	**1.8628**	**16.7612**	**21.8364**	**0.0430**		**0.6897**	**0.6897**		**0.6535**	**0.6535**		**4,096.7591**	**4,096.7591**	**0.9228**		**4,119.8296**

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

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0909	3.5787	1.2811	0.0171	0.6497	0.0217	0.6714	0.1870	0.0208	0.2077		1,865.3225	1,865.3225	0.0837	0.2789	1,950.5360
Worker	1.0863	0.6212	9.6025	0.0283	3.5488	0.0174	3.5662	0.9413	0.0161	0.9574		2,864.5052	2,864.5052	0.0752	0.0707	2,887.4610
Total	**1.1771**	**4.1999**	**10.8836**	**0.0455**	**4.1985**	**0.0391**	**4.2376**	**1.1283**	**0.0368**	**1.1651**		**4,729.8277**	**4,729.8277**	**0.1589**	**0.3497**	**4,837.9970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8871	5.4749	25.5621	0.0430		0.1897	0.1897		0.1897	0.1897	0.0000	4,096.7591	4,096.7591	0.9228		4,119.8296
Total	**0.8871**	**5.4749**	**25.5621**	**0.0430**		**0.1897**	**0.1897**		**0.1897**	**0.1897**	**0.0000**	**4,096.7591**	**4,096.7591**	**0.9228**		**4,119.8296**

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

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0909	3.5787	1.2811	0.0171	0.6497	0.0217	0.6714	0.1870	0.0208	0.2077		1,865.3225	1,865.3225	0.0837	0.2789	1,950.5360
Worker	1.0863	0.6212	9.6025	0.0283	3.5488	0.0174	3.5662	0.9413	0.0161	0.9574		2,864.5052	2,864.5052	0.0752	0.0707	2,887.4610
Total	**1.1771**	**4.1999**	**10.8836**	**0.0455**	**4.1985**	**0.0391**	**4.2376**	**1.1283**	**0.0368**	**1.1651**		**4,729.8277**	**4,729.8277**	**0.1589**	**0.3497**	**4,837.9970**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0377	0.0216	0.3334	9.8000e-004	0.1232	6.1000e-004	0.1238	0.0327	5.6000e-004	0.0332		99.4620	99.4620	2.6100e-003	2.4600e-003	100.2591
Total	**0.0377**	**0.0216**	**0.3334**	**9.8000e-004**	**0.1232**	**6.1000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**99.4620**	**99.4620**	**2.6100e-003**	**2.4600e-003**	**100.2591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4735	3.3090	16.1866	0.0228		0.1491	0.1491		0.1391	0.1391	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4735**	**3.3090**	**16.1866**	**0.0228**		**0.1491**	**0.1491**		**0.1391**	**0.1391**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0377	0.0216	0.3334	9.8000e-004	0.1232	6.1000e-004	0.1238	0.0327	5.6000e-004	0.0332		99.4620	99.4620	2.6100e-003	2.4600e-003	100.2591
Total	**0.0377**	**0.0216**	**0.3334**	**9.8000e-004**	**0.1232**	**6.1000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**99.4620**	**99.4620**	**2.6100e-003**	**2.4600e-003**	**100.2591**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.1682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**15.3390**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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

3.7 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2163	0.1237	1.9116	5.6400e-003	0.7065	3.4700e-003	0.7099	0.1874	3.1900e-003	0.1906		570.2487	570.2487	0.0150	0.0141	574.8186
Total	**0.2163**	**0.1237**	**1.9116**	**5.6400e-003**	**0.7065**	**3.4700e-003**	**0.7099**	**0.1874**	**3.1900e-003**	**0.1906**		**570.2487**	**570.2487**	**0.0150**	**0.0141**	**574.8186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.1682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**15.3390**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2163	0.1237	1.9116	5.6400e-003	0.7065	3.4700e-003	0.7099	0.1874	3.1900e-003	0.1906		570.2487	570.2487	0.0150	0.0141	574.8186
Total	**0.2163**	**0.1237**	**1.9116**	**5.6400e-003**	**0.7065**	**3.4700e-003**	**0.7099**	**0.1874**	**3.1900e-003**	**0.1906**		**570.2487**	**570.2487**	**0.0150**	**0.0141**	**574.8186**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Integrate Below Market Rate Housing

Encourage Telecommuting and Alternative Work Schedules

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	9.5792	9.3190	77.9027	0.1626	18.0052	0.1272	18.1324	4.7996	0.1187	4.9183		16,555.6653	16,555.6653	1.1249	0.7639	16,811.4359
Unmitigated	10.0270	10.1147	84.7315	0.1801	20.0058	0.1398	20.1456	5.3329	0.1304	5.4634		18,339.8190	18,339.8190	1.2059	0.8266	18,616.2935

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,505.82	1,713.59	1427.41	6,185,375	5,566,837
Condo/Townhouse	509.78	577.94	445.88	1,410,241	1,269,217
Enclosed Parking Structure	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	565.95	630.60	306.45	828,714	745,842
Total	3,581.55	2,922.13	2,179.74	8,424,329	7,581,896

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
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Condo/Townhouse	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Condo/Townhouse	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking Structure	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking with Elevator	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Parking Lot	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Strip Mall	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629

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	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194
NaturalGas Unmitigated	0.1505	1.2864	0.5507	8.2100e-003		0.1040	0.1040		0.1040	0.1040		1,641.5644	1,641.5644	0.0315	0.0301	1,651.3194

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

5.2 Energy by Land Use - NaturalGas

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					
Apartments Mid Rise	10660.9	0.1150	0.9825	0.4181	6.2700e-003		0.0794	0.0794		0.0794	0.0794		1,254.2200	1,254.2200	0.0240	0.0230	1,261.6732
Condo/Townhouse	3210.65	0.0346	0.2959	0.1259	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.7232	377.7232	7.2400e-003	6.9200e-003	379.9678
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	81.7808	8.8000e-004	8.0200e-003	6.7300e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004		9.6213	9.6213	1.8000e-004	1.8000e-004	9.6785
Total		**0.1505**	**1.2864**	**0.5507**	**8.2100e-003**		**0.1040**	**0.1040**		**0.1040**	**0.1040**		**1,641.5644**	**1,641.5644**	**0.0315**	**0.0301**	**1,651.3194**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	10.6609	0.1150	0.9825	0.4181	6.2700e-003		0.0794	0.0794		0.0794	0.0794		1,254.2200	1,254.2200	0.0240	0.0230	1,261.6732
Condo/Townhouse	3.21065	0.0346	0.2959	0.1259	1.8900e-003		0.0239	0.0239		0.0239	0.0239		377.7232	377.7232	7.2400e-003	6.9200e-003	379.9678
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0817808	8.8000e-004	8.0200e-003	6.7300e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004		9.6213	9.6213	1.8000e-004	1.8000e-004	9.6785
Total		**0.1505**	**1.2864**	**0.5507**	**8.2100e-003**		**0.1040**	**0.1040**		**0.1040**	**0.1040**		**1,641.5644**	**1,641.5644**	**0.0315**	**0.0301**	**1,651.3194**

6.0 Area Detail

6.1 Mitigation Measures Area

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	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761
Unmitigated	13.5545	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924	0.0000	62.5708	62.5708	0.0602	0.0000	64.0761

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.0919					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0470	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924		62.5708	62.5708	0.0602		64.0761
Total	**13.5545**	**0.3995**	**34.7009**	**1.8400e-003**		**0.1924**	**0.1924**		**0.1924**	**0.1924**	**0.0000**	**62.5708**	**62.5708**	**0.0602**	**0.0000**	**64.0761**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.0919					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0470	0.3995	34.7009	1.8400e-003		0.1924	0.1924		0.1924	0.1924		62.5708	62.5708	0.0602		64.0761
Total	**13.5545**	**0.3995**	**34.7009**	**1.8400e-003**		**0.1924**	**0.1924**		**0.1924**	**0.1924**	**0.0000**	**62.5708**	**62.5708**	**0.0602**	**0.0000**	**64.0761**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	142.00	Space	0.00	34,913.00	0
Enclosed Parking with Elevator	617.00	Space	0.00	246,133.00	0
Parking Lot	43.00	Space	0.00	17,200.00	0
Apartments Mid Rise	349.00	Dwelling Unit	10.97	398,622.00	1068
Condo/Townhouse	71.00	Dwelling Unit	0.00	146,485.00	217
Strip Mall	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 10.97 ac; mid rise apt 349 du + comm. 398,622 sf; townhome 71 du + amenity 146,485 sf; retail 15 ksf; MU garage 617 space 246,133 sf; 43 space parking lot; townhome garages 142 spaces 34,913 sf

Construction Phase - 30 demo, 15 prep, 80 grad, 440 bldg, 20 pav, 100 coating

Off-road Equipment -

Off-road Equipment - Project data. Add 1 bore rig, concrete pump. Welder to be electric. Generator to be electric (solar) solar

Off-road Equipment - Project data. Add 2 loaders, 1 water truck

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

Off-road Equipment -

Trips and VMT - 9 mile haul route

Demolition - 14,350 tons

Grading - 132,000 cy export

Architectural Coating - 10 g/L VOC interior residential, 50 g/L residential exterior and commercial use. VCAPCD Rule 74.2 and project features

Vehicle Trips - Adjusted per trip generation table

Area Coating - 10 g/L VOC residential interior, 50 g/L VOC residential exterior and commercial use. VCAPCD Rule 74.2 and project feature

Water And Wastewater - Hill Canyon Treatment Plant facility.

