Hallmark-Barham Specific Plan EIR

Technical Appendices

Appendix D

Air Quality

AIR QUALITY ASSESSMENT

East Barham Residential Development Project
City of San Marcos, CA

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1.0 INTRODUCTION

1.1 Project Description

The project proposes 151 multi-family residential units situated on approximately 10.56 gross acres. Residential buildings comprise approximately 2.8-acres of the project site. Multi-family residential dwelling units are comprised of one, two, and three-story condominiums with ten dwelling unit types interspersed throughout the Specific Plan area. Overall building heights will not exceed 40 feet. The project proposes a total of 349 parking spaces. This includes 283 garage spaces associated with the units, which will be pre-wired for electric vehicle (EV) charging stations. The project design includes 66 outdoor parking spaces of which 10 would be for the residences. The project would also include three electric vehicle charging stations within the visitor parking areas.

The project is proposing a General Plan Amendment (GP20-0002), Specific Plan (SP20-0002), Rezone (RZ20-0001), Multi-Family Site Development Plan (MFSD20-0001), Tentative Subdivision Map (TM20-0001), a Conditional Use Permit (CUP20-0007) and a Grading Variance (GV20-0002). Also, during grading a small rock crusher would be onsite for ancillary crushing needs if necessary. The project development plan is shown on Figure 1-A.

Grading of the Project site will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of fill material. During grading a standalone rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- would be onsite for ancillary crushing needs if necessary. The project also may require some blasting-related activities.

1.2 Project Location

The vacant 10.56 acre project site having an Assessor Parcel Number (APN) of 228-310-0100 is located at 943 E. Barham Drive in the Barham/Discovery Community in the City of San Marcos. Specifically, the project site is located on the southern side of Barham Drive between Woodland Parkway and La Moree Road. A project vicinity map is shown in Figure 1-B.

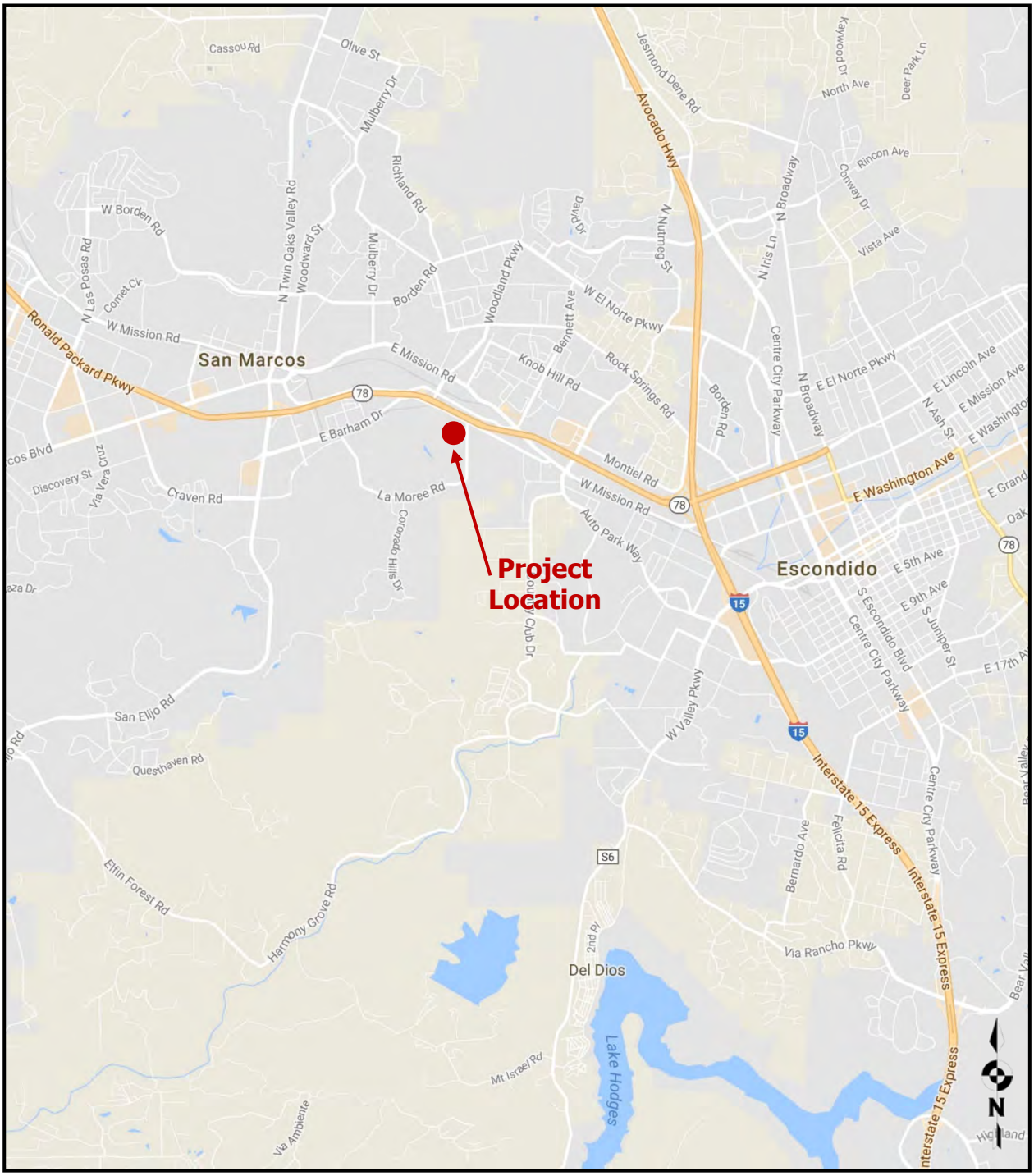
1.3 Purpose of this Study

The purpose of this Air Quality study is to determine potential significant air quality impacts (if any) that may be generated by construction, area or operational emissions from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant under the California Environmental Quality Act (CEQA).

Figure 1-A: Proposed Project Site Development Plan

Source: (SB&O, INC., 2021)

Figure 1-B: Project Vicinity Map



Source: (Google, 2021)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The vacant undeveloped Project site is located south of Barham Drive between the crossroads of Woodland Parkway and La Moree Road. The project site is relatively flat with elevations of approximately 675 to 750 feet above mean sea level. The existing site aerial map is shown in Figure 2-A.

The General Plan Land Use designation for the site is Mixed Use 3 (MU3), which is a mixed-use non-residential designation with a maximum floor area ratio (FAR) of 1.50. A constructable concept plan for the existing site was prepared calling for the construction of three 3-story buildings consisting of 275,067 square feet (SF) of office use, 18,344 of retail use, and 879 parking spaces. This scenario is referred to as the MU3 General Plan Buildout scenario. Parking under this scenario would be developed within a parking garage within each building. The total area including the parking would have a total gross floor area of 459,558 SF and would have a conservative FAR of 1.03.

Figure 2-A: Existing Site Layout

Source: (Google Earth Pro, 2021)

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure systems drop to the south and brings cooler, moister weather from the north.

Meteorological trends within the area generally show daytime highs ranging between 64ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37ºF in the winter to approximately 59ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits to protect public health which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare and include protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The Environmental Protection Agency's (EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air*

quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.

2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the*

one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality at State level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS in that the State standards also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the Air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal 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	No Separate State Standard		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)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 13				
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			

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 µg/m3 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 procedure 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 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 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 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 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 SO2 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 SO2 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.
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 µg/m3 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.

Source: (California Air Resources Board, 05/04/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the county. Therefore, the SDAPCD developed a RAQS to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2019)

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

A: Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

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 (PM10, PM2.5 or exceed quantitative thresholds for O3 precursors, oxides of nitrogen [NOX] and Volatile Organic Compounds [VOCs])?

C: Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?

D: Result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have AQI threshold for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million. At no time shall the project increase the cancer risk to over 10 in one million or

a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CalEEMod directly calculates ROG in place of VOC.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Carmel Mountain Ranch and Camp Pendleton monitoring stations which are located 11 and 15.5 miles from the Project site respectively. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2021).

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2019	2020	Days Exceeded over 2 years
O_3 (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.06	0.07	3
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	PM10 Data Not Available for Monitoring Sites near Project Site		
		Annual Arithmetic Mean	20 µg/m3	No Standard			
* $PM_{2.5}$ (µg/m^3)		24 Hour	No standard -	35 µg/m3	18.9	40.2	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.2	9.3	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.014	0.013	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.086	0.056	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	4.1	3.3	N/A
		8 Hour	9 ppm	9 ppm	2.5	1.7	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.
3. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2021. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The AERSCREEN dispersion model was used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The AERSCREEN input/output file for the proposed Project is shown in ***Attachment B*** at the end of this report. The worst case exhaust emissions generated from the Project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015).

Equation 1 $$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1x10^{-6})$$

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m^3) Annual average DPM concentration in µg/m^3 - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
$1x10^{-6}$	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the

excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the Project models which is provided as ***Attachment C*** to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

Equation 2

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

Office of Environmental Health Hazard Assessment OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to diesel particulate matter (DPM) and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, February 2015). Diesel Exhaust has a REL of 5 $\mu g/m^3$ and targets the respiratory system.

3.2 Construction Assumptions

The project would start grading late 2022 with residential construction to start shortly thereafter. Grading will consist of approximately 39,711 cubic yards (CY) of cut material and 86,052 CY of fill material requiring an import of approximately 46,341 CY of fill material. Earthwork associated with grading within CalEEMod uses a “Grading Equipment Passes” methodology which has been approved by SCAQMD in consultation with building estimator references and is used as the basis of emission generation (CAPCOA, 2021).

Per the Project Engineer, during grading operations, a standalone rock crusher similar to a Terex 4242SR 310 horsepower (HP)+/- would be onsite for ancillary crushing needs if necessary. An example of the crusher modeled within CalEEMod is shown in ***Attachment D*** to this report.

The site is currently vacant. The project would start grading late 2022 with construction of the residential buildings to start shortly thereafter. Earthwork activities for the project include an import of 46,341 CY of soil and would include a rock crusher and blasting during the grading operations. Construction of all residential buildings would be expected sometime in 2024. As a design feature, the project's construction contractor will utilize Tier IV rated diesel construction equipment to minimize diesel particulates from construction equipment. Table 3.1 below describes the construction equipment and durations.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Completion	Quantity	Work Days
Site Preparation	12/1/2022	12/14/2022		10
Graders			3	
Rubber Tired Dozers			4	
Haul Trucks	12/1/2022	12/14/2022	8	
Rock Drilling	12/15/2022	12/21/2022		5
Bore/Drill Rigs			1	
Grading	12/15/2022	1/25/2023		30
Crushing/Proc. Equipment			1	
Excavators			2	
Graders			1	
Rubber Tired Dozers			1	
Scrapers			2	
Tractors/Loaders/Backhoes			2	
Haul Trucks	12/15/2022	1/25/2023	8	
Building Construction	01/26/2023	03/20/2024		300
Cranes			1	
Forklifts			3	
Generator Sets			1	
Tractors/Loaders/Backhoes			3	
Welders			1	
Paving	03/21/2024	04/17/2024		20
Pavers			2	
Paving Equipment			2	
Rollers			2	
Architectural Coating	2/15/2024	4/17/2024		45
Air Compressors			1	

This equipment list is based upon equipment inventory within CALEEMOD 2020.4.0.

It should also be noted that the project design indicates that some blasting may be required during grading. During blasting operations, grading operations would temporarily stop and resume once blasting is completed. Per conversations with the project Civil Engineer, it is expected that each blast, limited to once a day, would be limited to six tons Ammonium Nitrate for any given blast operation. The area of each blast would be limited to 20,000 SF or (100-foot x 200-foot) area. Blasting operations usually require a chemical material that is capable of extremely rapid combustion resulting in an explosion or detonation. These materials are usually mixtures of several ingredients but are often oxygen deficient as combustion reactions take place which causes a formation of carbon monoxide and to a lesser extent, nitrogen oxides. For ammonium nitrate and fuel oil (ANFO) mixtures it is expected that carbon monoxide would be generated in quantities of 67 lbs per every ton of explosives and nitrogen oxides would be generated at 17 lbs per the same quantity (EPA, 1995). Particulate matter will also be generated from blasting and can be estimated using Table 11.9-1 of the aforementioned document (EPA, 1995) using the following equation:

$$PM_{10}(lb/Blast) = 0.000014 * (BlastArea(ft^2)) * 0.52$$

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as onsite natural gas and electrical use. The Operational model results are also shown in ***Attachment A*** at the end of this report.

The traffic inputs for CalEEMod were adjusted to be consistent with the proposed project traffic study. Based on that study, the proposed project would generate 1,208 daily trips (LLG Engineers, 2021). The CALEEMOD 2020.4.0 Model was run for both the winter and summer scenarios and assumed average winter and summer temperatures. Based on the Project Traffic Study, the MU3 General Plan Buildout scenario generate 5,410 trips (LLG Engineers, 2021) or more than four times more intense than the proposed project.

The model also estimates emission predictions for ROG, NOx, CO, SO_2, PM_{10} and $PM_{2.5}$ for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. Finally, since the proposed project would not be installing hearth options, CalEEMod default hearth settings were modified to represent no hearth options. CalEEMod includes landscaping and consumer product assumptions which would apply to this project. Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and

personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development.

As noted in the project description, the project will wire each garage for EV charging stations and will install three EV charging stations within the guest parking area of the project. These charging stations would reduce mobile emissions though were not analyzed within this air quality assessment.

3.4 Odor Impacts

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Also, since the project is a residential development, no operational odor sources are expected.

4.0 FINDINGS

4.1 Construction Findings

The project would start grading late 2022 and all building construction would be completed by 2024. The project would include a rock crusher and blasting during grading and will require import of 46,341 CY of soil. The following design features were assumed within the CalEEMod analysis:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite.*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Table 4.1 shows the expected construction emissions. Based on the cumulative totals, Air Quality impacts would not be expected.

During blasting operations, grading operations would stop and it is expected that each blast operation would require between 10,000 - 12,000 lbs of Ammonium Nitrate.

The proposed project would utilize approximately 6 tons of ammonium nitrate per a blast which would generate up to 402 lbs (67 lbs/ton * 6 tons) of carbon monoxide and up to 102 lbs (17 lbs/ton * 6 tons) of nitrogen oxides during a blast utilizing 6 tons of ammonium nitrate. These quantities would be additive to the mass grading operations for the entire project site and could be added to the worst-case mass grading daily CO and NO_x output. Additional particulates derived from each blast is estimated over a 20,000 SF area roughly 100-foot by 200-foot in dimension as identified in Section 3.2 above. Given this, it is estimated that each blast would generate 20.59 lb/blast as is shown in the equation below:

$$PM_{10}(lb/Blast) = 0.000014 * (20{,}000 ft^2)^{1.5} * 0.52 = 20.59(lb/blast)$$

Table 4.1: Expected Construction Emissions Summary

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2022	1.79	28.17	50.38	0.18	22.50	0.37	22.79	10.86	0.36	11.14
2023	1.41	23.39	48.14	0.17	12.09	0.30	12.39	4.42	0.29	4.71
2024	42.91	3.44	22.83	0.04	1.32	0.06	1.37	0.35	0.06	0.41
Blasting Emissions calculations shown in text above		102	402		20.59		20.59			
Construction Total w/ Blasting (Maximum)	46.11	157	523.35	0.39	56.5	0.73	57.14	15.63	0.71	16.26
Screening Level Threshold (lb/day)	**75**	**250**	**550**	**250**	**-**	**-**	**100**	**-**	**-**	**55**
SDAPCD Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.0089 tons over the construction duration (503-calendar days) or an average of 4.36×10^{-9} grams/second.

