Appendix A

Air Quality Assessment

Air Quality Assessment
469 Piercy Road Project
City of San José, California

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LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
BAAQMD	Bay Area Air Quality Management District
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	Lead
LST	local significance threshold
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	Ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SF	square foot
SO_{4-2}	Sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the 469 Piercy Road Project ("project" or "proposed project") in the City of San José. The purpose of this Air Quality Assessment is to evaluate potential short- and long-term air quality impacts associated with the Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION

The proposed project is located at 469 Piercy Road in San José. Figure 1: Regional Vicinity and Figure 2: Site Vicinity, depict the project site in a regional and local context. The project site is located in an urban area with a mix of surrounding uses including commercial, office, residential and industrial uses. To the northeast of the project site is open space. The project site's existing land use designation is Industrial Park (IP) and existing zoning designation is Combined Industrial/Commercial (CIC) Zoning District. The project site is currently developed with an approximately 6,939 square foot (sf) single-family residence and a detached garage structure in the northeast corner of the site.

1.2 PROJECT DESCRIPTION

The project intends to redevelop the property as a modern industrial facility. The proposed project would demolish the existing single-family residential structure and redevelop the property with a new approximately 134,605 (sf) warehouse building. The proposed single-story warehouse building would contain approximately 129,605 sf of warehouse space and 5,000 sf of office space refer to Figure 3: Project Site Plan. The warehouse building would include 18 dock doors on its northern side. The proposed project includes surface parking with 86 automobile (passenger vehicle) spaces. Of the 86 automobile spaces provided, 35 would be electric vehicle (EV) capable. In addition, 10 bicycle racks and 4 motorcycle parking spaces would be provided.

Access to the project site would be provided by two driveways, a 32-foot wide driveway located on the northeast corner of the site off Piercy Road and a 26-foot wide driveway located on the southwest corner of the site off Hellyer Avenue. The Piercy Road driveway would provide access for trucks and trailers, in addition to passenger vehicles. The Hellyer Avenue driveway would provide primary access for passenger vehicles.

The proposed project would be constructed over the course of approximately 13 months. Demolition is anticipated to occur for one month prior to a 12-month construction phase. The construction of the project was modeled with the California Emissions Estimator Modeling (CalEEMod) and was modeled to occur from Fall 2022 to Fall 2023. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. The proposed project would require approximately 1,655 cubic yards (cy) of soil export during the grading phases of construction.

Source: USGS, 2021

Figure 1: Regional Map

469 Piercy Road Project

Not to scale

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Source: Nearmap, 2022

Figure 2 Project Vicinity Map

469 Piercy Road Project

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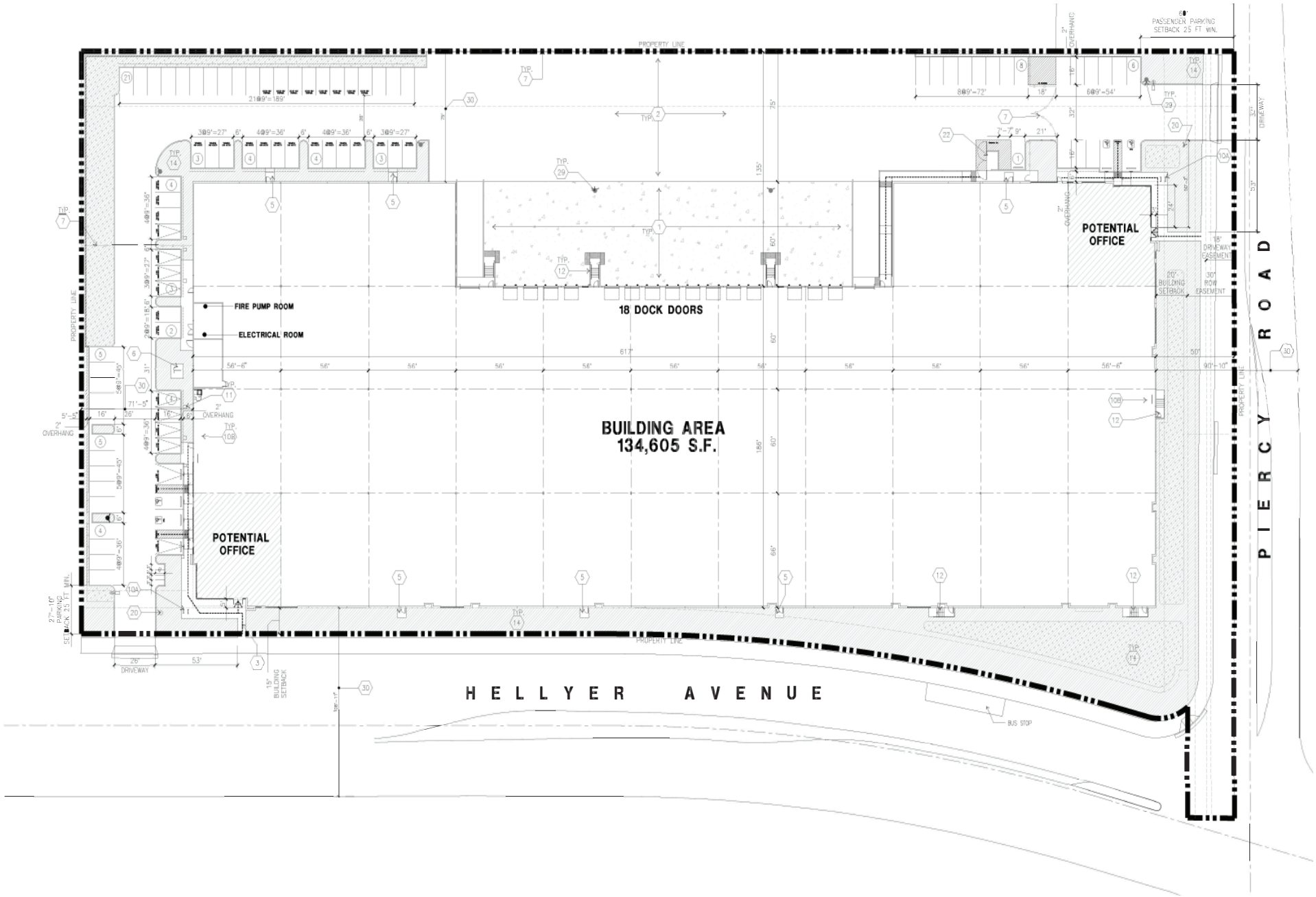

Source: Kier + Wright, 2022

Figure 3: Project Site Plan

469 Piercy Road Project

Not to scale

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2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below. The Bay Area Air Quality Management District (BAAQMD) is responsible for local control and monitoring of criteria air pollutants throughout the Basin.