Construction Off-road Equipment Mitigation - Rule 55 dust control. Tier 4 diesel equipment. electric welder. solar generator

Mobile Land Use Mitigation - Mixed Use with affordable units

Mobile Commute Mitigation - Live/work units and co-working amenity space

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	75.00	10.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Residential_Exterior	100	50
tblAreaCoating	Area_EF_Residential_Interior	75	10
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	30.00	80.00
tblConstructionPhase	NumDays	300.00	440.00
tblConstructionPhase	NumDays	20.00	100.00
tblGrading	MaterialExported	0.00	132,000.00
tblLandUse	LandUseSquareFeet	56,800.00	34,913.00

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

tblLandUse	LandUseSquareFeet	246,800.00	246,133.00
tblLandUse	LandUseSquareFeet	349,000.00	398,622.00
tblLandUse	LandUseSquareFeet	71,000.00	146,485.00
tblLandUse	LotAcreage	1.28	0.00
tblLandUse	LotAcreage	5.55	0.00
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	9.18	10.97
tblLandUse	LotAcreage	4.44	0.00
tblLandUse	LotAcreage	0.34	0.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblTripsAndVMT	HaulingTripLength	20.00	9.00
tblVehicleTrips	WD_TR	5.44	7.18
tblVehicleTrips	WD_TR	7.32	7.18
tblVehicleTrips	WD_TR	44.32	37.73
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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

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	0.3609	3.6608	3.2083	9.8900e-003	0.9059	0.1291	1.0350	0.3079	0.1199	0.4279	0.0000	907.9468	907.9468	0.1698	0.0506	927.2672
2024	0.4234	2.9425	4.3519	0.0116	0.5401	0.1092	0.6493	0.1454	0.1034	0.2488	0.0000	1,052.4452	1,052.4452	0.1304	0.0435	1,068.6770
2025	0.9509	1.2940	2.0855	5.3800e-003	0.2585	0.0463	0.3048	0.0695	0.0439	0.1133	0.0000	485.9389	485.9389	0.0611	0.0181	492.8734
Maximum	**0.9509**	**3.6608**	**4.3519**	**0.0116**	**0.9059**	**0.1291**	**1.0350**	**0.3079**	**0.1199**	**0.4279**	**0.0000**	**1,052.4452**	**1,052.4452**	**0.1698**	**0.0506**	**1,068.6770**

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	0.1529	1.2261	3.7885	9.8900e-003	0.5317	0.0221	0.5539	0.1721	0.0219	0.1940	0.0000	907.9462	907.9462	0.1698	0.0506	927.2666
2024	0.2837	1.3363	4.8305	0.0116	0.5401	0.0330	0.5731	0.1454	0.0327	0.1780	0.0000	1,052.4446	1,052.4446	0.1304	0.0435	1,068.6765
2025	0.8938	0.6318	2.3028	5.3800e-003	0.2585	0.0166	0.2751	0.0695	0.0164	0.0858	0.0000	485.9386	485.9386	0.0611	0.0181	492.8731
Maximum	**0.8938**	**1.3363**	**4.8305**	**0.0116**	**0.5401**	**0.0330**	**0.5731**	**0.1721**	**0.0327**	**0.1940**	**0.0000**	**1,052.4446**	**1,052.4446**	**0.1698**	**0.0506**	**1,068.6765**

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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	N20	CO2e
Percent Reduction	**23.33**	**59.55**	**-13.23**	**0.00**	**21.95**	**74.80**	**29.51**	**25.97**	**73.46**	**42.04**	**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	**4-3-2023**	**7-2-2023**	1.1933	0.3261
2	**7-3-2023**	**10-2-2023**	1.8448	0.5967
3	**10-3-2023**	**1-2-2024**	0.8999	0.4257
4	**1-3-2024**	**4-2-2024**	0.8396	0.4065
5	**4-3-2024**	**7-2-2024**	0.8279	0.3948
6	**7-3-2024**	**10-2-2024**	0.8372	0.3994
7	**10-3-2024**	**1-2-2025**	0.8480	0.4109
8	**1-3-2025**	**4-2-2025**	0.7825	0.3884
9	**4-3-2025**	**7-2-2025**	0.7722	0.4651
10	**7-3-2025**	**9-30-2025**	0.5408	0.5408
		Highest	1.8448	0.5967

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3769	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316
Energy	0.0275	0.2348	0.1005	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	870.5562	870.5562	0.0558	0.0111	875.2602
Mobile	1.5522	1.7697	14.0207	0.0282	3.1725	0.0226	3.1950	0.8469	0.0210	0.8680	0.0000	2,608.5248	2,608.5248	0.1852	0.1272	2,651.0612
Waste						0.0000	0.0000		0.0000	0.0000	42.4150	0.0000	42.4150	2.5067	0.0000	105.0813
Water						0.0000	0.0000		0.0000	0.0000	10.0748	101.0896	111.1644	0.0432	0.0229	119.0818
Total	**3.9565**	**2.0404**	**17.2443**	**0.0299**	**3.1725**	**0.0588**	**3.2313**	**0.8469**	**0.0573**	**0.9043**	**52.4897**	**3,585.2793**	**3,637.7690**	**2.7957**	**0.1613**	**3,755.7160**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3769	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316
Energy	0.0275	0.2348	0.1005	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	870.5562	870.5562	0.0558	0.0111	875.2602
Mobile	1.4780	1.6300	12.9362	0.0255	2.8552	0.0205	2.8757	0.7622	0.0192	0.7814	0.0000	2,355.0426	2,355.0426	0.1733	0.1176	2,394.4113
Waste						0.0000	0.0000		0.0000	0.0000	42.4150	0.0000	42.4150	2.5067	0.0000	105.0813
Water						0.0000	0.0000		0.0000	0.0000	8.0598	87.9382	95.9981	0.0352	0.0184	102.3684
Total	**3.8823**	**1.9008**	**16.1598**	**0.0272**	**2.8552**	**0.0568**	**2.9120**	**0.7622**	**0.0554**	**0.8177**	**50.4748**	**3,318.6457**	**3,369.1205**	**2.7757**	**0.1471**	**3,482.3528**

	ROG	NOx	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	**1.88**	**6.85**	**6.29**	**9.19**	**10.00**	**3.45**	**9.88**	**10.00**	**3.30**	**9.58**	**3.84**	**7.44**	**7.38**	**0.72**	**8.76**	**7.28**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	5/12/2023	5	30	
2	Site Preparation	Site Preparation	5/15/2023	6/2/2023	5	15	
3	Grading	Grading	6/5/2023	9/22/2023	5	80	

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

4	Building Construction	Building Construction	9/25/2023	5/30/2025	5	440	
5	Paving	Paving	6/2/2025	6/27/2025	5	20	
6	Architectural Coating	Architectural Coating	6/2/2025	10/17/2025	5	100	

Acres of Grading (Site Preparation Phase): 22.5

Acres of Grading (Grading Phase): 240

Acres of Paving: 0

Residential Indoor: 1,103,842; Residential Outdoor: 367,947; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 17,895 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
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	Off-Highway Trucks	1	6.00	402	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
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	Pumps	1	8.00	84	0.74

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

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
Demolition	6	15.00	0.00	1,419.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	11	28.00	0.00	16,500.00	10.80	7.30	9.00	LD_Mix	HDT_Mix	HHDT
Building Construction	11	432.00	96.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	86.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1555	0.0000	0.1555	0.0235	0.0000	0.0235	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0340	0.3223	0.2947	5.8000e-004		0.0150	0.0150		0.0139	0.0139	0.0000	50.9881	50.9881	0.0143	0.0000	51.3451
Total	**0.0340**	**0.3223**	**0.2947**	**5.8000e-004**	**0.1555**	**0.0150**	**0.1704**	**0.0235**	**0.0139**	**0.0375**	**0.0000**	**50.9881**	**50.9881**	**0.0143**	**0.0000**	**51.3451**

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	1.0000e-003	0.0471	0.0164	1.9000e-004	5.4900e-003	2.9000e-004	5.7800e-003	1.5100e-003	2.7000e-004	1.7800e-003	0.0000	19.0751	19.0751	1.2600e-003	3.0400e-003	20.0118
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.5000e-004	5.5800e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.3934	1.3934	5.0000e-005	4.0000e-005	1.4069
Total	**1.6400e-003**	**0.0476**	**0.0220**	**2.1000e-004**	**7.3000e-003**	**3.0000e-004**	**7.6000e-003**	**1.9900e-003**	**2.8000e-004**	**2.2700e-003**	**0.0000**	**20.4684**	**20.4684**	**1.3100e-003**	**3.0800e-003**	**21.4186**

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

3.2 Demolition - 2023

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					0.0700	0.0000	0.0700	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0647	0.3462	5.8000e-004		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	50.9880	50.9880	0.0143	0.0000	51.3450
Total	**0.0110**	**0.0647**	**0.3462**	**5.8000e-004**	**0.0700**	**2.7200e-003**	**0.0727**	**0.0106**	**2.7200e-003**	**0.0133**	**0.0000**	**50.9880**	**50.9880**	**0.0143**	**0.0000**	**51.3450**

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	1.0000e-003	0.0471	0.0164	1.9000e-004	5.4900e-003	2.9000e-004	5.7800e-003	1.5100e-003	2.7000e-004	1.7800e-003	0.0000	19.0751	19.0751	1.2600e-003	3.0400e-003	20.0118
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.5000e-004	5.5800e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.3934	1.3934	5.0000e-005	4.0000e-005	1.4069
Total	**1.6400e-003**	**0.0476**	**0.0220**	**2.1000e-004**	**7.3000e-003**	**3.0000e-004**	**7.6000e-003**	**1.9900e-003**	**2.8000e-004**	**2.2700e-003**	**0.0000**	**20.4684**	**20.4684**	**1.3100e-003**	**3.0800e-003**	**21.4186**

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

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1474	0.0000	0.1474	0.0758	0.0000	0.0758	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2064	0.1368	2.9000e-004		9.5000e-003	9.5000e-003		8.7400e-003	8.7400e-003	0.0000	25.0880	25.0880	8.1100e-003	0.0000	25.2909
Total	**0.0200**	**0.2064**	**0.1368**	**2.9000e-004**	**0.1474**	**9.5000e-003**	**0.1569**	**0.0758**	**8.7400e-003**	**0.0845**	**0.0000**	**25.0880**	**25.0880**	**8.1100e-003**	**0.0000**	**25.2909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.7000e-004	3.3500e-003	1.0000e-005	1.0900e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8360	0.8360	3.0000e-005	2.0000e-005	0.8441
Total	**3.9000e-004**	**2.7000e-004**	**3.3500e-003**	**1.0000e-005**	**1.0900e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8360**	**0.8360**	**3.0000e-005**	**2.0000e-005**	**0.8441**

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

3.3 Site Preparation - 2023

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					0.0663	0.0000	0.0663	0.0341	0.0000	0.0341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4900e-003	0.0151	0.1565	2.9000e-004		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	25.0880	25.0880	8.1100e-003	0.0000	25.2908
Total	**3.4900e-003**	**0.0151**	**0.1565**	**2.9000e-004**	**0.0663**	**4.7000e-004**	**0.0668**	**0.0341**	**4.7000e-004**	**0.0346**	**0.0000**	**25.0880**	**25.0880**	**8.1100e-003**	**0.0000**	**25.2908**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.7000e-004	3.3500e-003	1.0000e-005	1.0900e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8360	0.8360	3.0000e-005	2.0000e-005	0.8441
Total	**3.9000e-004**	**2.7000e-004**	**3.3500e-003**	**1.0000e-005**	**1.0900e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8360**	**0.8360**	**3.0000e-005**	**2.0000e-005**	**0.8441**

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3774	0.0000	0.3774	0.1476	0.0000	0.1476	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1696	1.7000	1.3415	3.3800e-003		0.0680	0.0680		0.0625	0.0625	0.0000	296.9222	296.9222	0.0960	0.0000	299.3229
Total	**0.1696**	**1.7000**	**1.3415**	**3.3800e-003**	**0.3774**	**0.0680**	**0.4454**	**0.1476**	**0.0625**	**0.2101**	**0.0000**	**296.9222**	**296.9222**	**0.0960**	**0.0000**	**299.3229**

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	0.0116	0.5482	0.1909	2.2100e-003	0.0639	3.3400e-003	0.0672	0.0175	3.1900e-003	0.0207	0.0000	221.8030	221.8030	0.0147	0.0353	232.6948
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2400e-003	0.0278	8.0000e-005	9.0300e-003	5.0000e-005	9.0800e-003	2.4000e-003	5.0000e-005	2.4400e-003	0.0000	6.9359	6.9359	2.2000e-004	2.1000e-004	7.0030
Total	**0.0148**	**0.5504**	**0.2187**	**2.2900e-003**	**0.0729**	**3.3900e-003**	**0.0763**	**0.0199**	**3.2400e-003**	**0.0232**	**0.0000**	**228.7390**	**228.7390**	**0.0149**	**0.0355**	**239.6977**