Utilizing the AERSCREEN dispersion model, the peak maximum 1-hr concentration is 0.16 µg/m^3 during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration by multiplying it by 0.08 (US EPA, 1992) yields an annual concentration of 0.0128 µg/m^3. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 3.10 per million exposed at the point of maximum exposure 125 meters away (410 feet) as predicted by AERSCREEN and shown in the model outputs provided within ***Attachment B***. As a condition of project approval, the Project would be required to utilize Tier 4 diesel equipment. Since the threshold is 10 per million exposed with T-BACT installed, the project would have a less than significant impact and would be in compliance with the City's thresholds.

It should be noted that sensitive residential receptors are adjacent to the project site. Since the maximum risk is 3.10 per million exposed (and the threshold is 10 per million), all sensitive receptors would have cancer risks at or less than 3.10 per million exposed which would also represent a less than significant impact.

There are known acute and chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the hourly concentration of 0.16 µg/m^3 divided by the REL of 5 µg/m^3 yields a Health Hazard Index of 0.03, which is less than one. Therefore, based on thresholds for non-cancer risks in Section 3.1 above, non-cancer health risks are considered less than significant.

4.3 Odor Impact Findings

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Also, the proposed project would not be expected to generate odors during operation since the project is residential in nature. Odor impacts would be less than significant.

4.4 Operational Findings

The proposed project would generate 1,208 daily trips once the proposed project is fully operational in the year 2025 (LLG Engineers, 2021). This assumption has been incorporated into the CalEEMod file. The Project traffic trip distances are based on an average trip distance within the County which can be calculated using the total daily VMT within the county (86,284,768) miles divided by the total trips in the County (16,007,853) or roughly 5.4 miles and is also shown in ***Attachment E*** to this report.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CALEEMOD 2020.4.0 and can be seen in Table 4.2 on the following page. Based upon these calculations, the proposed project would not generate operational air quality impacts.

Table 4.2: Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area Source Emission Estimates Mitigated (Lb/Day)	4.13	0.14	12.45	0.00	0.07	0.07
Energy Emission Estimates Mitigated (Lb/Day)	0.06	0.51	0.22	0.00	0.04	0.04
Mobile Emission Estimates Mitigated (Lb/Day)	2.71	2.29	20.38	0.04	4.47	1.21
Total (Lb/Day)	**6.90**	**2.95**	**33.05**	**0.05**	**4.58**	**1.32**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario						
Area Source Emission Estimates (Lb/Day)	4.13	0.14	12.45	0.00	0.07	0.07
Energy Emission Estimates (Lb/Day)	0.06	0.51	0.22	0.00	0.04	0.04
Mobile Emission Estimates (Lb/Day)	2.61	2.49	21.41	0.04	4.47	1.21
Total (Lb/Day)	**6.80**	**3.15**	**34.08**	**0.04**	**4.58**	**1.32**
Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

4.5 Cumulative Impacts

The project is proposing a General Plan Amendment (GP20-0002), Specific Plan (SP20-0002), Rezone (RZ20-0001), Multi-Family Site Development Plan (MFSD20-0001), Tentative Subdivision Map (TM20-0001), a Conditional Use Permit (CUP20-0007) and a Grading Variance (GV20-0002). The proposed project seeks to construct a 151 unit multi-family residential facility. The existing MU-3 designation on the site would allow for a mix of office and commercial use and could support up to 275,067 SF of office use, 18,344 SF of retail use, and 879 parking spaces which is approximately five times the traffic than the proposed Project. Since the largest component of Air Quality emissions are typically derived from vehicular trips, the site would be considered less intense. Given this, the site development plan would be less intense in terms of Air Quality than would otherwise be allowed within the approved Specific Plan to the General Plan. Given this, the project would not conflict with the County's Regional Air Quality Strategy (RAQS) or the State's air quality State Implementation Plan (SIP). Finally, since no direct construction air quality impacts are expected, no cumulative impacts are expected.

4.6 Conclusion of Findings

During construction of the proposed Project, fugitive dust emissions will be expected during grading and equipment usage however, these emissions would not exceed City thresholds and would not be considered an impact. The project has been designed and planned by incorporating design elements and best management practices which are a condition of approval to the project as shown below:

- *Construction Design Feature 1: all heavy diesel construction equipment will be classified as Tier IV.*
- *Construction Design Feature 2: In accordance with Rule 67 of the California Air Resource Board, only Low VOC paints shall be utilized onsite (100 g/l or less).*
- *Best Management Practice 1: Comply with SDAPCD's fugitive dust rules and fugitive dust control measures which will be provided by the City of San Marcos.*

Additionally, emissions will be generated from both area and operational sources by the proposed Project which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting to name a few. Impacts are not expected during operations. This analysis assumes the project would not install hearth options within the development.

The proposed project seeks to construct a 151 unit multi-family residential facility. The existing site would allow for up to 275,067 SF of office use, 18,344 SF of retail use and 879 parking spaces and would generate much more traffic than the proposed residential. Since the largest component of Air Quality emissions are typically derived from vehicular trips, the site would be considered less intense. Given this, the site development plan would be less intense than would otherwise be allowed within the approved Specific Plan to the General Plan. Given this, the project would not conflict with the County's Regional Air Quality Strategy (RAQS) or the State's air quality State Implementation Plan (SIP). Finally, since no direct construction air quality impacts are expected, no cumulative impacts are expected.

5.0 REFERENCES

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ATTACHMENT A

CalEEMod

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

Barham 151 Unit Multi-Family Operational Year 2025

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	66.00	Space	0.59	26,400.00	0
Condo/Townhouse	151.00	Dwelling Unit	9.96	151,000.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS for 2025 not applied for AQ analysis

Land Use - 10.55 acres

Construction Phase - CS

Off-road Equipment - Rock Crusher Added 310+/- HP

Off-road Equipment - CE

Trips and VMT -

Grading - 46341 CY of import

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per Traffic Study

Vehicle Emission Factors -

Vehicle Emission Factors -

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

Vehicle Emission Factors -

Woodstoves - No Hearth

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - T4

Area Mitigation - default

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblAreaMitigation	UseLowVOCPaintParkingValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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
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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	30.00	5.00
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	NumberGas	83.05	0.00
tblFireplaces	NumberNoFireplace	15.10	151.00
tblFireplaces	NumberWood	52.85	0.00
tblGrading	MaterialImported	0.00	34,755.00
tblGrading	MaterialImported	0.00	11,585.00
tblLandUse	LotAcreage	9.44	9.96
tblOffRoadEquipment	HorsePower	85.00	310.00
tblVehicleTrips	HO_TL	7.50	5.40

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

tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TL	7.30	5.40
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TL	10.80	5.40
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	8.14	8.00
tblVehicleTrips	SU_TR	6.28	8.00
tblVehicleTrips	WD_TR	7.32	8.00
tblWoodstoves	NumberCatalytic	7.55	0.00
tblWoodstoves	NumberNoncatalytic	7.55	0.00

2.0 Emissions Summary

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.5212	69.1835	40.7480	0.1798	22.5002	2.0946	24.3401	10.8605	1.9517	12.5616	0.0000	18,978.9206	18,978.9206	2.6399	1.5941	19,519.9685
2023	4.7531	58.7293	38.3455	0.1717	12.0879	1.7654	13.8533	4.4227	1.6444	6.0671	0.0000	18,181.2103	18,181.2103	2.5252	1.5269	18,699.3637
2024	44.2015	15.7341	21.5169	0.0440	1.3184	0.6855	2.0039	0.3528	0.6484	1.0012	0.0000	4,314.3203	4,314.3203	0.7369	0.0875	4,356.8956
Maximum	**44.2015**	**69.1835**	**40.7480**	**0.1798**	**22.5002**	**2.0946**	**24.3401**	**10.8605**	**1.9517**	**12.5616**	**0.0000**	**18,978.9206**	**18,978.9206**	**2.6399**	**1.5941**	**19,519.9685**

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					
2022	1.7861	28.1654	50.3798	0.1798	22.5002	0.3693	22.7896	10.8605	0.3594	11.1401	0.0000	18,978.9206	18,978.9206	2.6399	1.5941	19,519.9685
2023	1.4082	23.3898	48.1381	0.1717	12.0879	0.2974	12.3854	4.4227	0.2904	4.7131	0.0000	18,181.2103	18,181.2103	2.5252	1.5269	18,699.3637
2024	42.9067	3.4350	22.8326	0.0440	1.3184	0.0561	1.3745	0.3528	0.0554	0.4081	0.0000	4,314.3203	4,314.3203	0.7369	0.0875	4,356.8956
Maximum	**42.9067**	**28.1654**	**50.3798**	**0.1798**	**22.5002**	**0.3693**	**22.7896**	**10.8605**	**0.3594**	**11.1401**	**0.0000**	**18,978.9206**	**18,978.9206**	**2.6399**	**1.5941**	**19,519.9685**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.37	61.72	-20.61	0.00	0.00	84.10	9.08	0.00	83.39	17.16	0.00	0.00	0.00	0.00	0.00	0.00

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Energy	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Mobile	2.7064	2.2933	20.3753	0.0414	4.4388	0.0324	4.4711	1.1824	0.0302	1.2126		4,324.8340	4,324.8340	0.3224	0.1985	4,392.0388
Total	**6.9010**	**2.9485**	**33.0457**	**0.0453**	**4.4388**	**0.1428**	**4.5816**	**1.1824**	**0.1406**	**1.3230**	**0.0000**	**5,000.6215**	**5,000.6215**	**0.3565**	**0.2105**	**5,072.2467**

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	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Energy	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Mobile	2.7064	2.2933	20.3753	0.0414	4.4388	0.0324	4.4711	1.1824	0.0302	1.2126		4,324.8340	4,324.8340	0.3224	0.1985	4,392.0388
Total	**6.9010**	**2.9485**	**33.0457**	**0.0453**	**4.4388**	**0.1428**	**4.5816**	**1.1824**	**0.1406**	**1.3230**	**0.0000**	**5,000.6215**	**5,000.6215**	**0.3565**	**0.2105**	**5,072.2467**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/14/2022	5	10	
2	Rock Drilling	Grading	12/15/2022	12/21/2022	5	5	
3	Grading	Grading	12/15/2022	1/25/2023	5	30	
4	Building Construction	Building Construction	1/26/2023	3/20/2024	5	300	
5	Architectural Coating	Architectural Coating	2/15/2024	4/17/2024	5	45	
6	Paving	Paving	3/21/2024	4/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.59

Residential Indoor: 305,775; Residential Outdoor: 101,925; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,584 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Rock Drilling	Bore/Drill Rigs	1	3.00	221	0.50
Grading	Crushing/Proc. Equipment	1	8.00	310	0.78
Grading	Excavators	2	8.00	158	0.38

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	1,448.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Drilling	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	4,344.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	120.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8198	0.0000	19.8198	10.1271	0.0000	10.1271			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.8198**	**1.6126**	**21.4324**	**10.1271**	**1.4836**	**11.6107**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.6489	23.5171	5.7165	0.0909	2.5325	0.2265	2.7591	0.6942	0.2167	0.9109		10,003.0671	10,003.0671	0.4811	1.5890	10,488.6220
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	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.7015**	**23.5513**	**6.1832**	**0.0922**	**2.6804**	**0.2274**	**2.9078**	**0.7334**	**0.2175**	**0.9509**		**10,140.3360**	**10,140.3360**	**0.4850**	**1.5926**	**10,627.0440**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8198	0.0000	19.8198	10.1271	0.0000	10.1271			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**19.8198**	**0.0621**	**19.8819**	**10.1271**	**0.0621**	**10.1892**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.6489	23.5171	5.7165	0.0909	2.5325	0.2265	2.7591	0.6942	0.2167	0.9109		10,003.0671	10,003.0671	0.4811	1.5890	10,488.6220
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	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.7015**	**23.5513**	**6.1832**	**0.0922**	**2.6804**	**0.2274**	**2.9078**	**0.7334**	**0.2175**	**0.9509**		**10,140.3360**	**10,140.3360**	**0.4850**	**1.5926**	**10,627.0440**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.3 Rock Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0840	0.8499	0.7654	3.5400e-003		0.0273	0.0273		0.0251	0.0251		342.5853	342.5853	0.1108		345.3553
Total	**0.0840**	**0.8499**	**0.7654**	**3.5400e-003**	**0.0000**	**0.0273**	**0.0273**	**0.0000**	**0.0251**	**0.0251**		**342.5853**	**342.5853**	**0.1108**		**345.3553**

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	8.7600e-003	5.7000e-003	0.0778	2.2000e-004	0.0246	1.4000e-004	0.0248	6.5400e-003	1.3000e-004	6.6700e-003		22.8781	22.8781	6.6000e-004	5.9000e-004	23.0703
Total	**8.7600e-003**	**5.7000e-003**	**0.0778**	**2.2000e-004**	**0.0246**	**1.4000e-004**	**0.0248**	**6.5400e-003**	**1.3000e-004**	**6.6700e-003**		**22.8781**	**22.8781**	**6.6000e-004**	**5.9000e-004**	**23.0703**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.3 Rock Drilling - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0439	0.1900	1.6078	3.5400e-003		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	342.5853	342.5853	0.1108		345.3553
Total	**0.0439**	**0.1900**	**1.6078**	**3.5400e-003**	**0.0000**	**5.8500e-003**	**5.8500e-003**	**0.0000**	**5.8500e-003**	**5.8500e-003**	**0.0000**	**342.5853**	**342.5853**	**0.1108**		**345.3553**

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	8.7600e-003	5.7000e-003	0.0778	2.2000e-004	0.0246	1.4000e-004	0.0248	6.5400e-003	1.3000e-004	6.6700e-003		22.8781	22.8781	6.6000e-004	5.9000e-004	23.0703
Total	**8.7600e-003**	**5.7000e-003**	**0.0778**	**2.2000e-004**	**0.0246**	**1.4000e-004**	**0.0248**	**6.5400e-003**	**1.3000e-004**	**6.6700e-003**		**22.8781**	**22.8781**	**6.6000e-004**	**5.9000e-004**	**23.0703**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	4.7123	44.7670	33.5919	0.0834		1.8396	1.8396		1.7088	1.7088		8,434.9910	8,434.9910	2.0423		8,486.0484
Total	**4.7123**	**44.7670**	**33.5919**	**0.0834**	**9.3664**	**1.8396**	**11.2060**	**3.6784**	**1.7088**	**5.3872**		**8,434.9910**	**8,434.9910**	**2.0423**		**8,486.0484**