Climate, or the average weather condition, affects air quality in several ways. Wind patterns can remove or add air pollutants emitted by stationary or mobile sources. Inversion, a condition where warm air traps cooler air underneath it, can hold pollutants near the ground by limiting upward mixing (dilution). Topography also affects the local climate, as valleys often trap emissions by limiting lateral dispersal.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next to the ground. During radiation inversions downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

The frequency of hot, sunny days during the summer months in the Basin is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone.

The climate is dominated by the location and strength of a semi-permanent, subtropical high-pressure cell. In the summer, the Pacific cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the coast which results in condensation and the presence of fog and stratus clouds along the coast. In the winter, the high-pressure cell weakens and shifts southward, resulting in increased wind flow offshore, the absence of upwelling, and the occurrence of storms.

The Basin is characterized by moderately wet winters (November through March) and dry summers. The rainfall in the mountains reaches 40 inches while the valley sees less than 16 inches. Generally, coastal temperatures can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed.

The project site is located in the City of San José and Santa Clara County; on the southern perimeter of the San Francisco Bay. The City of San José has a generally mild climate, with average temperatures in the low 80's Fahrenheit in the summer and high 50's Fahrenheit in the winter. The annual rainfall is approximately 15 inches in the City, primarily between November and April. The regulatory section below discusses the various buffer zones around sources of air pollution sufficient to avoid adverse health and nuisance impacts on nearby receptors.

2.2 AIR POLLUTANTS OF PRIMARY CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Ozone, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NO_X in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_X and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the Basin. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 miles per hour (mph), then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, capcoa.org/health-effects/, accessed March 24, 2022.

Toxic Air Contaminants

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

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

2.3 AMBIENT AIR QUALITY

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

Ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) are pollutants of concern in the BAAQMD. The closest air monitoring station to the project site that monitors ambient concentrations of these pollutants is the San Jose-Jackson Street Monitoring Station located approximately 8.7 miles northwest of the project site. Local air quality data from 2018 to 2020 is provided in Table 2: Ambient Air Quality Data lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year. Particulate matter (PM_{10} and $PM_{2.5}$) were both exceeded in 2020 at the closest monitoring station.

Table 2: Ambient Air Quality Data

Pollutant	San Jose- Jackson Street[1]		
	2018	2019	2020
Ozone (O_3)			
1-hour Maximum Concentration (ppm)	0.078	0.095	.106
8-hour Maximum Concentration (ppm)	0.061	0.081	0.085
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	0	1	1
NAAQS 8-hour (>0.070 ppm)	0	2	2
Carbon Monoxide (CO)			
1-hour Maximum Concentration (ppm)	2.51	1.71	1.66
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1 hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
1-hour Maximum Concentration (ppm)	0.0861	0.0598	0.0519
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.100 ppm)	0	0	0

Pollutant	San Jose- Jackson Street[1]		
	2018	2019	2020
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)			
National 24-hour Maximum Concentration	133.9	27.6	120.5
State 24-hour Maximum Concentration	133.9	34.4	120.5
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	15	0	12
CAAQS 24-hour (>50 µg/m³)	13	13	13
Particulate Matter Less Than 10 Microns (PM_{10})			
National 24-hour Maximum Concentration	115.4	75.4	134.9
State 24-hour Maximum Concentration	121.8	77.1	137.1
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	0	0	0
CAAQS 24-hour (>50 µg/m³)	4	4	10
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m³ = micrograms per cubic meter; NM = not measured [1] Measurements taken at the San Jose-Jackson Street Monitoring Station located at 156B Jackson Street, San Jose, California 95112 (CARB# 43383).			
Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://arb.ca.gov/adam/topfour/topfour1.php).			

2.4 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The project site is located in an urban area in City of San José with open space to the northeast. The surrounding land uses are predominantly commercial and industrial, with some residences further to the west and south. The southeast boundary of the site is Piercy Road, and the southwest boundary of the site is Hellyer Avenue. Table 3: Sensitive Receptors, lists the distances and locations of nearby sensitive receptors from project site boundary to property line. Figure 4: Sensitive Receptor Locations shows the receptors.

Table 3: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
1. Single-family residence	150 feet southwest
2. Single-family residence	560 feet east
3. Family Community Church/Mar Thoma Church of Silicon Valley/RCCG – Jesus House Silicon Valley	150 feet east
Notes: Distances are measured from the project site boundary to the property line.	

Source: Nearmap, 2022

Figure 4: Sensitive Receptors

469 Piercy Road Project
Initial Study

Not to scale

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3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the EPA developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "nonattainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires that each state prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. Environmental Protection Agency (EPA) has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 4: State of California.

California Air Resources Board

CARB administers California's air quality policy. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. In general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O_3 and PM, for which standards are exceeded periodically. With respect to federal standards, the Bay Area's attainment status for 8-hour ozone is classified as "marginal nonattainment" and "nonattainment" for $PM_{2.5}$. The region is also considered to be in nonattainment with the CAAQS for PM_{10} and $PM_{2.5}$. Area sources generate the majority of these airborne particulate emissions. The Basin is considered in attainment or unclassified with respect to the CO, NO_2 and SO_2 NAAQS and CAAQS.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in Table 4.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]		Federal Standards[2]	
		Concentration	Attainment Status	Concentration[3]	Attainment Status
Ozone (O_3)	8 Hour	0.070 ppm (137 µg/m³)	N[9]	0.070 ppm	N[4]
	1 Hour	0.09 ppm (180 µg/m³)	N	NA	N/A[5]
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	A	9 ppm (10 mg/m³)	A[6]
	1 Hour	20 ppm (23 mg/m³)	A	35 ppm (40 mg/m³)	A
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	A	0.100 ppm[11]	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	-	0.053 ppm (100 µg/m³)	A
Sulfur Dioxide[12] (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	A	0.14 ppm (365 µg/m³)	A
	1 Hour	0.25 ppm (655 µg/m³)	A	0.075 ppm (196 µg/m³)	A
	Annual Arithmetic Mean	NA	-	0.03 ppm (80 µg/m³)	A
Particulate Matter (PM_{10})	24-Hour	50 µg/m³	N	150 µg/m³	-U
	Annual Arithmetic Mean	20 µg/m³	N[7]	NA	-
Fine Particulate Matter ($PM_{2.5}$) [15]	24-Hour	NA	-	35 µg/m³	U/A
	Annual Arithmetic Mean	12 µg/m³	N[7]	12 µg/m³	N
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	A	NA	-
Lead (Pb)[13, 14]	30-Day Average	1.5 µg/m³	-	NA	A
	Calendar Quarter	NA	-	1.5 µg/m³	A
	Rolling 3-Month Average	NA	-	0.15 µg/m³	-
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m³)	U	NA	-
Vinyl Chloride (C_2H_3Cl)	24 Hour	0.01 ppm (26 µg/m³)	-	NA	-
Visibility Reducing Particles[8]	8 Hour (10:00 to 18:00 PST)	-	U	-	-

A = attainment; N = nonattainment; U = unclassified; N/A = not applicable or no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = not indicated or no information available.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
   Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.
3. National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
5. The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.
6. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
7 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.
8 Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
9. The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
10. On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.
11. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
12. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.
13. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
14. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
15. In December 2012, EPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter ($\mu g/m^3$). In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, 2017. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status.