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

3.4 Grading - 2023

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					0.1698	0.0000	0.1698	0.0664	0.0000	0.0664	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0415	0.1798	1.7246	3.3800e-003		5.5300e-003	5.5300e-003		5.5300e-003	5.5300e-003	0.0000	296.9218	296.9218	0.0960	0.0000	299.3226
Total	**0.0415**	**0.1798**	**1.7246**	**3.3800e-003**	**0.1698**	**5.5300e-003**	**0.1754**	**0.0664**	**5.5300e-003**	**0.0719**	**0.0000**	**296.9218**	**296.9218**	**0.0960**	**0.0000**	**299.3226**

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	0.0116	0.5482	0.1909	2.2100e-003	0.0639	3.3400e-003	0.0672	0.0175	3.1900e-003	0.0207	0.0000	221.8030	221.8030	0.0147	0.0353	232.6948
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2400e-003	0.0278	8.0000e-005	9.0300e-003	5.0000e-005	9.0800e-003	2.4000e-003	5.0000e-005	2.4400e-003	0.0000	6.9359	6.9359	2.2000e-004	2.1000e-004	7.0030
Total	**0.0148**	**0.5504**	**0.2187**	**2.2900e-003**	**0.0729**	**3.3900e-003**	**0.0763**	**0.0199**	**3.2400e-003**	**0.0232**	**0.0000**	**228.7390**	**228.7390**	**0.0149**	**0.0355**	**239.6977**

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

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0741	0.6712	0.7701	1.5000e-003		0.0315	0.0315		0.0299	0.0299	0.0000	129.9793	129.9793	0.0296	0.0000	130.7195
Total	**0.0741**	**0.6712**	**0.7701**	**1.5000e-003**		**0.0315**	**0.0315**		**0.0299**	**0.0299**	**0.0000**	**129.9793**	**129.9793**	**0.0296**	**0.0000**	**130.7195**

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	3.2700e-003	0.1323	0.0459	6.2000e-004	0.0224	7.6000e-004	0.0232	6.4600e-003	7.3000e-004	7.1900e-003	0.0000	61.2907	61.2907	2.5200e-003	9.1800e-003	64.0881
Worker	0.0432	0.0303	0.3753	1.0200e-003	0.1219	6.7000e-004	0.1226	0.0324	6.2000e-004	0.0330	0.0000	93.6351	93.6351	3.0300e-003	2.7800e-003	94.5404
Total	**0.0465**	**0.1626**	**0.4212**	**1.6400e-003**	**0.1443**	**1.4300e-003**	**0.1457**	**0.0388**	**1.3500e-003**	**0.0402**	**0.0000**	**154.9257**	**154.9257**	**5.5500e-003**	**0.0120**	**158.6284**

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

3.5 Building Construction - 2023

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	0.0336	0.2056	0.8959	1.5000e-003		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003	0.0000	129.9792	129.9792	0.0296	0.0000	130.7193
Total	**0.0336**	**0.2056**	**0.8959**	**1.5000e-003**		**8.2900e-003**	**8.2900e-003**		**8.2900e-003**	**8.2900e-003**	**0.0000**	**129.9792**	**129.9792**	**0.0296**	**0.0000**	**130.7193**

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	3.2700e-003	0.1323	0.0459	6.2000e-004	0.0224	7.6000e-004	0.0232	6.4600e-003	7.3000e-004	7.1900e-003	0.0000	61.2907	61.2907	2.5200e-003	9.1800e-003	64.0881
Worker	0.0432	0.0303	0.3753	1.0200e-003	0.1219	6.7000e-004	0.1226	0.0324	6.2000e-004	0.0330	0.0000	93.6351	93.6351	3.0300e-003	2.7800e-003	94.5404
Total	**0.0465**	**0.1626**	**0.4212**	**1.6400e-003**	**0.1443**	**1.4300e-003**	**0.1457**	**0.0388**	**1.3500e-003**	**0.0402**	**0.0000**	**154.9257**	**154.9257**	**5.5500e-003**	**0.0120**	**158.6284**

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2604	2.3480	2.8722	5.6300e-003		0.1039	0.1039		0.0985	0.0985	0.0000	486.7851	486.7851	0.1103	0.0000	489.5435
Total	**0.2604**	**2.3480**	**2.8722**	**5.6300e-003**		**0.1039**	**0.1039**		**0.0985**	**0.0985**	**0.0000**	**486.7851**	**486.7851**	**0.1103**	**0.0000**	**489.5435**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.4928	0.1708	2.2900e-003	0.0838	2.8500e-003	0.0867	0.0242	2.7200e-003	0.0269	0.0000	225.9427	225.9427	9.6600e-003	0.0338	236.2618
Worker	0.1510	0.1017	1.3089	3.7000e-003	0.4563	2.4000e-003	0.4587	0.1212	2.2100e-003	0.1234	0.0000	339.7175	339.7175	0.0104	9.7200e-003	342.8717
Total	**0.1630**	**0.5945**	**1.4797**	**5.9900e-003**	**0.5401**	**5.2500e-003**	**0.5454**	**0.1454**	**4.9300e-003**	**0.1503**	**0.0000**	**565.6601**	**565.6601**	**0.0200**	**0.0435**	**579.1335**

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

3.5 Building Construction - 2024

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	0.1208	0.7418	3.3508	5.6300e-003		0.0277	0.0277		0.0277	0.0277	0.0000	486.7845	486.7845	0.1103	0.0000	489.5429
Total	**0.1208**	**0.7418**	**3.3508**	**5.6300e-003**		**0.0277**	**0.0277**		**0.0277**	**0.0277**	**0.0000**	**486.7845**	**486.7845**	**0.1103**	**0.0000**	**489.5429**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.4928	0.1708	2.2900e-003	0.0838	2.8500e-003	0.0867	0.0242	2.7200e-003	0.0269	0.0000	225.9427	225.9427	9.6600e-003	0.0338	236.2618
Worker	0.1510	0.1017	1.3089	3.7000e-003	0.4563	2.4000e-003	0.4587	0.1212	2.2100e-003	0.1234	0.0000	339.7175	339.7175	0.0104	9.7200e-003	342.8717
Total	**0.1630**	**0.5945**	**1.4797**	**5.9900e-003**	**0.5401**	**5.2500e-003**	**0.5454**	**0.1454**	**4.9300e-003**	**0.1503**	**0.0000**	**565.6601**	**565.6601**	**0.0200**	**0.0435**	**579.1335**

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

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1006	0.9051	1.1792	2.3200e-003		0.0372	0.0372		0.0353	0.0353	0.0000	200.6919	200.6919	0.0452	0.0000	201.8221
Total	**0.1006**	**0.9051**	**1.1792**	**2.3200e-003**		**0.0372**	**0.0372**		**0.0353**	**0.0353**	**0.0000**	**200.6919**	**200.6919**	**0.0452**	**0.0000**	**201.8221**

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	4.8000e-003	0.2008	0.0701	9.3000e-004	0.0346	1.1700e-003	0.0357	9.9700e-003	1.1200e-003	0.0111	0.0000	91.4369	91.4369	4.0900e-003	0.0137	95.6159
Worker	0.0583	0.0378	0.5039	1.4700e-003	0.1881	9.4000e-004	0.1890	0.0500	8.7000e-004	0.0508	0.0000	135.2286	135.2286	3.8800e-003	3.7500e-003	136.4431
Total	**0.0631**	**0.2386**	**0.5740**	**2.4000e-003**	**0.2227**	**2.1100e-003**	**0.2248**	**0.0599**	**1.9900e-003**	**0.0619**	**0.0000**	**226.6655**	**226.6655**	**7.9700e-003**	**0.0174**	**232.0589**

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

3.5 Building Construction - 2025

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	0.0479	0.2957	1.3804	2.3200e-003		0.0103	0.0103		0.0103	0.0103	0.0000	200.6917	200.6917	0.0452	0.0000	201.8219
Total	**0.0479**	**0.2957**	**1.3804**	**2.3200e-003**		**0.0103**	**0.0103**		**0.0103**	**0.0103**	**0.0000**	**200.6917**	**200.6917**	**0.0452**	**0.0000**	**201.8219**

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	4.8000e-003	0.2008	0.0701	9.3000e-004	0.0346	1.1700e-003	0.0357	9.9700e-003	1.1200e-003	0.0111	0.0000	91.4369	91.4369	4.0900e-003	0.0137	95.6159
Worker	0.0583	0.0378	0.5039	1.4700e-003	0.1881	9.4000e-004	0.1890	0.0500	8.7000e-004	0.0508	0.0000	135.2286	135.2286	3.8800e-003	3.7500e-003	136.4431
Total	**0.0631**	**0.2386**	**0.5740**	**2.4000e-003**	**0.2227**	**2.1100e-003**	**0.2248**	**0.0599**	**1.9900e-003**	**0.0619**	**0.0000**	**226.6655**	**226.6655**	**7.9700e-003**	**0.0174**	**232.0589**

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

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2400e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.8695	0.8695	2.0000e-005	2.0000e-005	0.8773
Total	**3.7000e-004**	**2.4000e-004**	**3.2400e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.8695**	**0.8695**	**2.0000e-005**	**2.0000e-005**	**0.8773**

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

3.6 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7400e-003	0.0331	0.1619	2.3000e-004		1.4900e-003	1.4900e-003		1.3900e-003	1.3900e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7400e-003**	**0.0331**	**0.1619**	**2.3000e-004**		**1.4900e-003**	**1.4900e-003**		**1.3900e-003**	**1.3900e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.4000e-004	3.2400e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.8695	0.8695	2.0000e-005	2.0000e-005	0.8773
Total	**3.7000e-004**	**2.4000e-004**	**3.2400e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.8695**	**0.8695**	**2.0000e-005**	**2.0000e-005**	**0.8773**

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

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7584					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5400e-003	0.0573	0.0905	1.5000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	12.7663	12.7663	7.0000e-004	0.0000	12.7837
Total	**0.7670**	**0.0573**	**0.0905**	**1.5000e-004**		**2.5800e-003**	**2.5800e-003**		**2.5800e-003**	**2.5800e-003**	**0.0000**	**12.7663**	**12.7663**	**7.0000e-004**	**0.0000**	**12.7837**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0108	6.9700e-003	0.0929	2.7000e-004	0.0347	1.7000e-004	0.0349	9.2100e-003	1.6000e-004	9.3700e-003	0.0000	24.9264	24.9264	7.2000e-004	6.9000e-004	25.1503
Total	**0.0108**	**6.9700e-003**	**0.0929**	**2.7000e-004**	**0.0347**	**1.7000e-004**	**0.0349**	**9.2100e-003**	**1.6000e-004**	**9.3700e-003**	**0.0000**	**24.9264**	**24.9264**	**7.2000e-004**	**6.9000e-004**	**25.1503**