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	0.6489	23.5171	5.7165	0.0909	2.5325	0.2265	2.7591	0.6942	0.2167	0.9109		10,003.0671	10,003.0671	0.4811	1.5890	10,488.6220
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	0.0672	0.0437	0.5964	1.7200e-003	0.1889	1.0700e-003	0.1900	0.0501	9.9000e-004	0.0511		175.3991	175.3991	5.0300e-003	4.5200e-003	176.8725
Total	**0.7161**	**23.5608**	**6.3129**	**0.0926**	**2.7215**	**0.2276**	**2.9491**	**0.7443**	**0.2177**	**0.9620**		**10,178.4662**	**10,178.4662**	**0.4861**	**1.5935**	**10,665.4945**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	1.0174	4.4088	42.3813	0.0834		0.1357	0.1357		0.1357	0.1357	0.0000	8,434.9910	8,434.9910	2.0423		8,486.0484
Total	**1.0174**	**4.4088**	**42.3813**	**0.0834**	**9.3664**	**0.1357**	**9.5020**	**3.6784**	**0.1357**	**3.8141**	**0.0000**	**8,434.9910**	**8,434.9910**	**2.0423**		**8,486.0484**

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	0.6489	23.5171	5.7165	0.0909	2.5325	0.2265	2.7591	0.6942	0.2167	0.9109		10,003.0671	10,003.0671	0.4811	1.5890	10,488.6220
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	0.0672	0.0437	0.5964	1.7200e-003	0.1889	1.0700e-003	0.1900	0.0501	9.9000e-004	0.0511		175.3991	175.3991	5.0300e-003	4.5200e-003	176.8725
Total	**0.7161**	**23.5608**	**6.3129**	**0.0926**	**2.7215**	**0.2276**	**2.9491**	**0.7443**	**0.2177**	**0.9620**		**10,178.4662**	**10,178.4662**	**0.4861**	**1.5935**	**10,665.4945**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	4.3623	39.7483	32.5887	0.0834		1.6036	1.6036		1.4896	1.4896		8,435.0581	8,435.0581	2.0381		8,486.0095
Total	**4.3623**	**39.7483**	**32.5887**	**0.0834**	**9.3664**	**1.6036**	**10.9700**	**3.6784**	**1.4896**	**5.1681**		**8,435.0581**	**8,435.0581**	**2.0381**		**8,486.0095**

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	0.3279	18.9419	5.2034	0.0866	2.5326	0.1608	2.6934	0.6942	0.1538	0.8480		9,575.2959	9,575.2959	0.4826	1.5227	10,041.1300
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	0.0629	0.0391	0.5535	1.6700e-003	0.1889	1.0200e-003	0.1900	0.0501	9.4000e-004	0.0511		170.8563	170.8563	4.5700e-003	4.2100e-003	172.2242
Total	**0.3908**	**18.9810**	**5.7568**	**0.0883**	**2.7215**	**0.1618**	**2.8833**	**0.7443**	**0.1548**	**0.8990**		**9,746.1522**	**9,746.1522**	**0.4871**	**1.5269**	**10,213.3542**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	1.0174	4.4088	42.3813	0.0834		0.1357	0.1357		0.1357	0.1357	0.0000	8,435.0581	8,435.0581	2.0381		8,486.0095
Total	**1.0174**	**4.4088**	**42.3813**	**0.0834**	**9.3664**	**0.1357**	**9.5020**	**3.6784**	**0.1357**	**3.8141**	**0.0000**	**8,435.0581**	**8,435.0581**	**2.0381**		**8,486.0095**

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	0.3279	18.9419	5.2034	0.0866	2.5326	0.1608	2.6934	0.6942	0.1538	0.8480		9,575.2959	9,575.2959	0.4826	1.5227	10,041.1300
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	0.0629	0.0391	0.5535	1.6700e-003	0.1889	1.0200e-003	0.1900	0.0501	9.4000e-004	0.0511		170.8563	170.8563	4.5700e-003	4.2100e-003	172.2242
Total	**0.3908**	**18.9810**	**5.7568**	**0.0883**	**2.7215**	**0.1618**	**2.8833**	**0.7443**	**0.1548**	**0.8990**		**9,746.1522**	**9,746.1522**	**0.4871**	**1.5269**	**10,213.3542**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.5 Building Construction - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.8574	0.3090	4.1000e-003	0.1355	5.2200e-003	0.1407	0.0390	5.0000e-003	0.0440		442.0939	442.0939	0.0134	0.0640	461.5044
Worker	0.3281	0.2038	2.8876	8.7100e-003	0.9858	5.3000e-003	0.9911	0.2615	4.8800e-003	0.2664		891.4242	891.4242	0.0239	0.0220	898.5609
Total	**0.3520**	**1.0611**	**3.1966**	**0.0128**	**1.1212**	**0.0105**	**1.1318**	**0.3005**	**9.8800e-003**	**0.3103**		**1,333.5182**	**1,333.5182**	**0.0373**	**0.0860**	**1,360.0653**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.8574	0.3090	4.1000e-003	0.1355	5.2200e-003	0.1407	0.0390	5.0000e-003	0.0440		442.0939	442.0939	0.0134	0.0640	461.5044
Worker	0.3281	0.2038	2.8876	8.7100e-003	0.9858	5.3000e-003	0.9911	0.2615	4.8800e-003	0.2664		891.4242	891.4242	0.0239	0.0220	898.5609
Total	**0.3520**	**1.0611**	**3.1966**	**0.0128**	**1.1212**	**0.0105**	**1.1318**	**0.3005**	**9.8800e-003**	**0.3103**		**1,333.5182**	**1,333.5182**	**0.0373**	**0.0860**	**1,360.0653**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0230	0.8515	0.3017	4.0200e-003	0.1355	5.2500e-003	0.1407	0.0390	5.0200e-003	0.0440		434.3861	434.3861	0.0137	0.0629	453.4706
Worker	0.3082	0.1833	2.6985	8.4200e-003	0.9858	5.0500e-003	0.9908	0.2615	4.6500e-003	0.2661		868.9893	868.9893	0.0217	0.0205	875.6442
Total	**0.3312**	**1.0348**	**3.0002**	**0.0124**	**1.1212**	**0.0103**	**1.1315**	**0.3005**	**9.6700e-003**	**0.3102**		**1,303.3755**	**1,303.3755**	**0.0354**	**0.0834**	**1,329.1148**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0230	0.8515	0.3017	4.0200e-003	0.1355	5.2500e-003	0.1407	0.0390	5.0200e-003	0.0440		434.3861	434.3861	0.0137	0.0629	453.4706
Worker	0.3082	0.1833	2.6985	8.4200e-003	0.9858	5.0500e-003	0.9908	0.2615	4.6500e-003	0.2661		868.9893	868.9893	0.0217	0.0205	875.6442
Total	**0.3312**	**1.0348**	**3.0002**	**0.0124**	**1.1212**	**0.0103**	**1.1315**	**0.3005**	**9.6700e-003**	**0.3102**		**1,303.3755**	**1,303.3755**	**0.0354**	**0.0834**	**1,329.1148**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.1563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**42.3370**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0617	0.0367	0.5397	1.6800e-003	0.1972	1.0100e-003	0.1982	0.0523	9.3000e-004	0.0532		173.7979	173.7979	4.3400e-003	4.1000e-003	175.1288
Total	**0.0617**	**0.0367**	**0.5397**	**1.6800e-003**	**0.1972**	**1.0100e-003**	**0.1982**	**0.0523**	**9.3000e-004**	**0.0532**		**173.7979**	**173.7979**	**4.3400e-003**	**4.1000e-003**	**175.1288**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.6 Architectural Coating - 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					
Archit. Coating	42.1563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**42.1860**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	0.0617	0.0367	0.5397	1.6800e-003	0.1972	1.0100e-003	0.1982	0.0523	9.3000e-004	0.0532		173.7979	173.7979	4.3400e-003	4.1000e-003	175.1288
Total	**0.0617**	**0.0367**	**0.5397**	**1.6800e-003**	**0.1972**	**1.0100e-003**	**0.1982**	**0.0523**	**9.3000e-004**	**0.0532**		**173.7979**	**173.7979**	**4.3400e-003**	**4.1000e-003**	**175.1288**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0655**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0385	0.0229	0.3373	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		108.6237	108.6237	2.7100e-003	2.5600e-003	109.4555
Total	**0.0385**	**0.0229**	**0.3373**	**1.0500e-003**	**0.1232**	**6.3000e-004**	**0.1239**	**0.0327**	**5.8000e-004**	**0.0333**		**108.6237**	**108.6237**	**2.7100e-003**	**2.5600e-003**	**109.4555**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

3.7 Paving - 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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3578**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0385	0.0229	0.3373	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		108.6237	108.6237	2.7100e-003	2.5600e-003	109.4555
Total	**0.0385**	**0.0229**	**0.3373**	**1.0500e-003**	**0.1232**	**6.3000e-004**	**0.1239**	**0.0327**	**5.8000e-004**	**0.0333**		**108.6237**	**108.6237**	**2.7100e-003**	**2.5600e-003**	**109.4555**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7064	2.2933	20.3753	0.0414	4.4388	0.0324	4.4711	1.1824	0.0302	1.2126		4,324.8340	4,324.8340	0.3224	0.1985	4,392.0388
Unmitigated	2.7064	2.2933	20.3753	0.0414	4.4388	0.0324	4.4711	1.1824	0.0302	1.2126		4,324.8340	4,324.8340	0.3224	0.1985	4,392.0388

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,208.00	1,208.00	1208.00	2,108,639	2,108,639
Parking Lot	0.00	0.00	0.00		
Total	1,208.00	1,208.00	1,208.00	2,108,639	2,108,639

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
Condo/Townhouse	5.40	5.40	5.40	42.00	19.00	39.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
NaturalGas Unmitigated	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Condo/Townhouse	5553.4	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0599**	**0.5118**	**0.2178**	**3.2700e-003**		**0.0414**	**0.0414**		**0.0414**	**0.0414**		**653.3416**	**653.3416**	**0.0125**	**0.0120**	**657.2241**

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					
Condo/Townhouse	5.5534	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0599**	**0.5118**	**0.2178**	**3.2700e-003**		**0.0414**	**0.0414**		**0.0414**	**0.0414**		**653.3416**	**653.3416**	**0.0125**	**0.0120**	**657.2241**

6.0 Area Detail

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Unmitigated	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

6.2 Area by SubCategory

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	0.5197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2408					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	0.3743	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691		22.4458	22.4458	0.0215		22.9838
Total	**4.1348**	**0.1434**	**12.4526**	**6.6000e-004**		**0.0691**	**0.0691**		**0.0691**	**0.0691**	**0.0000**	**22.4458**	**22.4458**	**0.0215**	**0.0000**	**22.9838**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2408					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	0.3743	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691		22.4458	22.4458	0.0215		22.9838
Total	**4.1348**	**0.1434**	**12.4526**	**6.6000e-004**		**0.0691**	**0.0691**		**0.0691**	**0.0691**	**0.0000**	**22.4458**	**22.4458**	**0.0215**	**0.0000**	**22.9838**

7.0 Water Detail

7.1 Mitigation Measures Water

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

Barham 151 Unit Multi-Family Operational Year 2025

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	66.00	Space	0.59	26,400.00	0
Condo/Townhouse	151.00	Dwelling Unit	9.96	151,000.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS for 2025 not applied for AQ analysis

Land Use - 10.55 acres

Construction Phase - CS

Off-road Equipment - Rock Crusher Added 310+/- HP

Off-road Equipment - CE

Trips and VMT -

Grading - 46341 CY of import

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per Traffic Study

Vehicle Emission Factors -

Vehicle Emission Factors -

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

Vehicle Emission Factors -

Woodstoves - No Hearth

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - T4

Area Mitigation - default

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblAreaMitigation	UseLowVOCPaintParkingValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	NumberGas	83.05	0.00
tblFireplaces	NumberNoFireplace	15.10	151.00
tblFireplaces	NumberWood	52.85	0.00
tblGrading	MaterialImported	0.00	34,755.00
tblGrading	MaterialImported	0.00	11,585.00
tblLandUse	LotAcreage	9.44	9.96
tblOffRoadEquipment	HorsePower	85.00	310.00
tblVehicleTrips	HO_TL	7.50	5.40

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

tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TL	7.30	5.40
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TL	10.80	5.40
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	8.14	8.00
tblVehicleTrips	SU_TR	6.28	8.00
tblVehicleTrips	WD_TR	7.32	8.00
tblWoodstoves	NumberCatalytic	7.55	0.00
tblWoodstoves	NumberNoncatalytic	7.55	0.00

2.0 Emissions Summary

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.5107	70.0726	40.8000	0.1797	22.5002	2.0950	24.3405	10.8605	1.9521	12.5619	0.0000	18,972.2278	18,972.2278	2.6392	1.5953	19,513.6076
2023	4.7388	59.4981	38.3829	0.1717	12.0879	1.7657	13.8536	4.4227	1.6447	6.0674	0.0000	18,181.1233	18,181.1233	2.5243	1.5288	18,699.8168
2024	44.2330	15.7974	21.3710	0.0435	1.3184	0.6856	2.0040	0.3528	0.6484	1.0012	0.0000	4,257.7631	4,257.7631	0.7374	0.0897	4,301.0203
Maximum	**44.2330**	**70.0726**	**40.8000**	**0.1797**	**22.5002**	**2.0950**	**24.3405**	**10.8605**	**1.9521**	**12.5619**	**0.0000**	**18,972.2278**	**18,972.2278**	**2.6392**	**1.5953**	**19,513.6076**

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					
2022	1.7757	29.0545	50.4319	0.1797	22.5002	0.3696	22.7900	10.8605	0.3597	11.1404	0.0000	18,972.2278	18,972.2278	2.6392	1.5953	19,513.6076
2023	1.3939	24.1586	48.1754	0.1717	12.0879	0.2977	12.3857	4.4227	0.2907	4.7134	0.0000	18,181.1233	18,181.1233	2.5243	1.5288	18,699.8168
2024	42.9382	3.4983	22.6868	0.0435	1.3184	0.0561	1.3745	0.3528	0.0554	0.4082	0.0000	4,257.7631	4,257.7631	0.7374	0.0897	4,301.0203
Maximum	**42.9382**	**29.0545**	**50.4319**	**0.1797**	**22.5002**	**0.3696**	**22.7900**	**10.8605**	**0.3597**	**11.1404**	**0.0000**	**18,972.2278**	**18,972.2278**	**2.6392**	**1.5953**	**19,513.6076**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.37	60.99	-20.63	0.00	0.00	84.09	9.07	0.00	83.37	17.16	0.00	0.00	0.00	0.00	0.00	0.00

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Energy	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Mobile	2.6082	2.4903	21.4073	0.0396	4.4388	0.0324	4.4712	1.1824	0.0302	1.2126		4,140.9119	4,140.9119	0.3466	0.2098	4,212.1092
Total	**6.8029**	**3.1455**	**34.0777**	**0.0436**	**4.4388**	**0.1428**	**4.5816**	**1.1824**	**0.1406**	**1.3230**	**0.0000**	**4,816.6993**	**4,816.6993**	**0.3807**	**0.2218**	**4,892.3171**

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	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Energy	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Mobile	2.6082	2.4903	21.4073	0.0396	4.4388	0.0324	4.4712	1.1824	0.0302	1.2126		4,140.9119	4,140.9119	0.3466	0.2098	4,212.1092
Total	**6.8029**	**3.1455**	**34.0777**	**0.0436**	**4.4388**	**0.1428**	**4.5816**	**1.1824**	**0.1406**	**1.3230**	**0.0000**	**4,816.6993**	**4,816.6993**	**0.3807**	**0.2218**	**4,892.3171**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/14/2022	5	10	
2	Rock Drilling	Grading	12/15/2022	12/21/2022	5	5	
3	Grading	Grading	12/15/2022	1/25/2023	5	30	
4	Building Construction	Building Construction	1/26/2023	3/20/2024	5	300	
5	Architectural Coating	Architectural Coating	2/15/2024	4/17/2024	5	45	
6	Paving	Paving	3/21/2024	4/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.59