3.2 REGIONAL

Bay Area Air Quality Management District

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The BAAQMD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate on April 19, 2019, by the BAAQMD.

BAAQMD periodically develops air quality plans that outline the regional strategy to improve air quality and protect the climate. The most recent plan, 2017 Bay Area Clean Air Plan, includes a wide range of control measures designed to reduce emissions of air pollutants and GHGs, including the following

examples that may be relevant to this project: reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks; implement pricing measures to reduce travel demand; accelerate the widespread adoption of electric vehicles; promote the use of clean fuels; promote energy efficiency in both new and existing buildings; and promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets. The 2017 Clean Air Plan contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_X), particulate matter, TACs, and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provides a control strategy to reduce ozone, PM, TACs, and greenhouse gases in a single, integrated plan; reviews progress in improving air quality in recent years; and establishes emission control measures to be adopted or implemented in both the short term and through 2050.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The following BAAQMD rules would limit emissions of air pollutants from construction and operation of the project:

- Regulation 8, Rule 3 – Architectural Coatings. This rule governs the manufacture, distribution, and sale of architectural coatings and limits the reactive organic gases content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the ROG content of paint available for use during the construction.

- Regulation 8, Rule 15 – Emulsified and Liquid Asphalts. This rule dictates the reactive organic gases content of asphalt available for use during construction through regulating the sale and use of asphalt and limits the ROG content in asphalt. Although this rule does not directly apply to the project, it does dictate the ROG content of asphalt for use during the construction.

- Regulation 9, Rule 8 – Organic Compounds. This rule limits the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower.

BAAQMD prepared an Ozone Attainment Demonstration Plan to satisfy the federal 1-hour ozone planning requirement because of the Air Basin's nonattainment for federal and State ozone standards. The U.S. EPA revoked the 1-hour ozone standard and adopted an 8-hour ozone standard. The BAAQMD will address the new federal 8-hour ozone planning requirements once they are established.

3.3 LOCAL

City of San José General Plan

The San José General Plan includes the following policies intended to control or reduce air pollution impacts:

Policy MS-10.1: Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emissions reduction measures.

Policy MS - 10.2: States that the City should take into consideration the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

Policy MS-10.4: Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, support Federal and State regulations to improve automobile emission controls.

Policy MS – 10.6: Encourage mixed land use development near transit lines and provide retail and other types of service-oriented uses within walking distance to minimize automobile dependent development.

Policy MS – 10.7: Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.

Policy MS - 11.2: For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

Policy MS-11.6: Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate matter smaller than 2.5 microns ($PM_{2.5}$), emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

Policy MS-11.7: Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

Policy MS-11.8: For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Policy MS-13.1: Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Policy MS-13.3: Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the California Air Resources Board's air toxic control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

State CEQA Guidelines Appendix G

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

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan?

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

AQ-3 Expose sensitive receptors to substantial pollutant concentrations?

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Air Quality Thresholds

Under the California Environmental Quality Act (CEQA), the Bay Area Air Quality Management District (BAAQMD) is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act (FCAA), the BAAQMD has adopted Federal attainment plans for O_3 and $PM_{2.5}$. The BAAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The BAAQMD Options and Justification Report (dated October 2009) establishes thresholds based on substantial evidence, and the thresholds are consistent with the thresholds outlined within the 2010/2011 BAAQMD CEQA Air Quality Guidelines (and current 2017 CEQA Air Quality Guidelines). The thresholds have been developed by the BAAQMD in order to attain State and Federal ambient air quality standards. Therefore, projects below these thresholds would not violate an air quality standard and would not contribute substantially to an existing or projected air quality violation.

The BAAQMD's CEQA Air Quality Guidelines provides significance thresholds for both construction and operation of projects. Ultimately the lead agency determines the thresholds of significance for impacts. However, if a project proposes development in excess of the established thresholds, as outlined in Table 5: Bay Area Air Quality Management District Emissions Thresholds, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 5: Bay Area Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operational-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emission (pounds/day)	Annual Average Emission (tons/year)
Reactive Organic Gases (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
Coarse Particulates (PM_{10})	82 (exhaust)	82	15
Fine Particulates ($PM_{2.5}$)	54 (exhaust)	54	10
PM_{10} / $PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	
Source: Bay Area Air Quality Management District, 2017 CEQA Air Quality Guidelines, 2017.			

4.2 METHODOLOGY

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

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

Project operations would result in emissions of area sources (consumer products), energy sources (natural gas usage), and mobile sources (motor vehicles from project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the project's Transportation Analysis prepared by Kimley-Horn (March 2023). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use activity data.

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

5 POTENTIAL IMPACTS AND MITIGATION

5.1 AIR QUALITY ANALYSIS

Threshold AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The CEQA Guidelines currently require a project to show consistency with an applicable air quality plan. The BAAQMD Air Quality Plan is the BAAQMD Final 2017 Clean Air Plan (Clean Air Plan). According to the BAAQMD CEQA Guidelines there are three criteria for determining a project's consistency with the Air Quality Plan (AQP). The Clean Air Plan outlines how the San Francisco area will attain air quality standards, reduce population exposure and protect public health, and reduce air quality emissions.

Criterion 1: Does the Project support the primary goals of the Air Quality Plan?

The primary goals of the current AQP are attain air quality standards; reduce population exposure and protecting public health in the Bay Area; and reduce greenhouse gas emissions and protect the climate.

As described below, construction and operational air quality emissions generated by the project would not exceed the BAAQMD's emissions thresholds. Since the project would not exceed these thresholds, the project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants and would not contribute to any non-attainment areas in the Basin.