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

3.7 Architectural Coating - 2025

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	0.7584					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5400e-003	0.0573	0.0905	1.5000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	12.7663	12.7663	7.0000e-004	0.0000	12.7837
Total	**0.7670**	**0.0573**	**0.0905**	**1.5000e-004**		**2.5800e-003**	**2.5800e-003**		**2.5800e-003**	**2.5800e-003**	**0.0000**	**12.7663**	**12.7663**	**7.0000e-004**	**0.0000**	**12.7837**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0108	6.9700e-003	0.0929	2.7000e-004	0.0347	1.7000e-004	0.0349	9.2100e-003	1.6000e-004	9.3700e-003	0.0000	24.9264	24.9264	7.2000e-004	6.9000e-004	25.1503
Total	**0.0108**	**6.9700e-003**	**0.0929**	**2.7000e-004**	**0.0347**	**1.7000e-004**	**0.0349**	**9.2100e-003**	**1.6000e-004**	**9.3700e-003**	**0.0000**	**24.9264**	**24.9264**	**7.2000e-004**	**6.9000e-004**	**25.1503**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Integrate Below Market Rate Housing

Encourage Telecommuting and Alternative Work Schedules

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4780	1.6300	12.9362	0.0255	2.8552	0.0205	2.8757	0.7622	0.0192	0.7814	0.0000	2,355.0426	2,355.0426	0.1733	0.1176	2,394.4113
Unmitigated	1.5522	1.7697	14.0207	0.0282	3.1725	0.0226	3.1950	0.8469	0.0210	0.8680	0.0000	2,608.5248	2,608.5248	0.1852	0.1272	2,651.0612

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,505.82	1,713.59	1427.41	6,185,375	5,566,837
Condo/Townhouse	509.78	577.94	445.88	1,410,241	1,269,217
Enclosed Parking Structure	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	565.95	630.60	306.45	828,714	745,842
Total	3,581.55	2,922.13	2,179.74	8,424,329	7,581,896

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

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
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Condo/Townhouse	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Enclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Condo/Townhouse	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking Structure	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Enclosed Parking with Elevator	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Parking Lot	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629
Strip Mall	0.553410	0.058491	0.170447	0.127855	0.026791	0.007507	0.012149	0.006212	0.000674	0.000390	0.028812	0.000632	0.006629

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

325 and 391 Hampshire MU - Ventura County, Annual

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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	598.7768	598.7768	0.0505	6.1300e-003	601.8658
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	598.7768	598.7768	0.0505	6.1300e-003	601.8658
NaturalGas Mitigated	0.0275	0.2348	0.1005	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	271.7794	271.7794	5.2100e-003	4.9800e-003	273.3945
NaturalGas Unmitigated	0.0275	0.2348	0.1005	1.5000e-003		0.0190	0.0190		0.0190	0.0190	0.0000	271.7794	271.7794	5.2100e-003	4.9800e-003	273.3945

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

5.2 Energy by Land Use - NaturalGas

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					
Apartments Mid Rise	3.89122e+006	0.0210	0.1793	0.0763	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.6502	207.6502	3.9800e-003	3.8100e-003	208.8841
Condo/Townhouse	1.17189e+006	6.3200e-003	0.0540	0.0230	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5363	62.5363	1.2000e-003	1.1500e-003	62.9079
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	29850	1.6000e-004	1.4600e-003	1.2300e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5929	1.5929	3.0000e-005	3.0000e-005	1.6024
Total		**0.0275**	**0.2348**	**0.1005**	**1.4900e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**	**0.0000**	**271.7794**	**271.7794**	**5.2100e-003**	**4.9900e-003**	**273.3945**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.89122e+006	0.0210	0.1793	0.0763	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.6502	207.6502	3.9800e-003	3.8100e-003	208.8841
Condo/Townhouse	1.17189e+006	6.3200e-003	0.0540	0.0230	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5363	62.5363	1.2000e-003	1.1500e-003	62.9079
Enclosed Parking Structure	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
Enclosed Parking with Elevator	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	29850	1.6000e-004	1.4600e-003	1.2300e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5929	1.5929	3.0000e-005	3.0000e-005	1.6024
Total		**0.0275**	**0.2348**	**0.1005**	**1.4900e-003**		**0.0190**	**0.0190**		**0.0190**	**0.0190**	**0.0000**	**271.7794**	**271.7794**	**5.2100e-003**	**4.9900e-003**	**273.3945**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.33801e+006	237.2895	0.0200	2.4300e-003	238.5137
Condo/Townhouse	343095	60.8463	5.1400e-003	6.2000e-004	61.1602
Enclosed Parking Structure	183293	32.5062	2.7400e-003	3.3000e-004	32.6739
Enclosed Parking with Elevator	1.33896e+006	237.4592	0.0200	2.4300e-003	238.6842
Parking Lot	6020	1.0676	9.0000e-005	1.0000e-005	1.0731
Strip Mall	166950	29.6078	2.5000e-003	3.0000e-004	29.7606
Total		**598.7768**	**0.0505**	**6.1200e-003**	**601.8658**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.33801e+006	237.2895	0.0200	2.4300e-003	238.5137
Condo/Townhouse	343095	60.8463	5.1400e-003	6.2000e-004	61.1602
Enclosed Parking Structure	183293	32.5062	2.7400e-003	3.3000e-004	32.6739
Enclosed Parking with Elevator	1.33896e+006	237.4592	0.0200	2.4300e-003	238.6842
Parking Lot	6020	1.0676	9.0000e-005	1.0000e-005	1.0731
Strip Mall	166950	29.6078	2.5000e-003	3.0000e-004	29.7606
Total		**598.7768**	**0.0505**	**6.1200e-003**	**601.8658**

6.0 Area Detail

6.1 Mitigation Measures Area

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					
Mitigated	2.3769	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316
Unmitigated	2.3769	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2068					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0942	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316
Total	**2.3769**	**0.0360**	**3.1231**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.1087**	**5.1087**	**4.9200e-003**	**0.0000**	**5.2316**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2068					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0942	0.0360	3.1231	1.7000e-004		0.0173	0.0173		0.0173	0.0173	0.0000	5.1087	5.1087	4.9200e-003	0.0000	5.2316
Total	**2.3769**	**0.0360**	**3.1231**	**1.7000e-004**		**0.0173**	**0.0173**		**0.0173**	**0.0173**	**0.0000**	**5.1087**	**5.1087**	**4.9200e-003**	**0.0000**	**5.2316**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

325 and 391 Hampshire MU - Ventura County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	95.9981	0.0352	0.0184	102.3684
Unmitigated	111.1644	0.0432	0.0229	119.0818

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	22.7388 / 14.3353	88.7987	0.0345	0.0183	95.1211
Condo/Townhouse	4.62594 / 2.91635	18.0651	7.0200e-003	3.7300e-003	19.3513
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.11109 / 0.680989	4.3006	1.6800e-003	8.9000e-004	4.6093
Total		**111.1644**	**0.0432**	**0.0229**	**119.0818**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.191 / 14.3353	76.6879	0.0281	0.0147	81.7750
Condo/Townhouse	3.70075 / 2.91635	15.6013	5.7100e-003	2.9900e-003	16.6362
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.88887 / 0.680989	3.7088	1.3700e-003	7.2000e-004	3.9572
Total		**95.9981**	**0.0352**	**0.0184**	**102.3684**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	42.4150	2.5067	0.0000	105.0813
Unmitigated	42.4150	2.5067	0.0000	105.0813

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	160.54	32.5882	1.9259	0.0000	80.7358
Condo/Townhouse	32.66	6.6297	0.3918	0.0000	16.4248
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**42.4150**	**2.5067**	**0.0000**	**105.0813**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	160.54	32.5882	1.9259	0.0000	80.7358
Condo/Townhouse	32.66	6.6297	0.3918	0.0000	16.4248
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	15.75	3.1971	0.1889	0.0000	7.9207
Total		**42.4150**	**2.5067**	**0.0000**	**105.0813**

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

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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

Fuel Consumption Worksheets

TO Ranch Project

Construction Fuel Use Worksheet
On Road

Worker Trips

Construction Phase	worker trips	Worker Miles/trip	Days	Worker Miles
Demo	15	10.8	30	4,860
Site Prep	18	10.8	15	
Grade	28	10.8	80	24,192
Construction	432	10.8	440	2,052,864
Paving	15	10.8	20	3,240
Painting	86	10.8	100	92,880
Total Worker Miles				**2,178,036**
	EMFAC 2022	Gasoline	Avg. miles/gal	24.11
Worker Fuel Use			Total gallons	**90,337**

Vendor Trips

Construction Phase	Vendor Trips	Vendor Miles/trip	Days	Vendor Miles
Demo	0	7.3	30	
Site Prep	0	7.3	15	
Grade	0	7.3	80	
Construction	96	7.3	440	308,352
Paving	0	7.3	20	
Painting	0	7.3	100	
Total Vendor Miles				**308,352**
	EMFAC 2022	Diesel	Avg. miles/gal	10.29
Vendor Fuel Use			Total gallons	**29,966**

Hauling Trips

Construction Phase	Haul Trips	Haul Miles/trip		Haul Miles
Demo	1,419	9		12,771
Grade	16,500	9		148,500
Total Hauling Miles				**161,271**
	EMFAC 2022	Diesel HHDT Only (T7 tractor)	Avg. miles/gal	6.11
Hauling Fuel Use			Total gallons	**26,395**

On Road Diesel Use	56,361
Off Road Diesel Use	109,182
Construction Diesel Use Total	**165,543**
Construction Gasoline Use	90,337

TO Ranch Project

Construction Fuel Use Worksheet
Off Road

Construction Phase	Equipment	Qty	Hrs/day	HP	Load Factor	#Days	HP hr
Demo	Concrete Saw	1	8	81	0.73	30	14,191
	Dozer	2	8	247	0.4	30	47,424
	Excavators	3	8	158	0.38	30	43,229
Site Prep	Dozer	3	8	247	0.4	15	35,568
	Loader/Backhoe	4	8	97	0.37	15	17,227
Grading	Excavators	2	8	158	0.38	80	76,851
	Grader	1	8	187	0.41	80	49,069
	Dozer	1	8	247	0.4	80	63,232
	Off-Highway Truck	1	6	402	0.38	80	73,325
	Loaders	2	8	203	0.36	80	93,542
	Scrapers	2	8	367	0.48	80	225,485
	Loader/Backhoe	2	8	97	0.37	80	45,939
Construction	Cranes	1	7	231	0.29	440	206,329
	Bore/Drill Rig	1	8	221	0.5	440	388,960
	Pump	1	8	84	0.74	440	218,803
	Forklifts	3	8	89	0.2	440	187,968
	Gen Set	0	8	84	0.74	440	-
	Loader/Backhoe	3	7	97	0.37	440	331,624
	Welder	0	8	46	0.45	440	-
Paving	Pavers	2	8	130	0.42	20	17,472
	Paving Equipment	2	8	132	0.36	20	15,206
	Roller	2	8	80	0.38	20	9,728
Painting	Air Compressor	1	6	78	0.48	100	22,464
						Total HP	**2,183,637**

HP = horsepower

gallons of diesel fuel per HP----hour= 0.05 **Gallons** **109,182**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Ventura
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/year, 1000 gallons/year for Fuel Consumption