Residential Indoor: 305,775; Residential Outdoor: 101,925; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,584 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Rock Drilling	Bore/Drill Rigs	1	3.00	221	0.50
Grading	Crushing/Proc. Equipment	1	8.00	310	0.78
Grading	Excavators	2	8.00	158	0.38

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	1,448.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Drilling	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	4,344.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	120.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8198	0.0000	19.8198	10.1271	0.0000	10.1271			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.8198**	**1.6126**	**21.4324**	**10.1271**	**1.4836**	**11.6107**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.6323	24.4001	5.8036	0.0909	2.5325	0.2269	2.7594	0.6942	0.2171	0.9113		10,007.3029	10,007.3029	0.4801	1.5898	10,493.0562
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	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.6891**	**24.4386**	**6.2461**	**0.0922**	**2.6804**	**0.2278**	**2.9081**	**0.7334**	**0.2179**	**0.9513**		**10,137.0058**	**10,137.0058**	**0.4843**	**1.5936**	**10,624.0046**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8198	0.0000	19.8198	10.1271	0.0000	10.1271			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**19.8198**	**0.0621**	**19.8819**	**10.1271**	**0.0621**	**10.1892**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.6323	24.4001	5.8036	0.0909	2.5325	0.2269	2.7594	0.6942	0.2171	0.9113		10,007.3029	10,007.3029	0.4801	1.5898	10,493.0562
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	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.6891**	**24.4386**	**6.2461**	**0.0922**	**2.6804**	**0.2278**	**2.9081**	**0.7334**	**0.2179**	**0.9513**		**10,137.0058**	**10,137.0058**	**0.4843**	**1.5936**	**10,624.0046**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.3 Rock Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0840	0.8499	0.7654	3.5400e-003		0.0273	0.0273		0.0251	0.0251		342.5853	342.5853	0.1108		345.3553
Total	**0.0840**	**0.8499**	**0.7654**	**3.5400e-003**	**0.0000**	**0.0273**	**0.0273**	**0.0000**	**0.0251**	**0.0251**		**342.5853**	**342.5853**	**0.1108**		**345.3553**

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	9.4700e-003	6.4100e-003	0.0738	2.1000e-004	0.0246	1.4000e-004	0.0248	6.5400e-003	1.3000e-004	6.6700e-003		21.6172	21.6172	7.0000e-004	6.4000e-004	21.8247
Total	**9.4700e-003**	**6.4100e-003**	**0.0738**	**2.1000e-004**	**0.0246**	**1.4000e-004**	**0.0248**	**6.5400e-003**	**1.3000e-004**	**6.6700e-003**		**21.6172**	**21.6172**	**7.0000e-004**	**6.4000e-004**	**21.8247**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.3 Rock Drilling - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0439	0.1900	1.6078	3.5400e-003		5.8500e-003	5.8500e-003		5.8500e-003	5.8500e-003	0.0000	342.5853	342.5853	0.1108		345.3553
Total	**0.0439**	**0.1900**	**1.6078**	**3.5400e-003**	**0.0000**	**5.8500e-003**	**5.8500e-003**	**0.0000**	**5.8500e-003**	**5.8500e-003**	**0.0000**	**342.5853**	**342.5853**	**0.1108**		**345.3553**

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	9.4700e-003	6.4100e-003	0.0738	2.1000e-004	0.0246	1.4000e-004	0.0248	6.5400e-003	1.3000e-004	6.6700e-003		21.6172	21.6172	7.0000e-004	6.4000e-004	21.8247
Total	**9.4700e-003**	**6.4100e-003**	**0.0738**	**2.1000e-004**	**0.0246**	**1.4000e-004**	**0.0248**	**6.5400e-003**	**1.3000e-004**	**6.6700e-003**		**21.6172**	**21.6172**	**7.0000e-004**	**6.4000e-004**	**21.8247**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	4.7123	44.7670	33.5919	0.0834		1.8396	1.8396		1.7088	1.7088		8,434.9910	8,434.9910	2.0423		8,486.0484
Total	**4.7123**	**44.7670**	**33.5919**	**0.0834**	**9.3664**	**1.8396**	**11.2060**	**3.6784**	**1.7088**	**5.3872**		**8,434.9910**	**8,434.9910**	**2.0423**		**8,486.0484**

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	0.6323	24.4001	5.8036	0.0909	2.5325	0.2269	2.7594	0.6942	0.2171	0.9113		10,007.3029	10,007.3029	0.4801	1.5898	10,493.0562
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	0.0726	0.0492	0.5654	1.6300e-003	0.1889	1.0700e-003	0.1900	0.0501	9.9000e-004	0.0511		165.7315	165.7315	5.3500e-003	4.8900e-003	167.3230
Total	**0.7049**	**24.4492**	**6.3690**	**0.0925**	**2.7215**	**0.2280**	**2.9495**	**0.7443**	**0.2181**	**0.9624**		**10,173.0344**	**10,173.0344**	**0.4854**	**1.5947**	**10,660.3792**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	1.0174	4.4088	42.3813	0.0834		0.1357	0.1357		0.1357	0.1357	0.0000	8,434.9910	8,434.9910	2.0423		8,486.0484
Total	**1.0174**	**4.4088**	**42.3813**	**0.0834**	**9.3664**	**0.1357**	**9.5020**	**3.6784**	**0.1357**	**3.8141**	**0.0000**	**8,434.9910**	**8,434.9910**	**2.0423**		**8,486.0484**

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	0.6323	24.4001	5.8036	0.0909	2.5325	0.2269	2.7594	0.6942	0.2171	0.9113		10,007.3029	10,007.3029	0.4801	1.5898	10,493.0562
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	0.0726	0.0492	0.5654	1.6300e-003	0.1889	1.0700e-003	0.1900	0.0501	9.9000e-004	0.0511		165.7315	165.7315	5.3500e-003	4.8900e-003	167.3230
Total	**0.7049**	**24.4492**	**6.3690**	**0.0925**	**2.7215**	**0.2280**	**2.9495**	**0.7443**	**0.2181**	**0.9624**		**10,173.0344**	**10,173.0344**	**0.4854**	**1.5947**	**10,660.3792**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	4.3623	39.7483	32.5887	0.0834		1.6036	1.6036		1.4896	1.4896		8,435.0581	8,435.0581	2.0381		8,486.0095
Total	**4.3623**	**39.7483**	**32.5887**	**0.0834**	**9.3664**	**1.6036**	**10.9700**	**3.6784**	**1.4896**	**5.1681**		**8,435.0581**	**8,435.0581**	**2.0381**		**8,486.0095**

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	0.3083	19.7059	5.2682	0.0867	2.5326	0.1611	2.6937	0.6942	0.1541	0.8483		9,584.6005	9,584.6005	0.4814	1.5243	10,050.8651
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	0.0682	0.0439	0.5259	1.5800e-003	0.1889	1.0200e-003	0.1900	0.0501	9.4000e-004	0.0511		161.4647	161.4647	4.8700e-003	4.5500e-003	162.9422
Total	**0.3765**	**19.7498**	**5.7941**	**0.0883**	**2.7215**	**0.1621**	**2.8836**	**0.7443**	**0.1550**	**0.8993**		**9,746.0652**	**9,746.0652**	**0.4863**	**1.5288**	**10,213.8073**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					9.3664	0.0000	9.3664	3.6784	0.0000	3.6784			0.0000			0.0000
Off-Road	1.0174	4.4088	42.3813	0.0834		0.1357	0.1357		0.1357	0.1357	0.0000	8,435.0581	8,435.0581	2.0381		8,486.0095
Total	**1.0174**	**4.4088**	**42.3813**	**0.0834**	**9.3664**	**0.1357**	**9.5020**	**3.6784**	**0.1357**	**3.8141**	**0.0000**	**8,435.0581**	**8,435.0581**	**2.0381**		**8,486.0095**

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	0.3083	19.7059	5.2682	0.0867	2.5326	0.1611	2.6937	0.6942	0.1541	0.8483		9,584.6005	9,584.6005	0.4814	1.5243	10,050.8651
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	0.0682	0.0439	0.5259	1.5800e-003	0.1889	1.0200e-003	0.1900	0.0501	9.4000e-004	0.0511		161.4647	161.4647	4.8700e-003	4.5500e-003	162.9422
Total	**0.3765**	**19.7498**	**5.7941**	**0.0883**	**2.7215**	**0.1621**	**2.8836**	**0.7443**	**0.1550**	**0.8993**		**9,746.0652**	**9,746.0652**	**0.4863**	**1.5288**	**10,213.8073**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.5 Building Construction - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0232	0.8934	0.3183	4.1000e-003	0.1355	5.2500e-003	0.1407	0.0390	5.0200e-003	0.0440		442.7224	442.7224	0.0133	0.0642	462.1759
Worker	0.3558	0.2292	2.7439	8.2300e-003	0.9858	5.3000e-003	0.9911	0.2615	4.8800e-003	0.2664		842.4244	842.4244	0.0254	0.0237	850.1331
Total	**0.3791**	**1.1226**	**3.0622**	**0.0123**	**1.1212**	**0.0106**	**1.1318**	**0.3005**	**9.9000e-003**	**0.3104**		**1,285.1468**	**1,285.1468**	**0.0388**	**0.0879**	**1,312.3090**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0232	0.8934	0.3183	4.1000e-003	0.1355	5.2500e-003	0.1407	0.0390	5.0200e-003	0.0440		442.7224	442.7224	0.0133	0.0642	462.1759
Worker	0.3558	0.2292	2.7439	8.2300e-003	0.9858	5.3000e-003	0.9911	0.2615	4.8800e-003	0.2664		842.4244	842.4244	0.0254	0.0237	850.1331
Total	**0.3791**	**1.1226**	**3.0622**	**0.0123**	**1.1212**	**0.0106**	**1.1318**	**0.3005**	**9.9000e-003**	**0.3104**		**1,285.1468**	**1,285.1468**	**0.0388**	**0.0879**	**1,312.3090**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0223	0.8874	0.3110	4.0200e-003	0.1355	5.2700e-003	0.1407	0.0390	5.0400e-003	0.0440		435.0214	435.0214	0.0136	0.0630	454.1477
Worker	0.3351	0.2062	2.5692	7.9600e-003	0.9858	5.0500e-003	0.9908	0.2615	4.6500e-003	0.2661		821.3290	821.3290	0.0232	0.0222	828.5172
Total	**0.3574**	**1.0936**	**2.8803**	**0.0120**	**1.1212**	**0.0103**	**1.1316**	**0.3005**	**9.6900e-003**	**0.3102**		**1,256.3503**	**1,256.3503**	**0.0368**	**0.0852**	**1,282.6649**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0223	0.8874	0.3110	4.0200e-003	0.1355	5.2700e-003	0.1407	0.0390	5.0400e-003	0.0440		435.0214	435.0214	0.0136	0.0630	454.1477
Worker	0.3351	0.2062	2.5692	7.9600e-003	0.9858	5.0500e-003	0.9908	0.2615	4.6500e-003	0.2661		821.3290	821.3290	0.0232	0.0222	828.5172
Total	**0.3574**	**1.0936**	**2.8803**	**0.0120**	**1.1212**	**0.0103**	**1.1316**	**0.3005**	**9.6900e-003**	**0.3102**		**1,256.3503**	**1,256.3503**	**0.0368**	**0.0852**	**1,282.6649**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.1563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**42.3370**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0670	0.0412	0.5138	1.5900e-003	0.1972	1.0100e-003	0.1982	0.0523	9.3000e-004	0.0532		164.2658	164.2658	4.6400e-003	4.4400e-003	165.7035
Total	**0.0670**	**0.0412**	**0.5138**	**1.5900e-003**	**0.1972**	**1.0100e-003**	**0.1982**	**0.0523**	**9.3000e-004**	**0.0532**		**164.2658**	**164.2658**	**4.6400e-003**	**4.4400e-003**	**165.7035**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.6 Architectural Coating - 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					
Archit. Coating	42.1563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**42.1860**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	0.0670	0.0412	0.5138	1.5900e-003	0.1972	1.0100e-003	0.1982	0.0523	9.3000e-004	0.0532		164.2658	164.2658	4.6400e-003	4.4400e-003	165.7035
Total	**0.0670**	**0.0412**	**0.5138**	**1.5900e-003**	**0.1972**	**1.0100e-003**	**0.1982**	**0.0523**	**9.3000e-004**	**0.0532**		**164.2658**	**164.2658**	**4.6400e-003**	**4.4400e-003**	**165.7035**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0655**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0419	0.0258	0.3212	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.6661	102.6661	2.9000e-003	2.7700e-003	103.5647
Total	**0.0419**	**0.0258**	**0.3212**	**1.0000e-003**	**0.1232**	**6.3000e-004**	**0.1239**	**0.0327**	**5.8000e-004**	**0.0333**		**102.6661**	**102.6661**	**2.9000e-003**	**2.7700e-003**	**103.5647**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

3.7 Paving - 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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3578**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	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	0.0419	0.0258	0.3212	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.6661	102.6661	2.9000e-003	2.7700e-003	103.5647
Total	**0.0419**	**0.0258**	**0.3212**	**1.0000e-003**	**0.1232**	**6.3000e-004**	**0.1239**	**0.0327**	**5.8000e-004**	**0.0333**		**102.6661**	**102.6661**	**2.9000e-003**	**2.7700e-003**	**103.5647**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6082	2.4903	21.4073	0.0396	4.4388	0.0324	4.4712	1.1824	0.0302	1.2126		4,140.9119	4,140.9119	0.3466	0.2098	4,212.1092
Unmitigated	2.6082	2.4903	21.4073	0.0396	4.4388	0.0324	4.4712	1.1824	0.0302	1.2126		4,140.9119	4,140.9119	0.3466	0.2098	4,212.1092

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,208.00	1,208.00	1208.00	2,108,639	2,108,639
Parking Lot	0.00	0.00	0.00		
Total	1,208.00	1,208.00	1,208.00	2,108,639	2,108,639

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
Condo/Townhouse	5.40	5.40	5.40	42.00	19.00	39.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
NaturalGas Unmitigated	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241

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					
Condo/Townhouse	5553.4	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0599**	**0.5118**	**0.2178**	**3.2700e-003**		**0.0414**	**0.0414**		**0.0414**	**0.0414**		**653.3416**	**653.3416**	**0.0125**	**0.0120**	**657.2241**

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					
Condo/Townhouse	5.5534	0.0599	0.5118	0.2178	3.2700e-003		0.0414	0.0414		0.0414	0.0414		653.3416	653.3416	0.0125	0.0120	657.2241
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0599**	**0.5118**	**0.2178**	**3.2700e-003**		**0.0414**	**0.0414**		**0.0414**	**0.0414**		**653.3416**	**653.3416**	**0.0125**	**0.0120**	**657.2241**

6.0 Area Detail

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838
Unmitigated	4.1348	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691	0.0000	22.4458	22.4458	0.0215	0.0000	22.9838