A project would be consistent with the 2017 Clean Air Plan Progress Report if it would not exceed the growth assumptions in the plan. The project is anticipated to generate 134[1] jobs within the City. Association of Bay Area Governments (ABAG) predicts that job opportunities in the City of San José will grow from 387,510 in 2010 to 554,875 by 2040. Therefore, the addition of 134 new jobs would be within the ABAG growth projections for the City which assumes approximately new 554,875 jobs by 2040. The Clean Air Plan forecasts regional emissions based on land uses and population projections. Population growth associated with the proposed project would be consistent with ABAG's projections for the City and with the City's General Plan. Therefore, the project would not conflict with the population growth anticipated in the Clean Air Plan.

As discussed in the 469 Piercy Road Greenhouse Gas Emissions Assessment (Kimley-Horn 2023), the project would be consistent with the City's Greenhouse Gas Reduction Strategy and therefore would not result in an increase in greenhouse gas emissions (GHG). Therefore, the project would not conflict with the third goal of reducing GHG emissions and protecting the climate.

Criterion 2: Does the Project include applicable control measures from the Air Quality Plan?

The project is consistent with the 2017 Clean Air Plan policies that are applicable to the project site. As shown below, projects are considered consistent with the 2017 Clean Air Plan if they incorporate all

[1] City of San José. *San José Market Overview and Employment Lands Analysis*, 2016. Employment Density is 1,000 square feet per employee for Industrial

applicable and feasible control measures from the 2017 Clean Air Plan and would not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

As discussed in Table 6: Project Consistency with Applicable Clean Air Plan Control Measures, the project would comply with City, State, and regional requirements.

Table 6: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Source Control Measures	
SS21: New Source Review of Toxic Air Contaminants	**Consistent**. The project would include backup generators that would generate new sources of TAC that would impact nearby sensitive receptors during emergency operations. However, the backup generators would be subject to the new source rule, would require permits, and would be required to implement best available control measures. The building design would accommodate warehouse and similar uses that are not heavy industrial or would exhaust TACs.
SS25: Coatings, Solvents, Lubricants, Sealants and Adhesives	**Consistent**. The project would comply with Regulation 8, Rule 3: Architectural Coatings, which would dictate the ROG content of paint available for use during construction.
SS26: Surface Prep and Cleaning Solvent	
SS29: Asphaltic Concrete	**Consistent**. Paving activities associated with the project would be required to utilize asphalt that does not exceed BAAQMD emission standards in Regulation 8, Rule 15.
SS31: General Particulate Matter Emissions Limitation	**Consistent**. This control measure is implemented by the BAAQMD through Regulation 6, Rule 1. This Rule Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity. The project would be required to comply with applicable BAAQMD rules.
SS32: Emergency Back-up Generators	**Consistent**. Depending on the end user, the project may potentially include back-up generators. The emergency generators installed would be required to meet the BAAQMD's emissions standards for back-up generators.
SS36: Particulate Matter from Trackout	**Consistent**. Mud and dirt that may be tracked out onto the nearby public roads during construction activities would be removed promptly by the contractor in compliance with BAAQMD's requirements and City Standard Permit Conditions.
SS37: Particulate Matter from Asphalt Operations	**Consistent**. Paving and roofing activities associated with the project would be required to utilize best management practices to minimize the particulate matter created from the transport and application of road and roofing asphalt.
SS38: Fugitive Dust	**Consistent**. Material stockpiling and track out during grading activities as well as smoke and fumes from paving and roofing asphalt operations would be required to utilize BMPs enforced through City's Standard Permit Condition noted in Item b) below, such as watering exposed surfaces twice a day, covering haul trucks, keeping vehicle speeds on unpaved roads under 15 miles per hour (mph), to minimize the creation of fugitive dust.

Control Measure	Project Consistency
SS40: Odors	**Consistent**. The project is an industrial development and is not anticipated to generate odors. The project would comply with BAAQMD Regulation 7 which strengthens odor standards and enhance enforceability.
Transportation Control Measures	
TR2: Trip Reduction Programs	**Consistent**. The project would include travel demand measures (TDMs) such as multimodal network improvements and ride sharing. These TDMs would help reduce vehicle miles traveled (VMT) and mobile greenhouse gas (GHG) emissions. The project would include two City suggested Tier 2 multi-modal infrastructure improvements. These improvements include the construction of a raised crosswalk at the existing pork-chop islands at the Hellyer at Silver Creek intersection and the installation of Class II bike lanes along the project frontages as well at Piercy Road from Hellyer Avenue to Silver Creek Valley Road. Bicycle storage for employees and visitors would be provided on site. Additionally, the project is within 0.25-mile of VTA bus stops along Hellyer Avenue.
TR8: Ridesharing and Last-Mile Connections	
TR9: Bicycle and Pedestrian Access Facilities	**Consistent.** Hellyer Avenue has a Class II bike lane with striping to separate the vehicle and bike travel way. Additionally, the proposed project would include 10 bicycle racks as well as bicycle and pedestrian access on the driveways.
TR10: Land Use Strategies	**Consistent** This measure is a BAAQMD funding tool to maintain and disseminate information on current climate action plans and other local best practices and collaborate with regional partners to identify innovative funding mechanisms to help local governments address air quality and climate change in their general plans. In addition, the proposed project site is located off Hellyer Avenue which has transit stop on VTA Bus Route 42 just past the intersection with Piercy Road. Therefore, employees associated with the proposed project could easily access transit, furthering the City's General Plan goals to support a healthy community, reduce traffic congestion and decrease GHG emissions and energy consumption. The project would not conflict with implementation of this measure.
TR13: Parking Policies	**Consistent.** The proposed project would provide 86 new parking spaces (including 38 standard stalls and 35 EV capable stalls). The proposed parking would meet City minimum parking requirements.
TR22: Construction, Freight and Farming Equipment	**Consistent**. The project would comply through implementation of the BAAQMD standard condition, which requires construction equipment to be properly maintained, and use a mix of Tier 3 and Tier 4 off road engines.
Energy and Climate Control Measures	
EN1: Decarbonize Electricity Generation	**Consistent**. The project would be constructed in accordance with the latest California Building Code and green building regulations/CalGreen. The proposed development would be constructed in compliance with the City's Council Policy 6-32 and attain LEEDTM Silver certification because it is over 25,000 square feet in size and the proposed project would comply with the City's Reach Code that requires building
EN2: Decrease Electricity Demand	