Region	Year	Vehicle Categ	Model Year	Speed	Fuel	Total VMT	Fuel Consumption
Ventura	2022	All Other Bus	Aggregate	Aggregate	Diesel	1711079.23	179.0500795
Ventura	2022	LDA	Aggregate	Aggregate	Diesel	13740296.8	327.5548491
Ventura	2022	LDT1	Aggregate	Aggregate	Diesel	107142.928	4.457659742
Ventura	2022	LDT2	Aggregate	Aggregate	Diesel	7342049.58	238.4828249
Ventura	2022	LHD1	Aggregate	Aggregate	Diesel	101859476	4951.869629
Ventura	2022	LHD2	Aggregate	Aggregate	Diesel	40750526.3	2386.246049
Ventura	2022	MDV	Aggregate	Aggregate	Diesel	19885565.1	858.1618442
Ventura	2022	MH	Aggregate	Aggregate	Diesel	3800583.31	369.2576165
Ventura	2022	Motor Coach	Aggregate	Aggregate	Diesel	432202.248	77.34895056
Ventura	2022	PTO	Aggregate	Aggregate	Diesel	3314536.25	694.7168172
Ventura	2022	SBUS	Aggregate	Aggregate	Diesel	2860022.87	377.8395849
Ventura	2022	T6 CAIRP Clas	Aggregate	Aggregate	Diesel	19191.9703	2.094627558
Ventura	2022	T6 CAIRP Clas	Aggregate	Aggregate	Diesel	26327.932	2.864995102
Ventura	2022	T6 CAIRP Clas	Aggregate	Aggregate	Diesel	68795.6397	7.406290161
Ventura	2022	T6 CAIRP Clas	Aggregate	Aggregate	Diesel	431521.025	43.59802439
Ventura	2022	T6 Instate Del	Aggregate	Aggregate	Diesel	3218056.11	360.4303007
Ventura	2022	T6 Instate Del	Aggregate	Aggregate	Diesel	3218952.28	363.421106
Ventura	2022	T6 Instate Del	Aggregate	Aggregate	Diesel	9520962.04	1065.361465
Ventura	2022	T6 Instate Del	Aggregate	Aggregate	Diesel	2424549.86	262.2191987
Ventura	2022	T6 Instate Otl	Aggregate	Aggregate	Diesel	8587004.37	954.2975382
Ventura	2022	T6 Instate Otl	Aggregate	Aggregate	Diesel	18912100.9	2112.189649
Ventura	2022	T6 Instate Otl	Aggregate	Aggregate	Diesel	15094708.4	1685.458754
Ventura	2022	T6 Instate Otl	Aggregate	Aggregate	Diesel	8323564.61	899.1069774
Ventura	2022	T6 Instate Tra	Aggregate	Aggregate	Diesel	97440.8634	10.83960623
Ventura	2022	T6 Instate Tra	Aggregate	Aggregate	Diesel	2960606.06	304.3367835
Ventura	2022	T6 OOS Class	Aggregate	Aggregate	Diesel	9171.50087	1.000898489
Ventura	2022	T6 OOS Class	Aggregate	Aggregate	Diesel	12581.6499	1.369152613
Ventura	2022	T6 OOS Class	Aggregate	Aggregate	Diesel	32876.2113	3.53965761
Ventura	2022	T6 OOS Class	Aggregate	Aggregate	Diesel	239050.937	24.11339779
Ventura	2022	T6 Public Clas	Aggregate	Aggregate	Diesel	450374.385	52.92317014
Ventura	2022	T6 Public Clas	Aggregate	Aggregate	Diesel	858714.472	100.2984782
Ventura	2022	T6 Public Clas	Aggregate	Aggregate	Diesel	864643.225	100.9639781
Ventura	2022	T6 Public Clas	Aggregate	Aggregate	Diesel	2326044.65	271.4287508
Ventura	2022	T6 Utility Clas	Aggregate	Aggregate	Diesel	554493.484	59.6862671
Ventura	2022	T6 Utility Clas	Aggregate	Aggregate	Diesel	104788.044	11.29751677
Ventura	2022	T6 Utility Clas	Aggregate	Aggregate	Diesel	145794.978	15.623583

Ventura	2022	T7 CAIRP Clas	Aggregate	Aggregate	Diesel	21719126.5	3552.61169
Ventura	2022	T7 NNOOS Cl	Aggregate	Aggregate	Diesel	25747363.8	4206.998743
Ventura	2022	T7 NOOS Clas	Aggregate	Aggregate	Diesel	9353559.93	1539.597024
Ventura	2022	T7 Other Port	Aggregate	Aggregate	Diesel	4812659.29	784.1258746
Ventura	2022	T7 POLA Class	Aggregate	Aggregate	Diesel	413913.099	69.00691537
Ventura	2022	T7 Public Clas	Aggregate	Aggregate	Diesel	4979925.86	859.8213847
Ventura	2022	T7 Single Con	Aggregate	Aggregate	Diesel	1554133.51	257.2388463
Ventura	2022	T7 Single Dun	Aggregate	Aggregate	Diesel	4500152.85	743.4273095
Ventura	2022	T7 Single Oth	Aggregate	Aggregate	Diesel	10151576.9	1677.796068
Ventura	2022	T7 SWCV Clas	Aggregate	Aggregate	Diesel	2318010.29	853.4776946
Ventura	2022	T7 Tractor Cla	Aggregate	Aggregate	Diesel	16709426.3	2712.274707
Ventura	2022	T7 Utility Clas	Aggregate	Aggregate	Diesel	437834.913	70.87318603
Ventura	2022	UBUS	Aggregate	Aggregate	Diesel	2133022.19	340.3231753
						379136502	36848.42869

All Diesel		10.2890819
T7 CAIRP	For Hauli	6.11356614

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Ventura
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/year, 1000 gallons/year for Fuel Consumption

Region	Year	Vehicle	Model Year	Speed	Fuel	Total VMT	Fuel Consumption
Ventura	2022	LDA	Aggregate	Aggregate	Gasoline	3304638502	113826.4052
Ventura	2022	LDT1	Aggregate	Aggregate	Gasoline	305644359	12669.64392
Ventura	2022	LDT2	Aggregate	Aggregate	Gasoline	1515505553	65459.14984
Ventura	2022	LHD1	Aggregate	Aggregate	Gasoline	119740878	9344.887878
Ventura	2022	LHD2	Aggregate	Aggregate	Gasoline	19492197.5	1699.909305
Ventura	2022	MCY	Aggregate	Aggregate	Gasoline	30769502.3	756.4560349
Ventura	2022	MDV	Aggregate	Aggregate	Gasoline	1021048138	54155.09801
Ventura	2022	MH	Aggregate	Aggregate	Gasoline	10268264	2075.994805
Ventura	2022	OBUS	Aggregate	Aggregate	Gasoline	3395958.62	669.8256332
Ventura	2022	SBUS	Aggregate	Aggregate	Gasoline	1623100.29	183.7338491
Ventura	2022	T6TS	Aggregate	Aggregate	Gasoline	10824097.9	2103.883051
Ventura	2022	T7IS	Aggregate	Aggregate	Gasoline	24426.3122	6.706477221
Ventura	2022	UBUS	Aggregate	Aggregate	Gasoline	1042676.12	209.5125121
						6344017653	263161.2066
					AVG MPG	24.1069637	

Light-duty (up to 8,500 lb GVWR)	% VMT
LDA	0.55341
LDT1	0.058491
LDT2	0.170447
MDV	0.127855
% of VMT	91%

Heavy-duty (> 8,500 lb GVWR)	% VMT
LHD1	0.026791
LHD2	0.007507
MHD	0.012149
HHD	0.006212
OBUS	0.000674
UBUS	0.00039
MCY	0.028812
SBUS	0.000632
MHD	0.006629
	9%

Vehicle Class	% VMT	Annual VMT	EMFAC 2022 Gal/year		Fuel
All		7,581,896			
light duty	91%	6,901,064	24.11	286,232	gasoline
heavy-duty	9%	680,824	10.29	66,164	diesel

March 31, 2022

IMT Capital, LLC
15303 Ventura Boulevard
Sherman Oaks, California 91403
Attn: David Tedesco

Re: T.O. Ranch - Hampshire Road: Construction Health Risk Assessment

Mr. Tedesco:

Per your request, Air Quality Dynamics has prepared a health risk assessment (HRA) to quantify the impact of diesel particulate matter (DPM), which is identified as a toxic air contaminant pursuant to California Code of Regulations Section 93001, associated with the generation of off-road equipment emissions during construction of the proposed project. This was done to supplement the Air Quality Assessment prepared by Envicom Corporation which evaluated criteria pollutant exposures associated with project construction and operation.

The HRA quantifies both carcinogenic risks and noncarcinogenic hazards for the maximum exposed sensitive receptors adjoining the project site. To ensure a viable quantification of exposure, the technical approach used in the preparation of the HRA was composed of all relevant and appropriate assessment and dispersion modeling methodologies presented by the U.S. Environmental Protection Agency, California Environmental Protection Agency and Ventura County Air Pollution Control District (VCAPCD).

Results of the HRA showed predicted carcinogenic risk and noncarcinogenic hazard estimates for the maximum exposed sensitive receptors below significance thresholds. The following discussion outlines the methodology utilized to conduct the HRA and summarizes the protocol used to evaluate DPM exposures.

Source Identification

The project proposes to construct a mixed-use development consisting of 420 dwelling units, and up to 15,000 square feet of restaurant and retail uses. The 420 dwelling units would be distributed across 2 podium mixed-use buildings and 13 townhome buildings. A blend of surface, first floor and subterranean parking is proposed to accommodate both residential and commercial uses. A community accessible park, landscaped open space, paseo garden paths and a dog park are additionally proposed.

The project includes the demolition of an existing one-story commercial structure consisting of 103,670 square feet, an attached one-story commercial building consisting of 12,512 square feet, a 2,600 square foot fast food restaurant, surface parking lot and existing landscape features.

The mixed-use development is located at 325 Hampshire Road situated on a 11.77 acre parcel adjoining sensitive land uses such as single/multi-family residential occupancies, an early childhood center and a short/long-term patient rehabilitation facility.

It is anticipated that the project will begin and complete construction the second quarter of 2023 and fourth quarter of 2025, respectively. Figure 1 presents an aerial photograph of the project location and adjoining community. Figure 2 provides a graphical representation of the proposed project site plan.

Figure 1
Site Location /Vicinity Aerial Photograph

Figure 2
Site Plan / Building Configuration

Source Characterization

For on-site construction, emission estimates were based upon the Ventura County profile generated by the CalEEMod land use emission software prepared by Envicom Corporation. CalEEMod is an emissions model which provides a uniform platform quantifying pollutant emissions associated with project construction and operation. The model is considered a comprehensive tool for quantifying air quality impacts from projects located throughout the State prepared under the auspices of the California Environmental Quality Act (CEQA).

For this assessment, the off-road PM_{10} exhaust estimates reported by CalEEMod were used as a surrogate for DPM emissions which assumed diesel-powered construction equipment will meet EPA-certified Tier 4 Final emission standards. The emission rates for both winter and summer scenarios were found to be commensurate.