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

6.2 Area by SubCategory

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	0.5197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2408					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	0.3743	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691		22.4458	22.4458	0.0215		22.9838
Total	**4.1348**	**0.1434**	**12.4526**	**6.6000e-004**		**0.0691**	**0.0691**		**0.0691**	**0.0691**	**0.0000**	**22.4458**	**22.4458**	**0.0215**	**0.0000**	**22.9838**

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2408					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	0.3743	0.1434	12.4526	6.6000e-004		0.0691	0.0691		0.0691	0.0691		22.4458	22.4458	0.0215		22.9838
Total	**4.1348**	**0.1434**	**12.4526**	**6.6000e-004**		**0.0691**	**0.0691**		**0.0691**	**0.0691**	**0.0000**	**22.4458**	**22.4458**	**0.0215**	**0.0000**	**22.9838**

7.0 Water Detail

7.1 Mitigation Measures Water

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Barham 151 Unit Multi-Family Operational Year 2025

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	66.00	Space	0.59	26,400.00	0
Condo/Townhouse	151.00	Dwelling Unit	9.96	151,000.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS for 2025 not applied for AQ analysis

Land Use - 10.55 acres

Construction Phase - CS

Off-road Equipment - Rock Crusher Added 310+/- HP

Off-road Equipment - CE

Trips and VMT -

Grading - 46341 CY of import

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per Traffic Study

Vehicle Emission Factors -

Vehicle Emission Factors -

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

Vehicle Emission Factors -

Woodstoves - No Hearth

Area Coating - Rule 67 Paint

Energy Use -

Construction Off-road Equipment Mitigation - T4

Area Mitigation - default

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblAreaMitigation	UseLowVOCPaintParkingValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	250
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	NumberGas	83.05	0.00
tblFireplaces	NumberNoFireplace	15.10	151.00
tblFireplaces	NumberWood	52.85	0.00
tblGrading	MaterialImported	0.00	34,755.00
tblGrading	MaterialImported	0.00	11,585.00
tblLandUse	LotAcreage	9.44	9.96
tblOffRoadEquipment	HorsePower	85.00	310.00
tblVehicleTrips	HO_TL	7.50	5.40

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

tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TL	7.30	5.40
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TL	10.80	5.40
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	8.14	8.00
tblVehicleTrips	SU_TR	6.28	8.00
tblVehicleTrips	WD_TR	7.32	8.00
tblWoodstoves	NumberCatalytic	7.55	0.00
tblWoodstoves	NumberNoncatalytic	7.55	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	0.0521	0.7049	0.3710	1.7200e-003	0.2146	0.0217	0.2362	0.0840	0.0201	0.1041	0.0000	164.8010	164.8010	0.0216	0.0159	170.0813
2023	0.2751	2.4102	2.6803	6.3100e-003	0.2609	0.1018	0.3627	0.0775	0.0957	0.1731	0.0000	570.7432	570.7432	0.0915	0.0221	579.6118
2024	1.0172	0.5451	0.7539	1.4700e-003	0.0373	0.0242	0.0615	0.0100	0.0227	0.0327	0.0000	130.5636	130.5636	0.0238	2.3500e-003	131.8573
Maximum	**1.0172**	**2.4102**	**2.6803**	**6.3100e-003**	**0.2609**	**0.1018**	**0.3627**	**0.0840**	**0.0957**	**0.1731**	**0.0000**	**570.7432**	**570.7432**	**0.0915**	**0.0221**	**579.6118**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0163	0.3057	0.4317	1.7200e-003	0.2146	3.6400e-003	0.2182	0.0840	3.5300e-003	0.0876	0.0000	164.8009	164.8009	0.0216	0.0159	170.0812
2023	0.0944	0.6220	2.9156	6.3100e-003	0.2609	8.8900e-003	0.2697	0.0775	8.7500e-003	0.0862	0.0000	570.7427	570.7427	0.0915	0.0221	579.6114
2024	0.9735	0.1125	0.8186	1.4700e-003	0.0373	1.9700e-003	0.0393	0.0100	1.9500e-003	0.0120	0.0000	130.5635	130.5635	0.0238	2.3500e-003	131.8571
Maximum	**0.9735**	**0.6220**	**2.9156**	**6.3100e-003**	**0.2609**	**8.8900e-003**	**0.2697**	**0.0840**	**8.7500e-003**	**0.0876**	**0.0000**	**570.7427**	**570.7427**	**0.0915**	**0.0221**	**579.6114**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.35**	**71.58**	**-9.48**	**0.00**	**0.00**	**90.18**	**20.16**	**0.00**	**89.73**	**40.09**	**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	**12-1-2022**	**2-28-2023**	1.5480	0.6018
2	**3-1-2023**	**5-31-2023**	0.5717	0.1316
3	**6-1-2023**	**8-31-2023**	0.5708	0.1306
4	**9-1-2023**	**11-30-2023**	0.5665	0.1311
5	**12-1-2023**	**2-29-2024**	0.7779	0.3583
6	**3-1-2024**	**5-31-2024**	0.9719	0.7722
		Highest	1.5480	0.7722

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7200	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766
Energy	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	289.5781	289.5781	0.0132	3.3300e-003	290.8985
Mobile	0.4652	0.4471	3.7969	7.2500e-003	0.7888	5.8800e-003	0.7947	0.2105	5.4800e-003	0.2160	0.0000	687.3911	687.3911	0.0559	0.0342	698.9889
Waste						0.0000	0.0000		0.0000	0.0000	14.0998	0.0000	14.0998	0.8333	0.0000	34.9315
Water						0.0000	0.0000		0.0000	0.0000	3.1212	48.2544	51.3756	0.3235	7.9300e-003	61.8261
Total	**1.1961**	**0.5534**	**4.9573**	**7.9100e-003**	**0.7888**	**0.0197**	**0.8084**	**0.2105**	**0.0193**	**0.2298**	**17.2210**	**1,027.0562**	**1,044.2771**	**1.2277**	**0.0455**	**1,088.5216**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7200	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766
Energy	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	289.5781	289.5781	0.0132	3.3300e-003	290.8985
Mobile	0.4652	0.4471	3.7969	7.2500e-003	0.7888	5.8800e-003	0.7947	0.2105	5.4800e-003	0.2160	0.0000	687.3911	687.3911	0.0559	0.0342	698.9889
Waste						0.0000	0.0000		0.0000	0.0000	14.0998	0.0000	14.0998	0.8333	0.0000	34.9315
Water						0.0000	0.0000		0.0000	0.0000	3.1212	48.2544	51.3756	0.3235	7.9300e-003	61.8261
Total	**1.1961**	**0.5534**	**4.9573**	**7.9100e-003**	**0.7888**	**0.0197**	**0.8084**	**0.2105**	**0.0193**	**0.2298**	**17.2210**	**1,027.0562**	**1,044.2771**	**1.2277**	**0.0455**	**1,088.5216**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/1/2022	12/14/2022	5	10	
2	Rock Drilling	Grading	12/15/2022	12/21/2022	5	5	
3	Grading	Grading	12/15/2022	1/25/2023	5	30	

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

4	Building Construction	Building Construction	1/26/2023	3/20/2024	5	300	
5	Architectural Coating	Architectural Coating	2/15/2024	4/17/2024	5	45	
6	Paving	Paving	3/21/2024	4/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.59

Residential Indoor: 305,775; Residential Outdoor: 101,925; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,584 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Rock Drilling	Bore/Drill Rigs	1	3.00	221	0.50
Grading	Crushing/Proc. Equipment	1	8.00	310	0.78
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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

Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	1,448.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Drilling	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	4,344.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	120.00	20.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0991**	**8.0600e-003**	**0.1072**	**0.0506**	**7.4200e-003**	**0.0581**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

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					0.0991	0.0000	0.0991	0.0506	0.0000	0.0506	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0991**	**3.1000e-004**	**0.0994**	**0.0506**	**3.1000e-004**	**0.0510**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2100e-003	0.1219	0.0288	4.5000e-004	0.0124	1.1300e-003	0.0135	3.4100e-003	1.0800e-003	4.4900e-003	0.0000	45.3812	45.3812	2.1800e-003	7.2100e-003	47.5841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.9000e-004	2.2100e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5936	0.5936	2.0000e-005	2.0000e-005	0.5991
Total	**3.4700e-003**	**0.1221**	**0.0310**	**4.6000e-004**	**0.0131**	**1.1300e-003**	**0.0143**	**3.6000e-003**	**1.0800e-003**	**4.6900e-003**	**0.0000**	**45.9748**	**45.9748**	**2.2000e-003**	**7.2300e-003**	**48.1832**

3.3 Rock Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	2.1200e-003	1.9100e-003	1.0000e-005		7.0000e-005	7.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7770	0.7770	2.5000e-004	0.0000	0.7833
Total	**2.1000e-004**	**2.1200e-003**	**1.9100e-003**	**1.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.7770**	**0.7770**	**2.5000e-004**	**0.0000**	**0.7833**

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

3.3 Rock Drilling - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1000e-004	4.8000e-004	4.0200e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.7770	0.7770	2.5000e-004	0.0000	0.7833
Total	**1.1000e-004**	**4.8000e-004**	**4.0200e-003**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.7770**	**0.7770**	**2.5000e-004**	**0.0000**	**0.7833**

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

3.3 Rock Drilling - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0495	0.0495	0.0000	0.0000	0.0499
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0495**	**0.0495**	**0.0000**	**0.0000**	**0.0499**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0283	0.2686	0.2016	5.0000e-004		0.0110	0.0110		0.0103	0.0103	0.0000	45.9126	45.9126	0.0111	0.0000	46.1905
Total	**0.0283**	**0.2686**	**0.2016**	**5.0000e-004**	**0.0863**	**0.0110**	**0.0973**	**0.0254**	**0.0103**	**0.0356**	**0.0000**	**45.9126**	**45.9126**	**0.0111**	**0.0000**	**46.1905**

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

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

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					0.0863	0.0000	0.0863	0.0254	0.0000	0.0254	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-003	0.0265	0.2543	5.0000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	45.9125	45.9125	0.0111	0.0000	46.1904
Total	**6.1000e-003**	**0.0265**	**0.2543**	**5.0000e-004**	**0.0863**	**8.1000e-004**	**0.0871**	**0.0254**	**8.1000e-004**	**0.0262**	**0.0000**	**45.9125**	**45.9125**	**0.0111**	**0.0000**	**46.1904**

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

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8500e-003	0.1463	0.0345	5.5000e-004	0.0149	1.3600e-003	0.0162	4.0900e-003	1.3000e-003	5.3900e-003	0.0000	54.4574	54.4574	2.6200e-003	8.6500e-003	57.1009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.9000e-004	3.3900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9101	0.9101	3.0000e-005	3.0000e-005	0.9187
Total	**4.2500e-003**	**0.1466**	**0.0379**	**5.6000e-004**	**0.0160**	**1.3700e-003**	**0.0174**	**4.3800e-003**	**1.3100e-003**	**5.6900e-003**	**0.0000**	**55.3676**	**55.3676**	**2.6500e-003**	**8.6800e-003**	**58.0195**

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					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0393	0.3577	0.2933	7.5000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	68.8694	68.8694	0.0166	0.0000	69.2854
Total	**0.0393**	**0.3577**	**0.2933**	**7.5000e-004**	**0.1044**	**0.0144**	**0.1188**	**0.0353**	**0.0134**	**0.0487**	**0.0000**	**68.8694**	**68.8694**	**0.0166**	**0.0000**	**69.2854**

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

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

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					0.1044	0.0000	0.1044	0.0353	0.0000	0.0353	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0397	0.3814	7.5000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	68.8693	68.8693	0.0166	0.0000	69.2853
Total	**9.1600e-003**	**0.0397**	**0.3814**	**7.5000e-004**	**0.1044**	**1.2200e-003**	**0.1056**	**0.0353**	**1.2200e-003**	**0.0365**	**0.0000**	**68.8693**	**68.8693**	**0.0166**	**0.0000**	**69.2853**

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

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1769	0.0471	7.8000e-004	0.0223	1.4500e-003	0.0238	6.1300e-003	1.3900e-003	7.5200e-003	0.0000	78.2109	78.2109	3.9400e-003	0.0124	82.0159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.9000e-004	4.7300e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3300	1.3300	4.0000e-005	4.0000e-005	1.3419
Total	**3.4400e-003**	**0.1773**	**0.0518**	**7.9000e-004**	**0.0240**	**1.4600e-003**	**0.0254**	**6.5700e-003**	**1.4000e-003**	**7.9700e-003**	**0.0000**	**79.5409**	**79.5409**	**3.9800e-003**	**0.0125**	**83.3578**

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	0.1903	1.7406	1.9655	3.2600e-003		0.0847	0.0847		0.0797	0.0797	0.0000	280.4837	280.4837	0.0667	0.0000	282.1518
Total	**0.1903**	**1.7406**	**1.9655**	**3.2600e-003**		**0.0847**	**0.0847**		**0.0797**	**0.0797**	**0.0000**	**280.4837**	**280.4837**	**0.0667**	**0.0000**	**282.1518**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.1074	0.0379	5.0000e-004	0.0161	6.3000e-004	0.0167	4.6400e-003	6.1000e-004	5.2500e-003	0.0000	48.5574	48.5574	1.4700e-003	7.0400e-003	50.6908
Worker	0.0393	0.0272	0.3318	1.0000e-003	0.1164	6.4000e-004	0.1171	0.0309	5.9000e-004	0.0315	0.0000	93.2917	93.2917	2.7300e-003	2.5700e-003	94.1261
Total	**0.0421**	**0.1346**	**0.3697**	**1.5000e-003**	**0.1325**	**1.2700e-003**	**0.1338**	**0.0356**	**1.2000e-003**	**0.0368**	**0.0000**	**141.8491**	**141.8491**	**4.2000e-003**	**9.6100e-003**	**144.8168**

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	0.0397	0.2704	2.1127	3.2600e-003		4.9400e-003	4.9400e-003		4.9400e-003	4.9400e-003	0.0000	280.4834	280.4834	0.0667	0.0000	282.1515
Total	**0.0397**	**0.2704**	**2.1127**	**3.2600e-003**		**4.9400e-003**	**4.9400e-003**		**4.9400e-003**	**4.9400e-003**	**0.0000**	**280.4834**	**280.4834**	**0.0667**	**0.0000**	**282.1515**

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.1074	0.0379	5.0000e-004	0.0161	6.3000e-004	0.0167	4.6400e-003	6.1000e-004	5.2500e-003	0.0000	48.5574	48.5574	1.4700e-003	7.0400e-003	50.6908
Worker	0.0393	0.0272	0.3318	1.0000e-003	0.1164	6.4000e-004	0.1171	0.0309	5.9000e-004	0.0315	0.0000	93.2917	93.2917	2.7300e-003	2.5700e-003	94.1261
Total	**0.0421**	**0.1346**	**0.3697**	**1.5000e-003**	**0.1325**	**1.2700e-003**	**0.1338**	**0.0356**	**1.2000e-003**	**0.0368**	**0.0000**	**141.8491**	**141.8491**	**4.2000e-003**	**9.6100e-003**	**144.8168**