Control Measure	Project Consistency
	electrification and energy efficiency, solar readiness on nonresidential buildings, and EV readiness and EV equipment installation.
Buildings Control Measures	
BL1: Green Buildings	**Consistent**. The project would be constructed in accordance with the latest California Building Code and green building regulations/CalGreen. The proposed development would be constructed in compliance with the City's Council Policy 6-32 and the City's Green Building Ordinance.
BL2: Decarbonize Buildings	
BL4: Urban Heat Island Mitigation	**Consistent**. The project would include a landscaping plan that would introduce vegetation to reduce heat island effects. The Landscaping Plan would comply with the City's requirements. This would include shading of the parking lot and walkways, specifically 24 parking lot trees and 1 street tree per 30 LF. These actions would act against urban heat island effect on-site.
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	**Consistent** The project site is a warehouse building. The project includes Landscaping Plans with native vegetation, drought tolerant plants, and trees. See BL4.
Waste Management Control Measures	
WA1: Landfills	**Consistent**. The waste service provider for the project would be required to meet the AB 341 and SB 939, 1374, and 1383 requirements that require waste service providers to divert and recycle waste. Per CalGreen requirements the project would recycle construction waste.
WA3: Green Waste Diversion	
WA4: Recycling and Waste Reduction	
Water Control Measures	
WR2: Support Water Conservation	**Consistent**. The project would implement water conservation measures and low flow fixtures as required by Title 24, CalGreen, and the City of San José Municipal Code Section 15-11 Water Efficient Landscaping Ordinance, which includes various specifications for plant types, water features, and irrigation design etc.
Source: BAAQMD, Clean Air Plan, 2017 and Kimley-Horn, 2022.	

As discussed above, the project would not exceed the assumptions in the Clean Air Plan and impacts would be less than significant.

Criterion 3: Does the Project hinder or disrupt the implementation of any Air Quality Control Measures?

The Clean Air Plan assumptions for projected air emissions and pollutants in the City of San José are based on the Envision San José 2040 General Plan Land Use Designation Map which designates the project site use as IP. The project site is zoned CIC. The CIC Zoning District allows for a broad range of commercial uses with a local or regional market, including big box retail, and a narrower range of industrial uses, primarily industrial park in nature, but including some low-intensity light industrial uses as well. The project would allow for a 134,605-sf warehouse building consistent with the Envision San José 2040 General Plan land use designation and would not increase the regional population growth or cause changes in vehicle traffic that would obstruct implementation of the Clean Air Plan in the San Francisco Bay Area Basin.

Further, Table 6 outlines the project's consistency with the applicable 2017 Clean Air Plan policies. Therefore, the project would not hinder or disrupt the implementation of any 2017 Clean Air Plan Control

Measures and impacts would be considered less than significant hinder or disrupt the implementation of any 2017 Clean Air Plan Control Measures and impacts would be considered less than significant

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction Emissions

Project construction activities would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NO_x) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and temporary, lasting only while construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

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

The duration of construction activities associated with the project are estimated to last approximately 13 months. The project's construction-related emissions were calculated using the BAAQMD-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Demolition of the project site is anticipated to last for one month. Demolition would consist of removing one ton of pavement and five tons of building material from the existing project site. Project site preparations are anticipated to last approximately 22 days. Project grading is anticipated to last approximately 23 days. The grading phase would require approximately 1,655 cubic yards (cy) of soil export. The project paving phase is estimated to last one month. The grading and paving phase includes the construction of the three-feet sidewalk extension on Hellyer Avenue and Piercy Road and the raised crosswalks at the pork-chop islands at the Hellyer Avenue and Silver Creek Valley Road intersection. The construction of these two improvements were modeled in the Road Construction Emission Model (RCEM) and were included in the Year 1 Construction Year pollutant emissions. Building Construction and architectural coating activities were modeled to be completed approximately six months after completion of the paving phase. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. See Appendix A: Air Quality Modeling Data for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in Table 7: Construction-Related Emissions.

Table 7: Construction-Related Emissions

Construction Year	Pollutant (maximum pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Year 1	4.27	44.21	2.17	1.94	9.51	4.56
Year 2	24.35	17.64	0.79	0.74	1.17	0.32
Maximum	**24.35**	**44.21**	**2.17**	**1.94**	**9.51**	**4.56**
BAAQMD Significance Threshold [2, 3]	*54*	*54*	*82*	*54*	*BMPs*	*BMPs*
Exceed BAAQMD Threshold?	No	No	No	No	N/A	N/A

1. Emissions were calculated using CalEEMod.
2. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, updated May 2017.
3. BMPs = Best Management Practices. The BAAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds. Implementation of Basic Construction Mitigation measures are considered to mitigate fugitive dust emissions to be less than significant.

Source: Refer to the CalEEMod outputs provided in Appendix A.

Fugitive Dust Emissions. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. As shown in Table 7, The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. The project would implement the BAAQMD Basic Construction Control Measures as a Standard Permit Condition to control dust at the project site during all phases of construction.

Construction Equipment and Worker Vehicle Exhaust. Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. As previously addressed in Table 7**,** The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. See the above listed Standard Permit Conditions.

ROG Emissions. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. The highest concentration of ROG emissions would be generated from architectural coating beginning July 2023 and lasting approximately three months. This phase includes the interior and exterior painting as

well as striping of all paved parking areas and driveways. Paints would be required to comply with BAAQMD Regulation 8, Rule 3: Architectural Coating. Regulation 8, Rule 3 provides specifications on painting practices and regulates the ROG content of paint. As shown in Table 7, compliance with BAAQMD's regulation would maintain ROG emissions below BAAQMD thresholds for the duration of construction.

Summary. As shown in Table 7, all criteria pollutant emissions would remain below their respective thresholds. BAAQMD considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NO_X emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting, requiring the use of newer construction equipment with better emissions controls would reduce construction-related NO_X emissions. With implementation of the Standard Permit Condition, above, the proposed project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Impacts would be less than significant.

Standard Permit Condition

These measures would be placed on the project plan documents prior to the issuance of any grading permits for the proposed project.

i. Water active construction areas at least twice daily or as often as needed to control dust emissions.
ii. Cover trucks hauling soil, sand, and other loose materials and/or ensure that all trucks hauling such materials maintain at least two feet of freeboard.
iii. Remove visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
iv. Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
v. Pave new or improved roadways, driveways, and sidewalks as soon as possible.
vi. Lay building pads as soon as possible after grading unless seeding or soil binders are used.
vii. Replant vegetation in disturbed areas as quickly as possible.
viii. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
ix. Minimizing idling times either by shutting off equipment when not in use, or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Provide clear signage for construction workers at all access points.
x. Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Check all equipment by a certified mechanic and record a determination of running in proper condition prior to operation.
xi. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints.