To assess localized impacts, construction phase, calendar year and number of days associated with each activity were identified to produce an average daily emission rate. Construction operations are reported to occur for 665 days over a 929 day period (2.55 years) based upon a 5 day per week operational schedule which accounts for a portion of concurrent phase activities during architectural coating and paving operations.

Table 1 provides a summary of estimated average daily particulate emissions associated with each identified construction phase and year. Attachment B presents the emission calculation

worksheet used to quantify pollutant source strength. Excerpts from the CalEEMod output file which identify construction phase timelines and associated emission rates are provided in Attachment C.

Table 1
Average Daily Emissions/PM_{10}

Construction Phase/Year	Emissions (Lbs/Day)
Demolition/2023	0.1816
Site Preparation/2023	0.0621
Grading/2023	0.1383
Building Construction/2023	0.2369
Building Construction/2024	0.2117
Building Construction/2025	0.1897
Architectural Coating/Paving/2025	0.2006
Architectural Coating/2025	0.0515
Average Daily Emissions	**0.1776**

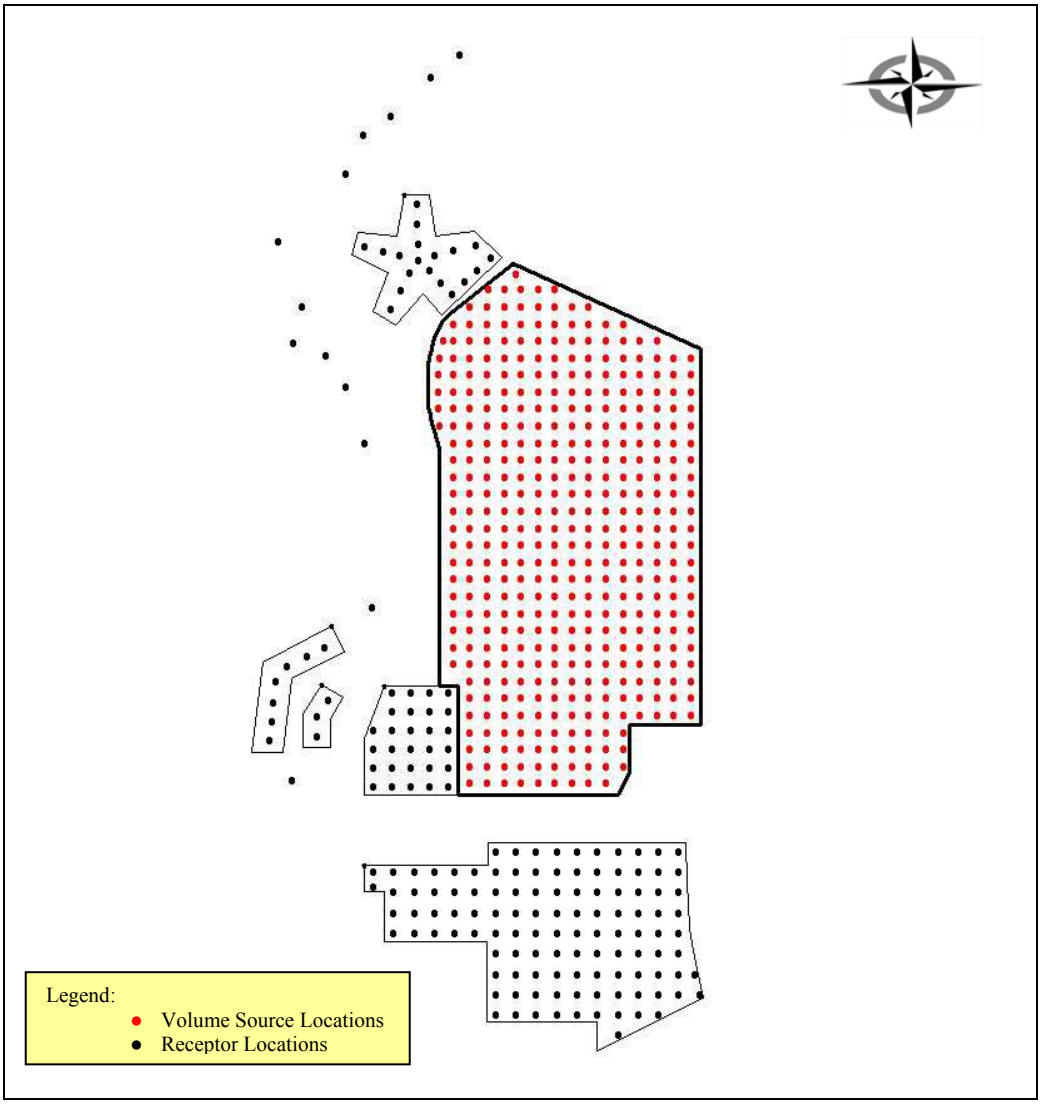
Exposure Quantification

In order to assess the impact of DPM emissions, air quality modeling utilizing the AMS/EPA Regulatory Model AERMOD was performed. AERMOD is a steady-state Gaussian plume model applicable to directly emitted air pollutants that employs best state-of-practice parameterizations for characterizing meteorological influences and atmospheric dispersion. AERMOD is the U.S. Environmental Protection Agency's guideline model for the assessment of near-field pollutant dispersion.

Source treatment outlined in the South Coast Air Quality Management District's Localized Significance Threshold (LST) methodology was utilized whereby exhaust emissions from construction equipment were treated as a set of side-by-side elevated volume sources with a release height of five and an initial vertical (sigma z) dimension of 1.4 meters. The elevated source characterization accounts for a mid-range plume rise height associated with exhaust stack emissions for typical off-road equipment inventories. Horizontal (sigma y) parameters were produced by dividing source separation distances by a standard deviation of 2.15.

To accommodate a Cartesian grid format, direction dependent calculations were obtained by identifying the universal transverse mercator (UTM) coordinates for each volume source location. UTM coordinates were also identified for sensitive receptors located immediately north, south and west of the project site. Flagpole heights were not assigned. Terrain height adjustments were incorporated into the modeling exercise to account for the discrepancy in source-receptor elevations. A graphical representation of the source-receptor grid network is presented in Figure 3.

Figure 3
Source-Receptor Grid Network



Refined air dispersion models require meteorological information to account for local atmospheric conditions. Due to their sensitivity to individual meteorological parameters such as wind speed and direction, the U.S. Environmental Protection Agency recommends that meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. In response to this recommendation, meteorological data from the VCAPCD Thousand Oaks monitoring station which is located 3.6 miles northwest of the project site was used to represent local weather conditions and prevailing winds. For the assessment of DPM exposures, maximum concentrations were produced by incorporating all three years (i.e., 2015 through 2017) of available data.

For residential occupancies and the patient rehabilitation facility, a model scalar value of 1 was assigned to account for emissions generated during construction related activity corresponding to

8 hours per day as reported in the CalEEMod construction profile from 8 a.m. to 4 p.m. (ending hours 9 to 16). For the adjoining early childhood center, the scalar was adjusted and assigned a value of 4.2 to account for an eight-hour transient exposure consistent with a non-continuous construction operational profile (i.e., 8 hrs/5 days per week). A scalar value of 0 was used for non-operational hours. A copy of the AERMOD dispersion model output summary files are provided in Attachment D.

Risk Characterization

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of one in one hundred thousand (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). This threshold is also consistent with the maximum incremental cancer risk established by the VCAPCD for projects prepared under the auspices of CEQA.

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper-bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a 70 year lifetime. The URF and corresponding cancer potency factor for DPM utilized in the assessment was obtained from the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*.

To effectively quantify dose, the Office of Environmental Health Hazard Assessment (OEHHA) recommends the incorporation of several discrete exposure variates. To account for upper-bound exposures, lifetime risk values were adjusted to account for an exposure frequency of 261 days per year for a period of 2.55 years. For residential occupancies, values associated with third trimester (0.25 years), ages 0 to 2 (2 years) and ages 2 to 9 (0.30 years) were utilized. For the early childhood center, exposures were based upon reported enrollment ages from 2 to 6 years of age. Adult exposures were assumed for the patient rehabilitation facility.

For residential occupancies, point estimates for daily breathing rates representing the 95th percentile of 361, 1090 and 861 L/kg-day for the identified age groups were utilized. The 95th percentile value of 290 L/kg-day was assigned for the patient rehabilitation facility. A breathing rate of 640 L/kg-day representing an eight-hour breathing rate associated with moderate intensity activities was utilized for the early childhood center. To quantify dose, the above values were incorporated into the following algorithm for each identified occupancy.

$$Dose_{air} = C_{air} \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

Where:

$Dose_{air}$	=	*dose through inhalation (mg/kg/day)*
C_{air}	=	*concentration of contaminant in air ($\mu g/m^3$)*
{BR/BW}	=	*daily breathing rate normalized to body weight (L/kg body weight/day)*
A	=	*inhalation absorption factor (unitless)*
EF	=	*exposure frequency (days/365 days)*
10^{-6}	=	*micrograms to milligrams conversion*

The inhalation dose values were subsequently incorporated into the following equation to produce carcinogenic risk estimates commensurate with the duration of construction activity:

$$Risk_{inh} = Dose_{air} \times CPF \times ASF \times ED/AT \times FAH$$

Where:

$Risk_{inh}$	=	*inhalation cancer risk*
$Dose_{air}$	=	*daily inhalation dose (mg/kg/day)*
CPF	=	*inhalation cancer potency factor ($mg/kg/day^{-1}$)*
ASF	=	*age sensitivity factor for the specified age group (unitless)*
ED	=	*exposure duration for specified age group (years)*
AT	=	*averaging time (years)*
FAH	=	*fraction of exposure time (unitless)*

Tables 2 through 4 present the carcinogenic risk estimates for the maximum exposed residential, patient rehabilitation facility and early childhood center receptors. Attachment A, Tables A1 through A5, column b identify the predicted DPM concentrations, columns f-h, present the URF, corresponding cancer potency factor and dose estimates for the exposure scenarios considered in the assessment. The cancer risk estimate is presented in column i.

Table 2
Carcinogenic Risk / Maximum Exposed Residential Receptor

Age Group	Risk
Third Trimester	1.2E-07
0 to 2 years	2.9E-06
2 to 9 years	8.9E-08
Total	**3.2E-06**

Note: 3.2E-06 denotes an excess case of cancer of 0.32 in one hundred thousand (100,000) individuals exposed.

Table 3
Carcinogenic Risk / Patient Rehabilitation Facility

Age Group	Risk
Adult	1.4E-07

Note: 1.4E-07 denotes an excess case of cancer of 0.014 in one hundred thousand (100,000) individuals exposed.

Table 4
Carcinogenic Risk / Early Childhood Center

Age Group	Risk
2 to 6 years	5.8E-06

Note: 5.8E-06 denotes an excess case of cancer of 0.58 in one hundred thousand (100,000) individuals exposed.

As noted above, the cancer risks for the identified sensitive receptors were predicted to be below the significance threshold of one in one hundred thousand (1.0E-05).