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	0.0427	0.3899	0.4688	7.8000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**0.0427**	**0.3899**	**0.4688**	**7.8000e-004**		**0.0178**	**0.0178**		**0.0167**	**0.0167**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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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	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	6.6000e-004	0.0256	8.8700e-003	1.2000e-004	3.8500e-003	1.5000e-004	4.0000e-003	1.1100e-003	1.5000e-004	1.2600e-003	0.0000	11.4350	11.4350	3.6000e-004	1.6600e-003	11.9377
Worker	8.8500e-003	5.8600e-003	0.0744	2.3000e-004	0.0279	1.5000e-004	0.0281	7.4200e-003	1.3000e-004	7.5500e-003	0.0000	21.7988	21.7988	6.0000e-004	5.8000e-004	21.9853
Total	**9.5100e-003**	**0.0314**	**0.0833**	**3.5000e-004**	**0.0318**	**3.0000e-004**	**0.0321**	**8.5300e-003**	**2.8000e-004**	**8.8100e-003**	**0.0000**	**33.2339**	**33.2339**	**9.6000e-004**	**2.2400e-003**	**33.9230**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.5100e-003	0.0648	0.5064	7.8000e-004		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	67.2362	67.2362	0.0159	0.0000	67.6337
Total	**9.5100e-003**	**0.0648**	**0.5064**	**7.8000e-004**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**67.2362**	**67.2362**	**0.0159**	**0.0000**	**67.6337**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	6.6000e-004	0.0256	8.8700e-003	1.2000e-004	3.8500e-003	1.5000e-004	4.0000e-003	1.1100e-003	1.5000e-004	1.2600e-003	0.0000	11.4350	11.4350	3.6000e-004	1.6600e-003	11.9377
Worker	8.8500e-003	5.8600e-003	0.0744	2.3000e-004	0.0279	1.5000e-004	0.0281	7.4200e-003	1.3000e-004	7.5500e-003	0.0000	21.7988	21.7988	6.0000e-004	5.8000e-004	21.9853
Total	**9.5100e-003**	**0.0314**	**0.0833**	**3.5000e-004**	**0.0318**	**3.0000e-004**	**0.0321**	**8.5300e-003**	**2.8000e-004**	**8.8100e-003**	**0.0000**	**33.2339**	**33.2339**	**9.6000e-004**	**2.2400e-003**	**33.9230**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0700e-003	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**0.9526**	**0.0274**	**0.0407**	**7.0000e-005**		**1.3700e-003**	**1.3700e-003**		**1.3700e-003**	**1.3700e-003**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

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3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0116	4.0000e-005	4.3300e-003	2.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3826	3.3826	9.0000e-005	9.0000e-005	3.4115
Total	**1.3700e-003**	**9.1000e-004**	**0.0116**	**4.0000e-005**	**4.3300e-003**	**2.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3826**	**3.3826**	**9.0000e-005**	**9.0000e-005**	**3.4115**

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	0.9485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	2.9000e-003	0.0412	7.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	**0.9492**	**2.9000e-003**	**0.0412**	**7.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**5.7448**	**5.7448**	**3.2000e-004**	**0.0000**	**5.7529**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0116	4.0000e-005	4.3300e-003	2.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3826	3.3826	9.0000e-005	9.0000e-005	3.4115
Total	**1.3700e-003**	**9.1000e-004**	**0.0116**	**4.0000e-005**	**4.3300e-003**	**2.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3826**	**3.3826**	**9.0000e-005**	**9.0000e-005**	**3.4115**

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0107**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

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

3.7 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5700e-003**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

3.7 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.8000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9396	0.9396	3.0000e-005	2.0000e-005	0.9476
Total	**3.8000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9396**	**0.9396**	**3.0000e-005**	**2.0000e-005**	**0.9476**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4652	0.4471	3.7969	7.2500e-003	0.7888	5.8800e-003	0.7947	0.2105	5.4800e-003	0.2160	0.0000	687.3911	687.3911	0.0559	0.0342	698.9889
Unmitigated	0.4652	0.4471	3.7969	7.2500e-003	0.7888	5.8800e-003	0.7947	0.2105	5.4800e-003	0.2160	0.0000	687.3911	687.3911	0.0559	0.0342	698.9889

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,208.00	1,208.00	1208.00	2,108,639	2,108,639
Parking Lot	0.00	0.00	0.00		
Total	1,208.00	1,208.00	1,208.00	2,108,639	2,108,639

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
Condo/Townhouse	5.40	5.40	5.40	42.00	19.00	39.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

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

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	181.4100	181.4100	0.0111	1.3400e-003	182.0877
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	181.4100	181.4100	0.0111	1.3400e-003	182.0877
NaturalGas Mitigated	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
NaturalGas Unmitigated	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Condo/Townhouse	2.02699e+006	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0109**	**0.0934**	**0.0397**	**6.0000e-004**		**7.5500e-003**	**7.5500e-003**		**7.5500e-003**	**7.5500e-003**	**0.0000**	**108.1680**	**108.1680**	**2.0700e-003**	**1.9800e-003**	**108.8108**

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					
Condo/Townhouse	2.02699e+006	0.0109	0.0934	0.0397	6.0000e-004		7.5500e-003	7.5500e-003		7.5500e-003	7.5500e-003	0.0000	108.1680	108.1680	2.0700e-003	1.9800e-003	108.8108
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0109**	**0.0934**	**0.0397**	**6.0000e-004**		**7.5500e-003**	**7.5500e-003**		**7.5500e-003**	**7.5500e-003**	**0.0000**	**108.1680**	**108.1680**	**2.0700e-003**	**1.9800e-003**	**108.8108**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	731418	179.1469	0.0110	1.3300e-003	179.8161
Parking Lot	9240	2.2632	1.4000e-004	2.0000e-005	2.2716
Total		**181.4100**	**0.0111**	**1.3500e-003**	**182.0877**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	731418	179.1469	0.0110	1.3300e-003	179.8161
Parking Lot	9240	2.2632	1.4000e-004	2.0000e-005	2.2716
Total		**181.4100**	**0.0111**	**1.3500e-003**	**182.0877**

6.0 Area Detail

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7200	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766
Unmitigated	0.7200	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766

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

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	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5914					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	0.0337	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766
Total	**0.7200**	**0.0129**	**1.1207**	**6.0000e-005**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**1.8326**	**1.8326**	**1.7600e-003**	**0.0000**	**1.8766**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5914					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	0.0337	0.0129	1.1207	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	1.8326	1.8326	1.7600e-003	0.0000	1.8766
Total	**0.7200**	**0.0129**	**1.1207**	**6.0000e-005**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**1.8326**	**1.8326**	**1.7600e-003**	**0.0000**	**1.8766**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	51.3756	0.3235	7.9300e-003	61.8261
Unmitigated	51.3756	0.3235	7.9300e-003	61.8261

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.83826 / 6.20238	51.3756	0.3235	7.9300e-003	61.8261
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**51.3756**	**0.3235**	**7.9300e-003**	**61.8261**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.83826 / 6.20238	51.3756	0.3235	7.9300e-003	61.8261
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**51.3756**	**0.3235**	**7.9300e-003**	**61.8261**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.0998	0.8333	0.0000	34.9315
Unmitigated	14.0998	0.8333	0.0000	34.9315

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	69.46	14.0998	0.8333	0.0000	34.9315
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0998**	**0.8333**	**0.0000**	**34.9315**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	69.46	14.0998	0.8333	0.0000	34.9315
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**14.0998**	**0.8333**	**0.0000**	**34.9315**

9.0 Operational Offroad

Barham 151 Unit Multi-Family Operational Year 2025 - San Diego County, Annual

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

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

ATTACHMENT B

AERSCREEN for PM_{10} Exhaust

TITLE: Barham 151 Unit Multi-Family

********** AREA PARAMETERS **********

SOURCE EMISSION RATE: 0.186E-04 g/s 0.148E-03 lb/hr

AREA EMISSION RATE: 0.436E-09 g/(s-m2) 0.346E-08 lb/(hr-m2)
AREA HEIGHT: 3.00 meters 9.84 feet
AREA SOURCE LONG SIDE: 206.63 meters 677.92 feet
AREA SOURCE SHORT SIDE: 206.63 meters 677.92 feet
INITIAL VERTICAL DIMENSION: 1.00 meters 3.28 feet
RURAL OR URBAN: URBAN
POPULATION: 80000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********
25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.1601E-01	45	125.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	28	28	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.92	0.043	-9.000	0.020	-999.	21.	8.5	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR	MO	DY	JDY	HR

```
 -- -- -- --- --
 10 01 28  28 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -0.92  0.043 -9.000  0.020 -999.   21.      8.5 1.000   1.50   0.35    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   310.0    2.0
```

********** AERSCREEN AUTOMATED DISTANCES **********

OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.1178E-01	2525.00	0.5379E-03
25.00	0.1276E-01	2550.00	0.5329E-03
50.01	0.1367E-01	2575.00	0.5281E-03
75.00	0.1451E-01	2600.00	0.5234E-03
100.00	0.1528E-01	2625.00	0.5188E-03
125.00	0.1601E-01	2650.00	0.5144E-03
150.01	0.1561E-01	2675.00	0.5101E-03
174.99	0.1212E-01	2700.00	0.5059E-03
200.00	0.1003E-01	2725.00	0.5018E-03
225.00	0.8642E-02	2750.00	0.4978E-03
250.00	0.7581E-02	2775.00	0.4939E-03
274.99	0.6775E-02	2800.00	0.4901E-03
300.00	0.6135E-02	2825.00	0.4864E-03
325.00	0.5612E-02	2849.99	0.4827E-03
350.00	0.5175E-02	2875.00	0.4792E-03
375.01	0.4801E-02	2900.00	0.4757E-03
400.00	0.4478E-02	2925.00	0.4723E-03
425.00	0.4194E-02	2950.00	0.4690E-03
450.00	0.3943E-02	2975.00	0.4658E-03
475.01	0.3718E-02	2999.99	0.4626E-03
500.00	0.3516E-02	3025.00	0.4595E-03
525.00	0.3333E-02	3050.00	0.4564E-03
550.00	0.3166E-02	3075.00	0.4534E-03
575.01	0.3014E-02	3100.00	0.4504E-03
599.99	0.2873E-02	3125.00	0.4475E-03
625.00	0.2745E-02	3150.00	0.4447E-03
650.00	0.2625E-02	3175.00	0.4419E-03
675.00	0.2515E-02	3200.00	0.4392E-03
699.99	0.2413E-02	3225.00	0.4366E-03
725.00	0.2317E-02	3250.00	0.4341E-03
750.00	0.2228E-02	3275.00	0.4315E-03
775.00	0.2144E-02	3300.00	0.4291E-03
800.01	0.2066E-02	3325.00	0.4266E-03
825.00	0.1992E-02	3350.00	0.4242E-03
850.00	0.1923E-02	3375.00	0.4218E-03
875.00	0.1858E-02	3400.00	0.4195E-03
900.01	0.1797E-02	3425.00	0.4172E-03
924.99	0.1739E-02	3450.00	0.4149E-03
950.00	0.1684E-02	3475.00	0.4126E-03
975.00	0.1632E-02	3500.00	0.4104E-03
1000.00	0.1583E-02	3525.00	0.4184E-03
1024.99	0.1536E-02	3550.00	0.4161E-03
1050.00	0.1492E-02	3575.00	0.4139E-03
1075.00	0.1449E-02	3600.00	0.4117E-03
1100.00	0.1409E-02	3625.00	0.4095E-03
1125.00	0.1371E-02	3650.00	0.4074E-03
1150.00	0.1334E-02	3675.00	0.4053E-03
1175.00	0.1299E-02	3700.00	0.4032E-03
1200.00	0.1266E-02	3725.00	0.4012E-03
1225.01	0.1234E-02	3750.00	0.3992E-03
1250.00	0.1204E-02	3775.00	0.3972E-03
1275.00	0.1175E-02	3800.00	0.3952E-03
1300.00	0.1147E-02	3825.00	0.3933E-03
1325.00	0.1120E-02	3850.00	0.3914E-03
1350.00	0.1094E-02	3875.00	0.3895E-03
1375.00	0.1070E-02	3900.00	0.3877E-03
1400.00	0.1046E-02	3925.00	0.3859E-03
1425.00	0.1024E-02	3950.00	0.3841E-03
1449.99	0.1002E-02	3975.00	0.3823E-03
1475.00	0.9815E-03	4000.00	0.3805E-03
1500.00	0.9615E-03	4025.00	0.3788E-03
1525.00	0.9420E-03	4050.00	0.3771E-03
1550.01	0.9233E-03	4075.00	0.3754E-03
1575.00	0.9054E-03	4100.00	0.3737E-03
1600.00	0.8882E-03	4125.00	0.3721E-03
1625.00	0.8716E-03	4150.00	0.3704E-03
1650.01	0.8557E-03	4175.00	0.3688E-03
1674.99	0.8405E-03	4200.00	0.3673E-03
1700.00	0.8258E-03	4225.00	0.3657E-03

1725.00	0.8116E-03	4250.00	0.3641E-03
1750.00	0.7980E-03	4275.00	0.3626E-03
1774.99	0.7847E-03	4300.00	0.3611E-03
1800.00	0.7720E-03	4325.00	0.3596E-03
1825.00	0.7595E-03	4350.00	0.3581E-03
1850.00	0.7475E-03	4375.00	0.3566E-03
1875.00	0.7360E-03	4400.00	0.3552E-03
1900.00	0.7248E-03	4425.00	0.3537E-03
1925.00	0.7141E-03	4450.00	0.3523E-03
1950.00	0.7037E-03	4475.00	0.3509E-03
1975.00	0.6936E-03	4500.00	0.3495E-03
1999.99	0.6839E-03	4525.00	0.3481E-03
2025.00	0.6745E-03	4550.00	0.3468E-03
2050.00	0.6655E-03	4575.00	0.3454E-03
2075.00	0.6568E-03	4600.00	0.3441E-03
2099.99	0.6484E-03	4625.00	0.3428E-03
2125.00	0.6402E-03	4650.00	0.3414E-03
2150.00	0.6323E-03	4675.00	0.3401E-03
2175.00	0.6247E-03	4700.00	0.3389E-03
2199.99	0.6172E-03	4725.00	0.3376E-03
2225.00	0.6100E-03	4750.00	0.3363E-03
2250.00	0.6030E-03	4775.00	0.3351E-03
2275.00	0.5961E-03	4800.00	0.3338E-03
2300.00	0.5895E-03	4825.00	0.3326E-03
2325.00	0.5831E-03	4850.00	0.3314E-03
2350.00	0.5769E-03	4875.00	0.3302E-03
2375.00	0.5708E-03	4900.00	0.3290E-03
2400.00	0.5649E-03	4925.00	0.3278E-03
2425.00	0.5592E-03	4950.00	0.3267E-03
2450.00	0.5536E-03	4975.00	0.3255E-03
2475.00	0.5482E-03	5000.00	0.3244E-03
2500.00	0.5430E-03		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.1652E-01	0.1652E-01	0.1652E-01	0.1652E-01	N/A

DISTANCE FROM SOURCE 144.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.1178E-01	0.1178E-01	0.1178E-01	0.1178E-01	N/A