Operational Emissions

Operational emissions for industrial developments are typically generated from mobile sources (burning of fossil fuels in cars); energy sources (cooling and heating); and area sources (landscape equipment and household products). Table 8: Maximum Daily Project Operational Emissions shows that the project's maximum emissions would not exceed BAAQMD operational thresholds.

Table 8: Maximum Daily Project Operational Emissions

Emissions Source	Pollutant (maximum pounds per day)[1]					
			Exhaust		Fugitive Dust	
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area	3.31	0.0002	0.0001	0.0001	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.60	14.96	0.13	0.13	2.96	0.80
Generators	1.69	4.71	0.25	0.25	0.00	0.00
Off-Road Equipment	1.25	9.64	0.19	0.16	0.00	0.00
Total Project Emissions	**6.85**	**29.31**	**0.57**	**0.54**	**2.96**	**0.80**
BAAQMD Significance Threshold[2]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
BAAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

1. Emissions were calculated using CalEEMod.
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.

Source: Refer to the CalEEMod outputs provided in Appendix A, Air Quality Modeling Data.

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

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

Mobile Sources. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source. Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the Project Transportation Analysis prepared by Kimley-Horn (March 2022). Based on the Transportation Analysis, the project would result in a total of 230 daily vehicle trips. However, with applicable trip reductions including location-based mode-share and other trip adjustments the project would result in a net of 213 new trips.

Generators. Generators would emit pollutants that are either of regional or local concern like ROG, NO_x, PM_{10}, and $PM_{2.5}$. The project would include back-up generators that would operate during emergencies and maintenance. Emissions from these generators would be infrequent and would not be constant. The project would only have one emergency back-up generator.

Off-Road Equipment. The Project would include the operation of off-road equipment such as forklifts and yard trucks. Emissions related to off-road equipment have been estimated using emission rates from the CARB Emission Factor (EMFAC) model. The project is estimated to use five forklifts and one yard truck based off the square footage of the proposed building.

Total Operational Emissions. As indicated in Table 8, net project operational emissions would not exceed BAAQMD thresholds. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Project operational emissions would be less than significant.

Cumulative Short-Term Emissions

The Basin is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. discussed above, the project's construction-related emissions would not exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The BAAQMD recommends Basic Construction Control Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.[2]

As shown in Table 8, the project's operational emissions would not exceed BAAQMD thresholds. As a result, operational emissions associated with the project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Mitigation Measures: No mitigation is required.

[2] In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD CEQA Guidelines page 2-1).

Level of Significance: Less than significant impact with compliance with standard conditions and City policies.

Threshold AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Sensitive land uses are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The State CEQA Guidelines indicate that a potentially significant impact could occur if a project would expose sensitive receptors to substantial pollutant concentrations.

Construction Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust which is a known Toxic Air Contaminants (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. However, the use of diesel-powered construction equipment would be episodic and would occur in various phases throughout the project site. Construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Division 3, Article 1, Chapter 10, Sections 2485 and 2449), which reduce DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions.

As noted in the Health Risk Assessment prepared by Kimley-Horn (2023), maximum (worst case) $PM_{2.5}$ exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. See the HRA for additional methodology on the modeling analysis. Risk levels were calculated with the CARB Hotspots Analysis and Reporting Program (HARP) Risk Assessment Standalone Tool (RAST) based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015). Results of this assessment are summarized in Table 9: Construction Risk.

Table 9: Construction Risk

Exposure Scenario	Pollutant Concentration (µg/m³)	Cancer Risk (per Million)[1]	Chronic Hazard	Acute Hazard
Worker Exposure	0.047	2.88	0.010	0.164
Residential Exposure	0.017	4.05	0.003	0.103
BAAQMD Threshold	*0.3*	*10*	*1.0*	*1.0*
Threshold Exceeded?	**No**	**No**	**No**	**No**

1. Although construction would only occur for 13 months, the exposure duration was calculated to last for 3 years per the *BAAQMD Health Risk Assessment Modeling Protocol* (December 2020). Worker exposure would be 8 hours per day for 245 days per year and a residential exposure would be 24 hours per day for 350 days per year. The residential exposure scenario assumes a third trimester start age, 95th percentile breathing rates, and age sensitivity factors. The worker exposure was conservatively used to estimate the risk at the nearby church.

Refer to Appendix A: Modeling Data.

Maximum concentration of $PM_{2.5}$ during construction would be 0.05 µg/m³, which would not exceed the BAAQMD threshold of 0.3 µg/m³. The highest calculated carcinogenic risk from project construction would

be 5.74 per million for the maximally exposed individual resident (MEIR) located east of the project site, which would not exceed the BAAQMD threshold of 10 in one million. The maximally exposed individual (MEI) during construction (i.e., the closest receptor exposed to the highest concentrations) to the project site is the residence (approximately 150 feet to the southwest). Non-cancer hazards for DPM would be below BAAQMD threshold, with a chronic hazard index computed at 0.004 and an acute hazard index of 0.129. Although pollutant concentrations are higher directly north of the project site, worker exposure is assumed to occur 8 hours per day for 245 days per year, while residential exposure is assumed to occur 24 hours per day for 350 days per year[3]. The worker exposure scenario was conservatively used for the church receptors. As described above, construction risk levels would be below the BAAQMD's thresholds and impacts would be less than significant.

Operational Toxic Air Contaminants

According to the Transportation Analysis, the project would include passenger vehicles and trucks. The project is anticipated to generate approximately 75 daily truck trips. As shown in Table 10: Operational Risk Assessment Results, the highest calculated carcinogenic risk resulting from the project is 0.12 per million residents, which is below the BAAQMD threshold of 10 per million. Acute and chronic hazards also would be below the BAAQMD significance threshold of 1.0. Operational mobile impacts would be less than significant.

Table 10: Operational Risk Assessment Results

Exposure Scenario	Pollutant Concentration (µg/m³)	Cancer Risk (per Million)[1]	Chronic Hazard	Acute Hazard
Worker Exposure	0.001	0.03	0.0001	0.0034
Residential Exposure	0.0002	0.07	0.00003	0.0016
Threshold	*0.3*	*10*	*1.0*	*1.0*
Exceed Threshold?	**No**	**No**	**No**	**No**
1. The maximum cancer would be experienced at the residences located south of the project site based on worst-case exposure durations for the project, 95th percentile breathing rates, age sensitivity factors, third trimester start age, and 30-year exposure duration. The worker and trail exposure is based on 95th percentile breathing rates and 25-year exposure duration.				
Refer to Appendix A: Modeling Data.				