An evaluation of the potential noncancer effects of DPM exposure was also conducted. Under the point estimate approach, adverse health effects are evaluated by comparing the pollutant concentration with the appropriate Reference Exposure Level (REL). The chronic REL presented in the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* was considered in the assessment. There are no available acute/8-hour reference exposure levels for DPM.

To quantify noncarcinogenic impacts, the hazard index approach was used. The hazard index assumes that subthreshold exposures adversely affect a specific organ or organ system (i.e., toxicological endpoint). To calculate the hazard index, the pollutant concentration or dose is divided by its toxicity value. Should the total equal or exceed one (i.e., unity), a health hazard is presumed to exist. No exposure frequency or duration adjustments are considered for noncarcinogenic exposures.

Table 5 presents the hazard index values for the identified sensitive receptor locations. Attachment A, Tables A1 through A5, column j presents the REL used in the evaluation of chronic noncarcinogenic exposures. The noncancer hazard index generated from off-road equipment activity is presented in column k.

Table 5
Noncarcinogenic Hazards

Receptor	Hazard
Residential	3.0E-03
Patient Rehabilitation Facility	3.6E-03
Early Childhood Center	2.2E-02

Note: 3.0E-03, 3.6E-03 and 2.2E-02 are commensurate with numeric values of 0.0030. 0.0036 and 0.022, respectively.

As noted above, the hazard index for the respiratory endpoint totaled less than one for all sensitive receptor occupancies.

Conclusion

Based upon the predicted carcinogenic risk and noncarcinogenic hazard estimates for the receptor exposure scenarios, the HRA demonstrates that construction of the proposed project will not result in unacceptable localized impacts.

I can be reached at (818) 703-3294 should you have any questions or require additional information.

Sincerely,

Bill Piazza

Attachment A: Carcinogenic Risk/Noncarcinogenic Hazard Calculation Worksheets
Attachment B: Emission Calculation Worksheet
Attachment C: CalEEMod Output File
Attachment D: Dispersion Model Output Summary Files
Attachment E: List of References

ATTACHMENT A

Carcinogenic Risk/Noncarcinogenic Hazard Calculation Worksheets

Table A1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
Third Trimester Exposure Variates / Maximum Residential Receptor

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.01480	1.48E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.8E-06	1.2E-07	5.0E+00	3.0E-03							
TOTAL								1.2E-07		3.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	261
exposure duration (years)	0.25
inhalation rate (L/kg-day))	361
inhalation absorption factor	1
averaging time (years)	70
fraction of exposure time	0.85
age sensitivity factor	10
breathing rate third trimester	361
fraction of exposure time (third trimester to 2 years old)	0.85
age sensitivity factor (third trimester to 2 years old)	10

Table A2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0 to 2 Year Exposure Variates / Maximum Residential Receptor

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.01480	1.48E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.2E-05	2.9E-06	5.0E+00	3.0E-03							
TOTAL								2.9E-06		3.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	261
exposure duration (years)	2.0
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of exposure time	0.85
age sensitivity factor	10
breathing rate 0-2	1090
fraction of exposure time (third trimester to 2 years old)	0.85
age sensitivity factor third trimester to 2 years old)	10

Table A3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2 to 9 Year Exposure Variates / Maximum Residential Receptor

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.01480	1.48E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	9.1E-06	8.9E-08	5.0E+00	3.0E-03							
TOTAL								8.9E-08		3.0E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	261
exposure duration (years)	0.30
inhalation rate (L/kg-day))	861
inhalation absorption factor	1
averaging time (years)	70
fraction of exposure time	0.72
age sensitivity factor	3
breathing rate 2-9	861
fraction of exposure time (2 to 16 years old)	0.72
age sensitivity factor (2 to 16 years old)	3

Table A4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
Adult Exposure Variates / Patient Rehabilitation Facility

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.01823	1.82E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.8E-06	1.4E-07	5.0E+00	3.6E-03							
TOTAL								1.4E-07		3.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	261
exposure duration (years)	2.55
inhalation rate (L/kg-day))	290
inhalation absorption factor	1
averaging time (years)	70
fraction of exposure time	1
age sensitivity factor	1
breathing rate 16-70	290
age sensitivity factor (ages 16 to 70 years old)	1

Table A5
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2 to 9 Year Exposure Variates / Early Childhood Center

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards / Toxicological Endpoints*								
					URF	CPF	DOSE	RISK	REL	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
On-Site Exhaust	0.11006	1.10E-04	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	5.0E-05	5.8E-06	5.0E+00	2.2E-02							
TOTAL								5.8E-06		2.2E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

* Key to Toxicological Endpoint

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effect
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	261
exposure duration (years)	2.55
inhalation rate (L/kg-day))	640
inhalation absorption factor	1
averaging time (years)	70
fraction of exposure time	1
age sensitivity factor	3
breathing rate 2-9 (8-hour)	640
age sensitivity factor (2 to 9 years old)	3

ATTACHMENT B

Emission Calculation Worksheet

Emission Calculation Worksheet

Emissions	Phase	Year	Lb/Day	# Days	Emissions
On-Site	Demolition	2023	0.1816	30	5.4480
Exhaust PM 10	Site Preparation	2023	0.0621	15	0.9315
	Grading	2023	0.1383	80	11.0640
	Building Construction	2023	0.2369	70	16.5830
	Building Construction	2024	0.2117	262	55.4654
	Building Construction	2025	0.1897	108	20.4876
	Architectural Coating/Paving	2025	0.2006	20	4.0120
	Architectural Coating	2025	0.0515	80	4.1200
				665	118.1115
	Average Daily Construction (Lb/Day)				0.1776

Exhaust PM10			Combustion mass	Combustion g/s/source
	Combustion Sources	410	0.1776	6.8227E-06

ATTACHMENT C

CalEEMod Output File

325 and 391 Hampshire MU - Ventura County, Winter

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

325 and 391 Hampshire MU

Ventura County, Winter

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	5/12/2023	5	30	
2	Site Preparation	Site Preparation	5/15/2023	6/2/2023	5	15	
3	Grading	Grading	6/5/2023	9/22/2023	5	80	
4	Building Construction	Building Construction	9/25/2023	5/30/2025	5	440	
5	Paving	Paving	6/2/2025	6/27/2025	5	20	
6	Architectural Coating	Architectural Coating	6/2/2025	10/17/2025	5	100	

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
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	Off-Highway Trucks	1	6.00	402	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
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	Pumps	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

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2023

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					4.6636	0.0000	4.6636	0.7062	0.0000	0.7062			0.0000			0.0000
Off-Road	0.7334	4.3163	23.0786	0.0388		0.1816	0.1816		0.1816	0.1816	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**0.7334**	**4.3163**	**23.0786**	**0.0388**	**4.6636**	**0.1816**	**4.8452**	**0.7062**	**0.1816**	**0.8878**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.3 Site Preparation - 2023

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	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

3.4 Grading - 2023

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					4.2460	0.0000	4.2460	1.6600	0.0000	1.6600			0.0000			0.0000
Off-Road	1.0375	4.4957	43.1158	0.0845		0.1383	0.1383		0.1383	0.1383	0.0000	8,182.5164	8,182.5164	2.6464		8,248.6762
Total	**1.0375**	**4.4957**	**43.1158**	**0.0845**	**4.2460**	**0.1383**	**4.3843**	**1.6600**	**0.1383**	**1.7983**	**0.0000**	**8,182.5164**	**8,182.5164**	**2.6464**		**8,248.6762**

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9613	5.8736	25.5983	0.0430		0.2369	0.2369		0.2369	0.2369	0.0000	4,093.6477	4,093.6477	0.9324		4,116.9580
Total	**0.9613**	**5.8736**	**25.5983**	**0.0430**		**0.2369**	**0.2369**		**0.2369**	**0.2369**	**0.0000**	**4,093.6477**	**4,093.6477**	**0.9324**		**4,116.9580**

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9218	5.6627	25.5785	0.0430		0.2117	0.2117		0.2117	0.2117	0.0000	4,096.0968	4,096.0968	0.9285		4,119.3081
Total	**0.9218**	**5.6627**	**25.5785**	**0.0430**		**0.2117**	**0.2117**		**0.2117**	**0.2117**	**0.0000**	**4,096.0968**	**4,096.0968**	**0.9285**		**4,119.3081**

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8871	5.4749	25.5621	0.0430		0.1897	0.1897		0.1897	0.1897	0.0000	4,096.7591	4,096.7591	0.9228		4,119.8296
Total	**0.8871**	**5.4749**	**25.5621**	**0.0430**		**0.1897**	**0.1897**		**0.1897**	**0.1897**	**0.0000**	**4,096.7591**	**4,096.7591**	**0.9228**		**4,119.8296**

3.6 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4735	3.3090	16.1866	0.0228		0.1491	0.1491		0.1391	0.1391	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4735**	**3.3090**	**16.1866**	**0.0228**		**0.1491**	**0.1491**		**0.1391**	**0.1391**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.7 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.1682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**15.3390**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

ATTACHMENT D

Dispersion Model Output Summary Files

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for   410 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   127873.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates ANNUAL Averages Only

**This Run Includes: 410 Source(s);   1 Source Group(s); and   156 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 410 VOLUME source(s)
                and: 0 AREA type source(s)
                and: 0 LINE source(s)
                and: 0 RLINE/RLINEXT source(s)
                and: 0 OPENPIT source(s)
                and: 0 BUOYANT LINE source(s) with a total of   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 18081

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   247.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/SEC   ; Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\hampshire road\construction\model\RESIDENTIAL_2015-2017_DPM.DTA