DISTANCE FROM SOURCE 1.00 meters

ATTACHMENT C

Cancer Risk Calculations

Air Quality Health Risk Calculations (Worst-Case)
Barham 151 Unit Multi-Family (PDF Tier 4 Equipment)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.00893**					
	Construction Start	**12/1/2022**					
	Construction Complete	**4/17/2024**	1.60E-02				
	Days	**503**					
	Construction Emission per day (lb/day)	**0.035506958**					
	Annual Duration (Days)	**365**					
	Annualized Emission Rate (Grams/Second)	**1.86E-04**					
	Project Site Size (Acres)	**10.55**					
	Project Site Size (meters^2)	**42694.33526**					
	Length of Smalles Side (meters)	**206.6260759**					
Used as an input to AERSCREEN	Emission Rate over Grading Area(g/s-m^2)	**4.36E-09**					
From AERSCREEN*0.08	Concentration Annual (Ug/M^3)	**0.0128**					
		Days	Days to years				
Duration		503	1.378082192				
Age (Years)		3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15		0.0128	0.0128	0.0128	0.0128	0.0128	0.0128
Breathing Rate per agegroup BR/BW (Page 5-25)		361	1090	861	745	335	290
A (Default is 1)		1	1	1	1	1	1
Exposure Frequency = EF (days/365days)		0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3		0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh		0.00000444	0.00001339	0.00001058	0.00000915	0.00000412	0.00000356
Construction Days		503	1.378082192				
potency factor for Diesel		1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor		10	10	3	3	1	1
ED		0.25	1.378082192	1.378082192	1.378082192	1.378082192	1.378082192
AT		70	70	70	70	70	70
FAH		0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group		1.4813E-07	2.46545E-06	4.94889E-07	4.28214E-07	6.50757E-08	5.63342E-08
Risk per million Exposed		0.148129646	2.465451094	0.49488908	0.428214129	0.065075668	0.05633416
Cancer Risk Per Million 9-years		3.11					
Cancer Risk Per Million 30-years		3.11					
Cancer Risk Per Million 70-years		**3.10**					

ATTACHMENT D

Terex 4242SR Rock Crusher Cut Sheet

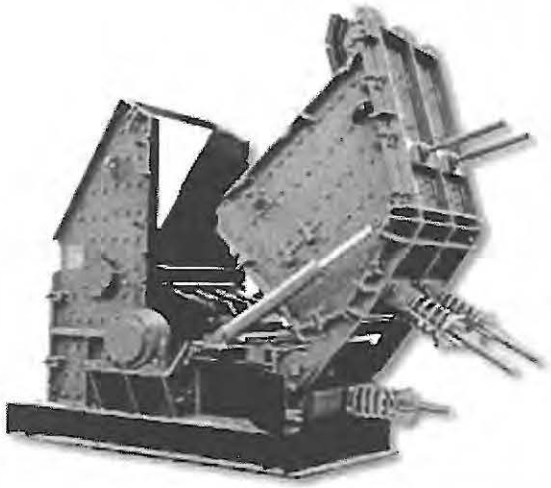
TEREX | PEGSON

4242SR SPECIFICATION

Above photograph features a 4242SR fitted with the optional side conveyor and magnet

IMPACT CRUSHER

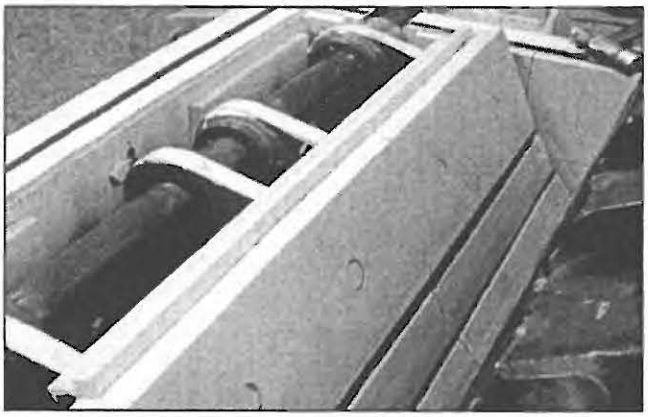
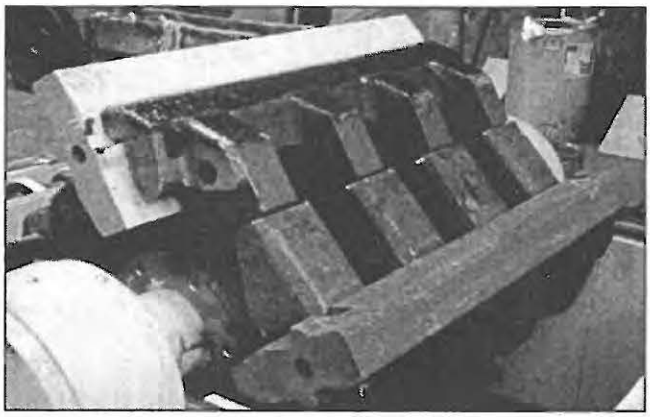
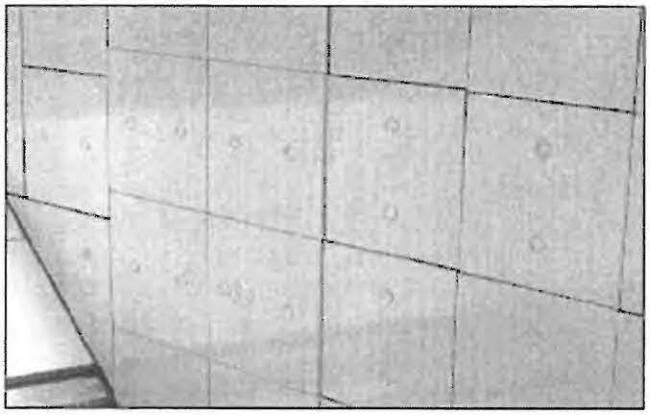
Crusher type:	428 Fixed Hammer Impactor.
Feed opening:	1067mm x 711mm.
Rotor Width:	1066 mm.
Rotor Diameter:	1066 mm (Over Hammers).
Crusher frame:	Fabricated from steel plate and fitted with replaceable liner plates.
Rotor:	Runs in two heavy-duty spherical self aligning roller bearings and is fitted with four reversible and replaceable fixed blow bars.
Blowbars:	Two full size and two half size high manganese blow bars are fitted as standard.
Impact aprons:	Fitted in upper and middle positions and lined with wear resistant impact plates.
Drive:	Through wedge belts with screw tension adjustment on engine.
Engine pulley:	Machines built for stock are fitted with the standard speed pulley (suitable for quarry applications). The slower crusher pulley is supplied loose.
Maximum feed size:	$400mm^3$ depending on type of blow bar and material being processed.
Impactor speeds:	Slow 504 rpm (224mm diameter) Std. 630 rpm (280mm diameter)
Lubrication:	Greased roller bearings, inner and outer labyrinth seals.
Adjustment:	Manual adjustment on upper and lower aprons with overload compression springs on lower apron.
Maintenance:	Hydraulic case opening
Crusher Liners:	Fully lined internally with abrasion resistant steel.
Grinding path:	Optional grinding path with manual adjustment and overload compression springs suitable for certain quarry applications.



APPLICATIONS

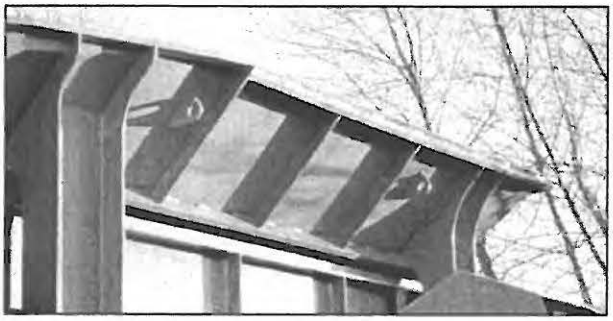
This plant is designed for both demolition and quarrying applications. When fitted with manganese blow bars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other uncrushable objects, and the feed material should be assessed / inspected for suitability prior to use. It is vitally important that large pieces of steel or similar uncrushable objects are not allowed to enter the crushing chamber as severe damage and injury may occur. When High Chrome bars are fitted, no steel should be allowed to enter the chamber, the machine should only be used on quarry applications, or clean materials such as asphalt.

IMPACT CRUSHER - INTERNAL


HOPPER

Hopper type:	Fixed Hopper.
Hopper length:	4m.
Hopper width:	2.1m.
Hopper capacity:	Up to 3.8m^3 gross depending on method of feed.
Hopper body:	Hardox wear resistant steel plate with suitably braced steel sections.



VIBRATING GRIZZLY FEEDER

Type:	Spring mounted vibrating pan.
Vibrating unit:	Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end.
Length:	3.8m.
Width:	1.08m.
Pan:	12mm thick abrasion resistant steel bottom plate is included in the welded construction.
Drive:	Flange mounted hydraulic motor
Grizzly:	2.16m long double section of welded tapered finger bars at 50mm spaces fabricated in 20mm thick abrasion resistant steel.
Underscreen:	Removable rubber blanking mat fitted as standard. This can be substituted for various aperture wire meshes.
Control:	Variable speed control through a proportional flow control valve.

PLANT CHUTEWORK

Impactor feed chute: Fabricated in 10mm mild steel plate with full width single strand chain curtain and rubber curtain. Liners are fitted at wear points.

Grizzly fines chute: Chutework fabricated in 6mm mild steel plate is provided with two-way flapdoor. Material passing over the blanking mat is discharged to the main product conveyor via the bypass chute.

ON PLANT PRODUCT CONVEYOR

CONVEYOR 1

Conveyor type: Troughed belt conveyor with fixed tail end.

Belt type: Ripstop EP500/3 with 5mm top and 2mm bottom heavy-duty rubber covers.

Belt width: 1m.

Drive: Direct drive hydraulic motor

Feedboot: Fabricated in mild steel plate with abrasion resistant steel liners.

Control: Fixed speed.

Skirting: Fully skirted wear resistant rubber sealing along the conveyor length.

Belt covers: Canvas type removable dust covers are fitted at the head end.

Impact cradle: This is provided beneath the belt immediately below the impactor outlet.

Lubrication: Grease nipples located on bearing housings at tailshaft.

TOP DECK SIDE TRANSFER CONVEYOR

CONVEYOR 2

Conveyor type: Plain belt.

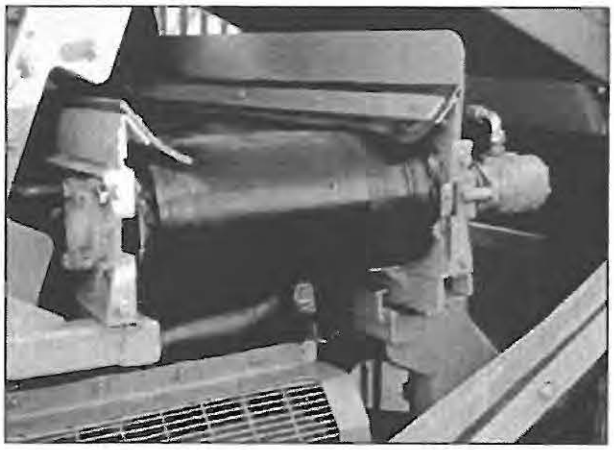
Belt type: EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.

Conveyor: Transfers material from the top deck of the sizing screen to the re-circulating conveyor.

Width: 500mm.

Drive: Direct drive hydraulic motor.

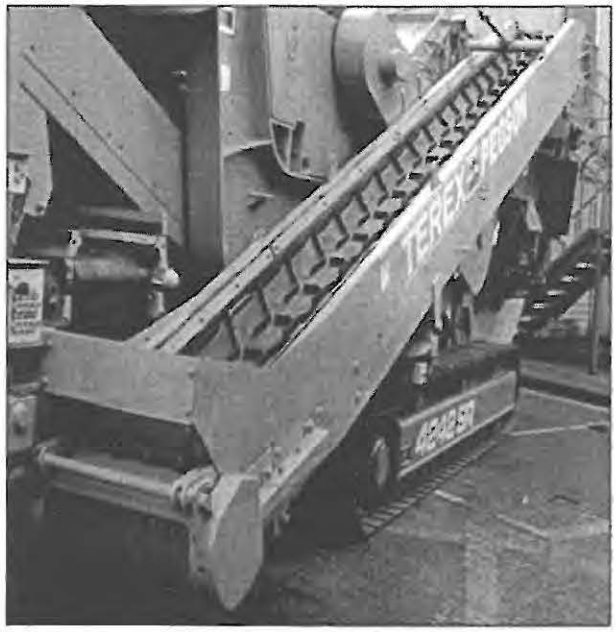
Lubrication: Grease nipples located on bearing housing at head and tailshaft.



RE-CIRCULATING CONVEYOR

CONVEYOR 3

Conveyor type:	Chevron type troughed belt.
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Conveyor:	Returns oversize material transferred from the top deck back to the impactor for re-crushing. This conveyor can be slewed to enable oversize material to be stockpiled at the side of the plant.
Width:	500mm.
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples located on bearing housing for tailshaft. Remote grease nipples for head drum.



FINES PRODUCT CONVEYOR

CONVEYOR 4

Conveyor type:	Plain troughed belt
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Position:	Mounted beneath the sizing screen.
Width:	1.4m.
Discharge Height:	2.93m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.
Control:	Fixed Speed.

BOTTOM DECK SIDE TRANSFER CONVEYOR

CONVEYOR 5

Conveyor type:	Plain belt.
Belt type:	EP400/2 with 5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.
Conveyor:	Transfers material from the bottom deck of the sizing screen to the optional plant mounted stockpiling conveyor or the re-circulating conveyor when in position.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft.

STOCKPILING CONVEYOR

CONVEYOR 6 (Optional extra)

Conveyor type:	Chevron type troughed belt
Belt type:	EP315/2 with 3mm top and 1mm bottom rubber covers, 35mm high cleats and a vulcanised joint.
Width:	500mm.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at tailshaft. Remote grease nipples for head drum.
Conveyor:	Stockpiles material transferred from the bottom deck side transfer conveyor to the side of the plant.

SIZING SCREEN

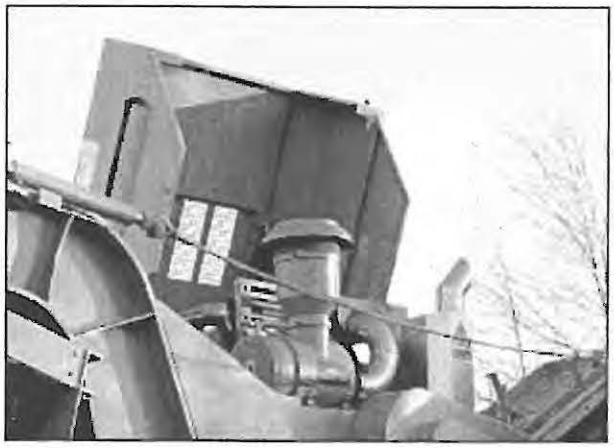
Type:	Double deck vibrating screen (Four bearing type)
Size:	1525 x 3350.
Position:	Mounted beneath the impactor product conveyor.
Drive:	Hydraulic drive.
Top deck:	45mm aperture fitted as standard
Bottom deck:	Optional mesh.
Control:	Fixed speed. (1100 rpm)
Lubrication:	Four grease nipples.
Access:	Fines conveyor and screen can be lowered for maintenance.

POWERPACK

Powerpack type:	Caterpillar C-9.
Performance:	309 HP (230kW) at 1800 rpm at sea level.
Engine:	Six cylinders, four stroke, direct Injection.
Fuel tank capacity:	463 Litres.