The risk calculated for the church represents the exposure levels outdoors for 8 hours a day. However, a typical person attending the church would not spend the majority of time at the same location near the project site for an 8-hour day. Therefore, the calculated risk is not necessarily representative of actual exposure at the project site and tend to overestimate exposure. The MEIR during operation is the sensitive receptor, the church, located 150 feet to the east (see sensitive receptors in Figure 4).

Cumulative Health Risk Analysis

Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Worst-case $PM_{2.5}$ concentrations and chronic hazard levels for the project would be well below the BAAQMD's thresholds. CEQA Guidelines 15065(a)(3) states "… 'Cumulatively considerable' means that the incremental effects of

[3] Bay Area Air Quality Management District, *BAAQMD Health Risk Assessment Modeling Protocol*, December 2020.

an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

Mobile sources and stationary sources within a 1,000-foot radius of the project site were reviewed using BAAQMD's Stationary Source Screening Analysis Tools. There are three existing permitted stationary sources located within a 1,000-foot radius of the project site. As shown in Table 11, cumulative impacts related to cancer risk and hazard would be less than cumulatively considerable and within acceptable limits. The primary contributor the cumulative $PM_{2.5}$ concentrations are the existing highway sources near the project area ($PM_{2.5}$ of 0.21 µg/m^3). The highway sources represent approximately 99.99 percent of the total concentrations and are completely unrelated to the project. The project represents less than 0.1 percent of total cumulative $PM_{2.5}$ in the project area. Therefore, the project would not be cumulatively considerable and cumulative impacts would be less than significant.

The incremental effect of the individual project is less than significant. [4] Therefore, the project's cumulative impacts would be less than significant. Table 11: Cumulative Operational Health Risk, below shows the cumulative health risk values for the proposed project. Cumulative impacts related to cancer risk and hazard would be less than cumulatively considerable and within acceptable limits. The primary contributor the cumulative $PM_{2.5}$ concentrations are the existing highway sources near the project area ($PM_{2.5}$ of 0.21 µg/m^3). The highway sources represent approximately 99.99 percent of the total concentrations and are completely unrelated to the project. The project represents less than 0.1 percent of total cumulative $PM_{2.5}$ in the project area. Therefore, the project would not be cumulatively considerable and cumulative impacts would be less than significant.

Table 11: Cumulative Operational Health Risk

Emissions Sources	$PM_{2.5}$ (µg/m^3)	Cancer Risk (per million)	Hazard
Project Mobile Emissions	0.0002	0.07	0.00003
Major Street Sources[1]	0.002	0.09	0.008
Highway Sources[1]	0.21	15.08	0.84
Railway Sources[1]	0.001	0.77	0.004
Stationary Sources			
Name of Facility			
ColFin 2019-2D Industrial Owner LLC	0.001	0.63	0.001
Suez Water Technologies and Solutions, Inc	0.00	0.08	0.00
Commonwealth Central Credit Union	0.00	0.006	0.00
Cumulative Health Risk Values	**0.21**	**16.73**	**0.85**
BAAQMD Cumulative Threshold	*0.8*	*100*	*10*
Threshold Exceeded?	**No**	**No**	**No**

1. BAAQMD GIS data.
Source: BAAQMD's Stationary Source Data and GIS Mapping Tools, 2022.

[4] CEQA case law has held that any additional emissions in an impacted area does not necessarily create a significant cumulative impact, finding that "the 'one [additional] molecule rule' is not the law" (Communities for a Better Environment v. California Resources Agency (2002) 103 Cal. App. 4th 98, 120).

Mobile Sources

The project would not place sensitive receptors within 1,000-feet of a major roadway (mobile TAC source). Additionally, the project's effects to existing vehicle distribution and travel speeds would be nominal. According to the Transportation Analysis, the project would generate 213 net new daily trips. Any changes to vehicle distribution and travel speeds can affect vehicle emissions rates, although these changes would be minimal and would not substantially change criteria pollutant emissions, which are primarily driven by vehicle miles travelled (VMT). Project traffic is also predominantly light-duty and gasoline powered including 75 daily project truck trips. Therefore, any shifts in traffic would not constitute a change in substantial cancer risk. The project does not involve the increase of transit trips or routes and would not generate increased emissions from expanded service (e.g., increased bus idling service).

Carbon Monoxide Hotspots

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

The Basin is designated as in attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the Basin with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. Traffic would increase along surrounding roadways during long-term operational activities.

According to the Transportation Analysis prepared for the project (2023), the project would generate 213 new trips. The project's effects to existing vehicle distribution and travel speeds would be nominal. Therefore, the project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the project would not have the potential to create a CO hotspot and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The project does not include any uses identified by the BAAQMD as being associated with odors.

Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Any construction-related odors would be short-term in nature and cease upon project completion. As a result, impacts to existing adjacent land uses from construction-related odors would be short-term in duration and therefore would be less than significant.

Operational

BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

The project includes a 134,605 square-foot warehouse building which is not anticipated to generate odors. None of the above listed odor generating uses are located near the project site. Impacts would be less than significant.

Mitigation Measures: Compliance with General Plan Policies and applicable state and local law would reduce impacts associated with odors to a less than significant level. No additional site-specific mitigation measures are required.

Level of Significance: Less than significant impact.

5.2 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

The cumulative setting for air quality includes the City and the Air Basin. The Air Basin is designated as a nonattainment area for state standards of ozone, PM_{10}, and $PM_{2.5}$ and federal standards of ozone and $PM_{2.5,}$ attainment and serious maintenance for federal PM_{10} standards, and is designated as unclassified or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Per consultation with the City, there are three additional proposed warehouse projects located within a mile of the project site with one located along the northeast face of the project site.

Cumulative Impacts and Mitigation Measures

The BAAQMD CEQA Air Quality Guidelines do not include separate significance thresholds for cumulative operational or construction emissions. However, with respect to regional air pollution, the development of the project would result in population growth that is consistent with ABAG projections and the City General Plan. Therefore, the project would be consistent with the 2017 Clean Air Plan that uses ABAG population forecasts.