**Output Print File: F:\WD Passport\hampshire road\construction\model\RESIDENTIAL_2015-2017_DPM.LST

**File for Summary of Results: F:\WD Passport\hampshire road\construction\model\RESIDENTIAL_2015-2017_DPM.SUM

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: F:\WD Passport\hampshire road\metdata\Thousand Oaks_2015-2017.SFC Met Version: 18081
Profile file: F:\WD Passport\hampshire road\metdata\Thousand Oaks_2015-2017.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 93110 Upper air station no.: 93214
Name: UNKNOWN Name: VANDENBERG AFB, CA
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-2.8	0.059	-9.000	-9.000	-999.	34.	6.3	0.33	1.11	1.00	1.00	112.	10.0	275.4	10.0
15	01	01	1	02	-5.2	0.079	-9.000	-9.000	-999.	53.	8.3	0.29	1.11	1.00	1.40	129.	10.0	274.6	10.0
15	01	01	1	03	-3.9	0.068	-9.000	-9.000	-999.	42.	7.1	0.29	1.11	1.00	1.20	126.	10.0	274.2	10.0
15	01	01	1	04	-6.0	0.084	-9.000	-9.000	-999.	59.	8.8	0.29	1.11	1.00	1.50	126.	10.0	273.6	10.0
15	01	01	1	05	-6.0	0.084	-9.000	-9.000	-999.	59.	8.8	0.29	1.11	1.00	1.50	127.	10.0	273.8	10.0
15	01	01	1	06	-8.7	0.101	-9.000	-9.000	-999.	77.	10.6	0.29	1.11	1.00	1.80	127.	10.0	274.0	10.0
15	01	01	1	07	-14.2	0.130	-9.000	-9.000	-999.	112.	13.5	0.29	1.11	1.00	2.30	146.	10.0	273.5	10.0
15	01	01	1	08	-8.9	0.107	-9.000	-9.000	-999.	84.	12.2	0.29	1.11	0.56	1.90	127.	10.0	275.0	10.0
15	01	01	1	09	21.5	0.201	0.313	0.005	50.	216.	-33.3	0.29	1.11	0.31	1.50	141.	10.0	278.9	10.0
15	01	01	1	10	73.9	0.245	0.561	0.005	85.	291.	-17.6	0.34	1.11	0.23	1.60	163.	10.0	281.6	10.0
15	01	01	1	11	111.3	0.090	1.400	0.010	873.	89.	-1.0	0.35	1.11	0.20	0.28	66.	10.0	284.5	10.0
15	01	01	1	12	130.4	0.081	1.493	0.009	903.	56.	-1.0	0.21	1.11	0.19	0.28	273.	10.0	286.2	10.0
15	01	01	1	13	130.0	0.204	1.508	0.008	932.	220.	-5.7	0.21	1.11	0.19	1.30	297.	10.0	286.2	10.0
15	01	01	1	14	111.0	0.147	1.443	0.007	957.	136.	-2.5	0.21	1.11	0.20	0.80	281.	10.0	286.9	10.0
15	01	01	1	15	73.6	0.324	1.266	0.006	973.	443.	-40.8	0.21	1.11	0.23	2.70	281.	10.0	286.5	10.0
15	01	01	1	16	21.1	0.359	0.838	0.006	982.	516.	-193.4	0.21	1.11	0.32	3.30	280.	10.0	285.8	10.0
15	01	01	1	17	-23.3	0.245	-9.000	-9.000	-999.	298.	55.7	0.21	1.11	0.57	2.90	282.	10.0	284.4	10.0
15	01	01	1	18	-2.1	0.048	-9.000	-9.000	-999.	111.	4.6	0.15	1.11	1.00	1.00	309.	10.0	282.5	10.0
15	01	01	1	19	-2.8	0.059	-9.000	-9.000	-999.	36.	6.3	0.33	1.11	1.00	1.00	100.	10.0	280.9	10.0
15	01	01	1	20	-2.7	0.056	-9.000	-9.000	-999.	32.	5.9	0.29	1.11	1.00	1.00	123.	10.0	279.2	10.0
15	01	01	1	21	-6.0	0.084	-9.000	-9.000	-999.	59.	8.9	0.29	1.11	1.00	1.50	134.	10.0	278.4	10.0
15	01	01	1	22	-2.2	0.051	-9.000	-9.000	-999.	27.	5.3	0.29	1.11	1.00	0.90	127.	10.0	277.6	10.0
15	01	01	1	23	-3.2	0.062	-9.000	-9.000	-999.	37.	6.5	0.29	1.11	1.00	1.10	128.	10.0	276.5	10.0
15	01	01	1	24	-3.2	0.062	-9.000	-9.000	-999.	37.	6.5	0.29	1.11	1.00	1.10	127.	10.0	275.8	10.0

```
 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  112.    1.00   275.5   19.8  -99.00    0.33

 F indicates top of profile (=1) or below (=0)
```


*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 3 YEARS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01823	AT (330416.10, 3781971.70, 285.50, 421.80, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.01797	AT (330408.10, 3781964.50, 286.40, 421.80, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.01784	AT (330423.40, 3781978.40, 284.70, 421.80, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.01646	AT (330431.30, 3781986.00, 283.90, 421.80, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.01480	AT (330518.00, 3781637.00, 279.70, 421.80, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.01477	AT (330506.00, 3781637.00, 280.20, 421.80, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.01457	AT (330530.00, 3781637.00, 279.20, 421.80, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.01457	AT (330494.00, 3781637.00, 280.90, 421.80, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.01413	AT (330542.00, 3781637.00, 278.70, 421.80, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.01410	AT (330482.00, 3781637.00, 281.50, 421.80, 0.00)	DC	

```
 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```



```
 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of          214 Informational Message(s)

 A Total of        26304 Hours Were Processed

 A Total of            0 Calm Hours Identified

 A Total of          214 Missing Hours Identified (  0.81 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    1419       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 MX W403    1419       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
```

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for   410 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   127873.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: DPM

**Model Calculates ANNUAL Averages Only

**This Run Includes: 410 Source(s);   1 Source Group(s); and   28 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 410 VOLUME source(s)
                and: 0 AREA type source(s)
                and: 0 LINE source(s)
                and: 0 RLINE/RLINEXT source(s)
                and: 0 OPENPIT source(s)
                and: 0 BUOYANT LINE source(s) with a total of   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 18081

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   247.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/SEC   ; Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =   3.8 MB of RAM.

**Input Runstream File: F:\WD Passport\hampshire road\construction\model\ECC_2015-2017_DPM.DTA

**Output Print File: F:\WD Passport\hampshire road\construction\model\ECC_2015-2017_DPM.LST

**File for Summary of Results: F:\WD Passport\hampshire road\construction\model\ECC_2015-2017_DPM.SUM

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: F:\WD Passport\hampshire road\metdata\Thousand Oaks_2015-2017.SFC   Met Version: 18081
Profile file: F:\WD Passport\hampshire road\metdata\Thousand Oaks_2015-2017.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   93110   Upper air station no.:   93214
Name: UNKNOWN   Name: VANDENBERG AFB, CA
Year: 2015   Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-2.8	0.059	-9.000	-9.000	-999.	34.	6.3	0.33	1.11	1.00	1.00	112.	10.0	275.4	10.0
15	01	01	1	02	-5.2	0.079	-9.000	-9.000	-999.	53.	8.3	0.29	1.11	1.00	1.40	129.	10.0	274.6	10.0
15	01	01	1	03	-3.9	0.068	-9.000	-9.000	-999.	42.	7.1	0.29	1.11	1.00	1.20	126.	10.0	274.2	10.0
15	01	01	1	04	-6.0	0.084	-9.000	-9.000	-999.	59.	8.8	0.29	1.11	1.00	1.50	126.	10.0	273.6	10.0
15	01	01	1	05	-6.0	0.084	-9.000	-9.000	-999.	59.	8.8	0.29	1.11	1.00	1.50	127.	10.0	273.8	10.0
15	01	01	1	06	-8.7	0.101	-9.000	-9.000	-999.	77.	10.6	0.29	1.11	1.00	1.80	127.	10.0	274.0	10.0
15	01	01	1	07	-14.2	0.130	-9.000	-9.000	-999.	112.	13.5	0.29	1.11	1.00	2.30	146.	10.0	273.5	10.0
15	01	01	1	08	-8.9	0.107	-9.000	-9.000	-999.	84.	12.2	0.29	1.11	0.56	1.90	127.	10.0	275.0	10.0
15	01	01	1	09	21.5	0.201	0.313	0.005	50.	216.	-33.3	0.29	1.11	0.31	1.50	141.	10.0	278.9	10.0
15	01	01	1	10	73.9	0.245	0.561	0.005	85.	291.	-17.6	0.34	1.11	0.23	1.60	163.	10.0	281.6	10.0
15	01	01	1	11	111.3	0.090	1.400	0.010	873.	89.	-1.0	0.35	1.11	0.20	0.28	66.	10.0	284.5	10.0
15	01	01	1	12	130.4	0.081	1.493	0.009	903.	56.	-1.0	0.21	1.11	0.19	0.28	273.	10.0	286.2	10.0
15	01	01	1	13	130.0	0.204	1.508	0.008	932.	220.	-5.7	0.21	1.11	0.19	1.30	297.	10.0	286.2	10.0
15	01	01	1	14	111.0	0.147	1.443	0.007	957.	136.	-2.5	0.21	1.11	0.20	0.80	281.	10.0	286.9	10.0
15	01	01	1	15	73.6	0.324	1.266	0.006	973.	443.	-40.8	0.21	1.11	0.23	2.70	281.	10.0	286.5	10.0
15	01	01	1	16	21.1	0.359	0.838	0.006	982.	516.	-193.4	0.21	1.11	0.32	3.30	280.	10.0	285.8	10.0
15	01	01	1	17	-23.3	0.245	-9.000	-9.000	-999.	298.	55.7	0.21	1.11	0.57	2.90	282.	10.0	284.4	10.0
15	01	01	1	18	-2.1	0.048	-9.000	-9.000	-999.	111.	4.6	0.15	1.11	1.00	1.00	309.	10.0	282.5	10.0
15	01	01	1	19	-2.8	0.059	-9.000	-9.000	-999.	36.	6.3	0.33	1.11	1.00	1.00	100.	10.0	280.9	10.0
15	01	01	1	20	-2.7	0.056	-9.000	-9.000	-999.	32.	5.9	0.29	1.11	1.00	1.00	123.	10.0	279.2	10.0
15	01	01	1	21	-6.0	0.084	-9.000	-9.000	-999.	59.	8.9	0.29	1.11	1.00	1.50	134.	10.0	278.4	10.0
15	01	01	1	22	-2.2	0.051	-9.000	-9.000	-999.	27.	5.3	0.29	1.11	1.00	0.90	127.	10.0	277.6	10.0
15	01	01	1	23	-3.2	0.062	-9.000	-9.000	-999.	37.	6.5	0.29	1.11	1.00	1.10	128.	10.0	276.5	10.0
15	01	01	1	24	-3.2	0.062	-9.000	-9.000	-999.	37.	6.5	0.29	1.11	1.00	1.10	127.	10.0	275.8	10.0

First hour of profile data
YR MO DY HR HEIGHT F WDIR   WSPD AMB_TMP sigmaA sigmaW sigmaV
15 01 01 01   10.0 1 112.   1.00   275.5   19.8 -99.00   0.33

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   3 YEARS ***

** CONC OF DPM   IN MICROGRAMS/M**3   **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.11006 AT	(330406.00, 3781730.00, 285.00, 421.80, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.10043 AT	(330406.00, 3781719.00, 285.50, 421.80, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.09306 AT	(330406.00, 3781708.00, 285.70, 421.80, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08541 AT	(330406.00, 3781697.00, 285.80, 421.80, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.07640 AT	(330395.00, 3781730.00, 286.80, 421.80, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.07606 AT	(330406.00, 3781686.00, 285.90, 421.80, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.07083 AT	(330395.00, 3781719.00, 286.80, 421.80, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.06579 AT	(330395.00, 3781708.00, 286.80, 421.80, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.06496 AT	(330406.00, 3781675.00, 285.80, 421.80, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.06080 AT	(330395.00, 3781697.00, 286.70, 421.80, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT URBAN SigA Data

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   214 Informational Message(s)

A Total of   26304 Hours Were Processed

A Total of   0 Calm Hours Identified

A Total of   214 Missing Hours Identified (0.81 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********   WARNING MESSAGES   ********
ME W186   1291   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
MX W403   1291   PFLCNV: Turbulence data is being used w/o ADJ_U* option   SigA Data

ATTACHMENT E

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5. California Code of Regulations, Title 22, Section 12703.

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20. United States Environmental Protection Agency, 2017. Guideline on Air Quality Models (Final Rule). 40 CFR Part 51.

21. South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology.*

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