CLUTCH

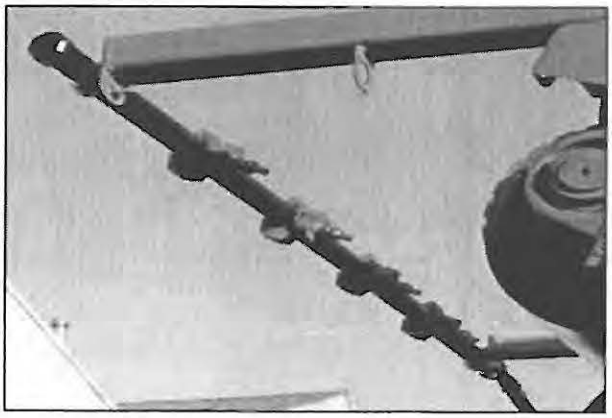
Clutch type:	Manually operated twin disc clutch.



DUST SUPPRESSION SPRAYS

Sprays bars with atomiser nozzles are mounted over the impactor discharge point and the fines product conveyor head piped to an inlet manifold for client's pressured water supply.

Type:	Clean water multi atomising nozzles.
Inlet:	Single Point.
Pressure required:	2.8 bar (42 psi).
Water supply:	7 litres per minute.
Frost protection:	Via system drain valves.
Pump:	Optional extra.



CRAWLER TRACKS

Type:	Heavy-duty tracks fitted as standard.
Pitch:	160mm.
Longitudinal centres:	3800mm.
Track width:	400 mm.
Climbing grade:	29˚ maximum.
High speed:	0.8 km/hr.
Slow speed:	0.322 km/hr.
Drive:	Hydraulic integral motors
Track tensioning:	Hydraulic adjuster, grease tension.

GUARDS

Wire mesh or sheet metal guards are provided for all drives, flywheels, pulleys & couplings.

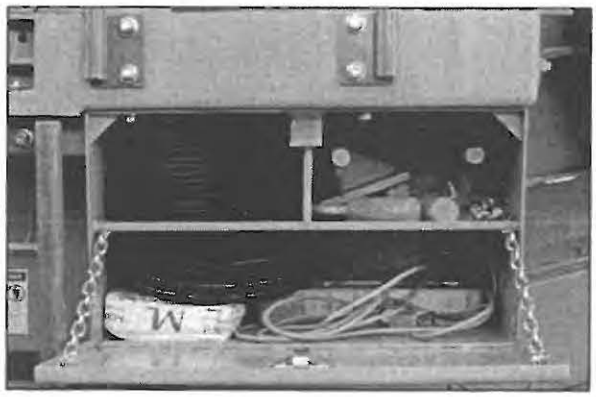
The guards provided are designed and manufactured to CE & ANSI standards.

PLATFORMS

A steel grid maintenance platform is provided on one side of the feeder and impactor fitted with double row handrails and access ladders. Platforms are also included to gain access to the rear of the crusher and the powerpack.

TOOLBOX

A plant mounted lockable toolbox is provided containing the slower speed pulley, operators manual, impactor stops, spanner, door open locking pins, screen mesh tensioning hoses, blow bar ejector hoses and a grease gun.



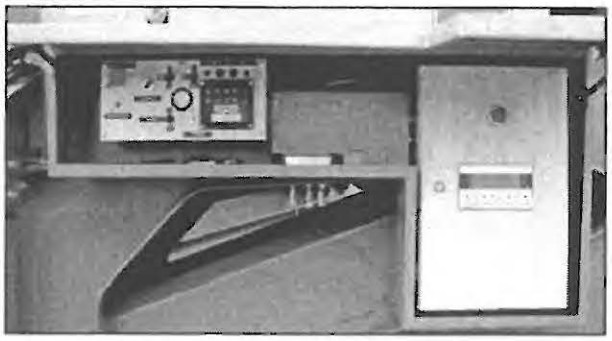
CHASSIS

Heavy duty steel fabricated I section of welded construction.

PLC CONTROLS

A PLC control system is fitted onto the plant to operate the following items: -

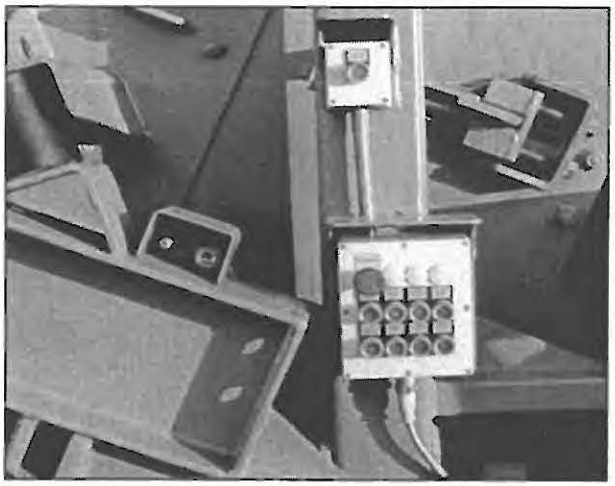
- Feeder (Start/Stop/Speed).
- Optional Dirt Conveyor (Start/Stop).
  (Also operates Re-Circulating, stockpiling and side transfer conveyors)
- Product Conveyor (Start/Stop).
- Screen and fines conveyor (Start/Stop).



SET UP CONTROLS

Controls are fitted onto the plant to operate the following items: -

- Side chute (Raise/Lower).
- Screen/Fines Conveyor (Raise/Lower).
- Recirculating Conveyor (Raise/Lower).
- Dirt Conveyor (Raise/Lower)



UMBILICAL CONTROL

An umbilical control unit is also supplied with the plant. This is fitted with controls for the track motion, feeder stop, start and a stop button for the plant.

OPTIONAL EXTRAS

(For prices refer to your dealer)

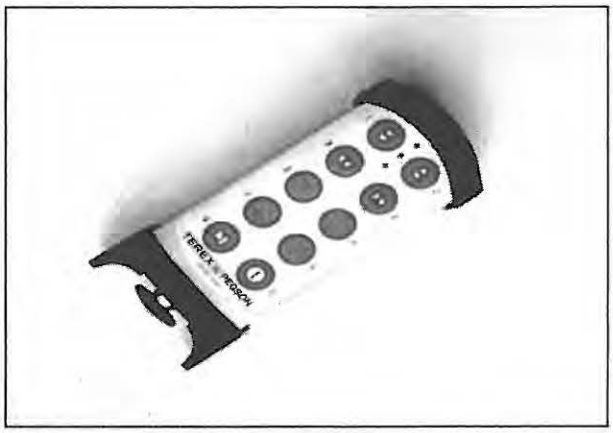
- High Chrome hammers (only for use when no steel in feed).
- Single idler belt weigher with integrator and speed sensing wheel fitted to fines conveyor.
- 500mm wide stockpiling conveyor from the bottom oversize transfer conveyor.
- Four full size hammers in lieu of two full and two half hammers.
- Re-fuelling pump kit.
- Radio remote control.
- Overband magnetic separator
- Side/dirt conveyor.
- Wire meshes for feeder underscreen to separate scalpings at 10mm, 20mm, 30mm, 40mm or 50mm. The optional dirt conveyor must be fitted.
- Grinding path (not suitable for demolition applications) fitted in the lower position and lined with wear resistant impact plates on the upper section, and reversible manganese impact bars on the lower section. When fitted greater control of the product size is achieved together with improved product shape.

RECOMMENDED OPTIONAL EXTRAS

- Engine fire extinguisher system.
- Hydraulic driven water pump assembly to provide a pressurised water supply to the dust suppression sprays.

REMOTE CONTROL (OPTIONAL EXTRA)

This option will control the tracking function and also provides stop and start controls for the vibrating grizzly feeder, together with a stop button for the plant. **This facility is only available in certain countries where type approval has been obtained.** For a full list of countries, please consult TP or your dealer.



ON PLANT DIRT/SIDE CONVEYOR

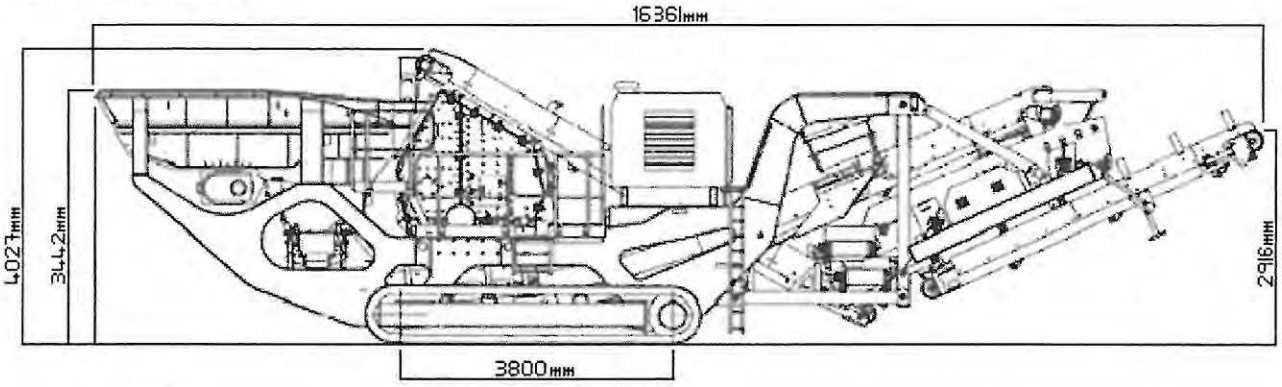
(OPTIONAL EXTRA) CONVEYOR DC

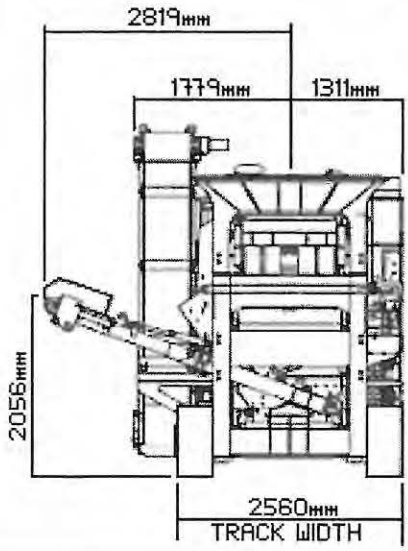
Conveyor type:	Plain troughed belt, hydraulic folding for transport.
Width:	600mm.
Discharge height:	2.0m.
Drive:	Direct drive hydraulic motor.
Lubrication:	Grease nipples located on bearing housing at head and tailshaft. Remote greasing at tail drum.
Skirts:	Full length.
Position:	Mounted to discharge on near side of plant.

MAGNET
(OPTIONAL EXTRA)

Magnet Type:	Suspended self-cleaning overband, fitted with endless belt.
Magnet Width:	750mm.
Magnet length:	1000mm.
Drive:	Hydraulic Motor.
Control:	Pre-set variable speed.
Discharge chute:	Via stainless steel shedder plate.
Power:	570 Gauss at 200mm. 450 Gauss at 250mm.

PLANT DIAGRAM





APPROXIMATE OVERALL PLANT WEIGHTS & DIMENSIONS

Operating Length:	**16361 mm**
Operating Height:	**4027 mm**
Transport Length:	**16361 mm**
Transport Width:	**3090 mm**
Transport Height:	**3442 mm**
Total plant weight:	**44500 Kg**

PAINTING

The plant is finish painted RAL 5015 Blue. The tracks and handrails are painted RAL 7012 Grey.

GENERAL

TEREX | Pegson equipment complies with CE requirements.

The plant is designed to operate between ambient temperatures of between -10c and 40c at altitudes up to 1000 meters above sea level. For applications outside this range please consult with Terex Pegson Limited.

Above line drawings feature a 4242SR with optional magnet and side conveyor.

Please consult TEREX | Pegson if you have any other specific requirements in respect of guarding, noise or vibration levels, dust emissions, or any other factors relevant to health and safety measures or environmental protection needs. On receipt of specific requests, we will endeavour to ascertain the need for additional equipment and, if appropriate, quote extra to contract prices. Every endeavour will be made to supply equipment as specified, but we reserve the right, where necessary, to amend the specifications without prior notice as we operate a policy of continual product development. It is the importers responsibility to check that all equipment supplied complies with local legislation.

ATTACHMENT E

EMFAC – VMT per Trip Oceanside Calculation

EMFAC2014 (v1.0.7) Emission Rates
Region Type: County
Region: San Diego
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips
San Diego	2025	HHDT	Aggregated	Aggregated	GAS	161.1216337	21202.37807	3223.721647
San Diego	2025	HHDT	Aggregated	Aggregated	DSL	15341.84567	2103842.221	0
San Diego	2025	LDA	Aggregated	Aggregated	GAS	1430879.21	47587916.84	9062515.432
San Diego	2025	LDA	Aggregated	Aggregated	DSL	18230.05635	610522.5588	114299.8171
San Diego	2025	LDA	Aggregated	Aggregated	ELEC	102949.8741	4362999.303	668758.3291
San Diego	2025	LDT1	Aggregated	Aggregated	GAS	110056.6214	3351787.675	665740.3764
San Diego	2025	LDT1	Aggregated	Aggregated	DSL	135.5653413	2803.107134	658.3286144
San Diego	2025	LDT1	Aggregated	Aggregated	ELEC	41.86046771	1338.281949	253.6785286
San Diego	2025	LDT2	Aggregated	Aggregated	GAS	445728.9448	15377108.99	2820576.047
San Diego	2025	LDT2	Aggregated	Aggregated	DSL	944.5915358	33384.93915	6012.222933
San Diego	2025	LHDT1	Aggregated	Aggregated	GAS	17137.47188	468069.7958	255322.7962
San Diego	2025	LHDT1	Aggregated	Aggregated	DSL	23103.06152	724642.3549	290607.4503
San Diego	2025	LHDT2	Aggregated	Aggregated	GAS	4048.832368	139572.0706	60321.56952
San Diego	2025	LHDT2	Aggregated	Aggregated	DSL	8965.43705	322602.574	112773.9196
San Diego	2025	MCY	Aggregated	Aggregated	GAS	70674.39783	501031.3352	141334.6608
San Diego	2025	MDV	Aggregated	Aggregated	GAS	267677.4564	8534402.663	1665093.779
San Diego	2025	MDV	Aggregated	Aggregated	DSL	5742.887036	206955.8564	36633.47691
San Diego	2025	MH	Aggregated	Aggregated	GAS	8633.503985	64191.89208	863.6957387
San Diego	2025	MH	Aggregated	Aggregated	DSL	2309.531209	17748.26353	230.9531209
San Diego	2025	MHDT	Aggregated	Aggregated	GAS	3092.563169	161145.5943	61876.00388
San Diego	2025	MHDT	Aggregated	Aggregated	DSL	25605.17262	1301919.202	0
San Diego	2025	OBUS	Aggregated	Aggregated	GAS	1716.976671	92464.33544	34353.26924
San Diego	2025	OBUS	Aggregated	Aggregated	DSL	935.0309742	73876.47022	0
San Diego	2025	SBUS	Aggregated	Aggregated	GAS	438.5086625	19991.26012	1754.03465
San Diego	2025	SBUS	Aggregated	Aggregated	DSL	1213.170137	45957.63464	0
San Diego	2025	UBUS	Aggregated	Aggregated	GAS	472.4052031	63912.54677	1889.620812
San Diego	2025	UBUS	Aggregated	Aggregated	DSL	690.1969245	93377.97918	2760.787698
						Total	86284768.12	16007853.97
						Total VMT/Trip		5.390152126