As described in threshold AQ-1 above, the project would also be consistent with the appropriate 2017 Clean Air Plan control measures, which are provided to reduce air quality emissions for the entire Bay Area region. Additionally, the discussion in threshold AQ-2 addresses cumulative impacts and demonstrates that the project would not exceed the applicable BAAQMD thresholds for construction or operations. The BAAQMD CEQA Air Quality Guidelines note that the nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. As mentioned on pages 2-3 and 2-6 of the BAAQMD CEQA Guidelines (2017), if the project emissions of criteria air pollutants or its precursors are below the BAAQMD Thresholds of Significance, the project would result in a less than significant cumulative impact. Consistency with the 2017 Clean Air Plan control measures would ensure that the project would not cumulatively contribute to air quality impacts in the Basin. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. Bay Area Air Quality Management District, *Planning Healthy Places*, 2016.
2. Bay Area Air Quality Management District, *CEQA Air Quality Guidelines,* 2017.
3. Bay Area Air Quality Management District, *Clean Air Plan*, 2017.
4. Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status,* 2017.
5. Bay Area Air Quality Management District, *Current Rules*, 2017.
6. California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, 2018.
7. California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.
8. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2015 to 2017*, 2018.
9. California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
10. California Air Resources Board, *Current Air Quality Standards*, 2016.
11. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.
12. City of San José, *General Plan,* 2018.
13. City of San José, *Municipal Code*, 2019.
14. Federal Highway Administration*, Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents,* 2016.
15. Kimley-Horn & Associates, *469 Piercy Road Development Transportation Analysis*, March 2023.
16. Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, 2015.
17. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
18. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2018.
19. United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

Appendix A

Air Quality Modeling Data

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

469 Piercy Road

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	134.60	1000sqft	3.09	134,605.00	0
Parking Lot	97.97	1000sqft	2.25	97,965.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per site plan

Construction Phase - Per construction timeline

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - Parking lot = truck trips

Area Coating -

Energy Use - Per San Jose's GHGRS natural gas policy

Water And Wastewater -

Solid Waste -

469 Piercy Road - Santa Clara County, Summer

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

Construction Off-road Equipment Mitigation - Per BAAQMD rule compliance

Waste Mitigation - per AB 939

Fleet Mix - per TA

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	230.00	191.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	11/22/2023	9/29/2023
tblConstructionPhase	PhaseEndDate	9/27/2023	9/29/2023
tblConstructionPhase	PhaseEndDate	9/28/2022	9/30/2022
tblConstructionPhase	PhaseEndDate	11/9/2022	12/2/2022
tblConstructionPhase	PhaseEndDate	10/25/2023	1/5/2023
tblConstructionPhase	PhaseEndDate	10/12/2022	11/1/2022
tblConstructionPhase	PhaseStartDate	10/26/2023	7/3/2023
tblConstructionPhase	PhaseStartDate	11/10/2022	1/6/2023
tblConstructionPhase	PhaseStartDate	10/13/2022	11/2/2022
tblConstructionPhase	PhaseStartDate	9/28/2023	12/5/2022
tblConstructionPhase	PhaseStartDate	9/29/2022	10/3/2022
tblEnergyUse	NT24E	1.07	4.53

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

tblEnergyUse	NT24NG	0.07	0.00
tblEnergyUse	T24NG	3.37	0.00
tblFleetMix	HHD	6.3620e-003	1.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.0410e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.8380e-003	0.00
tblFleetMix	MHD	7.8170e-003	0.00
tblFleetMix	OBUS	9.1200e-004	0.00
tblFleetMix	SBUS	9.2700e-004	0.00
tblFleetMix	UBUS	3.8900e-004	0.00
tblGrading	MaterialExported	0.00	1,655.00
tblLandUse	LandUseSquareFeet	134,600.00	134,605.00
tblLandUse	LandUseSquareFeet	97,970.00	97,965.00
tblVehicleTrips	CNW_TL	7.30	31.00
tblVehicleTrips	CNW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.00	0.77
tblVehicleTrips	ST_TR	1.74	1.03
tblVehicleTrips	SU_TR	0.00	0.77
tblVehicleTrips	SU_TR	1.74	1.03
tblVehicleTrips	WD_TR	0.00	0.77

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

tblVehicleTrips	WD_TR	1.74	1.03

2.0 Emissions Summary

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	3.2211	33.1151	20.9891	0.0399	19.8049	1.6133	21.4182	10.1417	1.4843	11.6259	0.0000	3,860.6025	3,860.6025	1.1958	0.1017	3,887.9690
2023	24.3435	17.5051	21.4425	0.0460	1.2267	0.7851	2.0119	0.3312	0.7430	1.0742	0.0000	4,517.5506	4,517.5506	0.7167	0.1425	4,576.6043
Maximum	**24.3435**	**33.1151**	**21.4425**	**0.0460**	**19.8049**	**1.6133**	**21.4182**	**10.1417**	**1.4843**	**11.6259**	**0.0000**	**4,517.5506**	**4,517.5506**	**1.1958**	**0.1425**	**4,576.6043**

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	3.2211	33.1151	20.9891	0.0399	8.5435	1.6133	10.1568	4.3561	1.4843	5.8404	0.0000	3,860.6025	3,860.6025	1.1958	0.1017	3,887.9690
2023	24.3435	17.5051	21.4425	0.0460	1.1652	0.7851	1.9503	0.3161	0.7430	1.0591	0.0000	4,517.5506	4,517.5506	0.7167	0.1425	4,576.6043
Maximum	**24.3435**	**33.1151**	**21.4425**	**0.0460**	**8.5435**	**1.6133**	**10.1568**	**4.3561**	**1.4843**	**5.8404**	**0.0000**	**4,517.5506**	**4,517.5506**	**1.1958**	**0.1425**	**4,576.6043**

469 Piercy Road - Santa Clara 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	53.84	0.00	48.33	55.39	0.00	45.67	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5995	14.9631	6.8875	0.0780	2.9554	0.1333	3.0887	0.8027	0.1274	0.9301		8,463.9295	8,463.9295	0.3056	1.2372	8,840.2395
Total	**3.9128**	**14.9633**	**6.9113**	**0.0780**	**2.9554**	**0.1334**	**3.0888**	**0.8027**	**0.1275**	**0.9301**		**8,463.9804**	**8,463.9804**	**0.3057**	**1.2372**	**8,840.2938**

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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5995	14.9631	6.8875	0.0780	2.9554	0.1333	3.0887	0.8027	0.1274	0.9301		8,463.9295	8,463.9295	0.3056	1.2372	8,840.2395
Total	**3.9128**	**14.9633**	**6.9113**	**0.0780**	**2.9554**	**0.1334**	**3.0888**	**0.8027**	**0.1275**	**0.9301**		**8,463.9804**	**8,463.9804**	**0.3057**	**1.2372**	**8,840.2938**

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	Demolition	Demolition	9/1/2022	9/30/2022	5	22	
2	Site Preparation	Site Preparation	10/3/2022	11/1/2022	5	22	
3	Grading	Grading	11/2/2022	12/2/2022	5	23	
4	Building Construction	Building Construction	1/6/2023	9/29/2023	5	191	
5	Paving	Paving	12/5/2022	1/5/2023	5	24	
6	Architectural Coating	Architectural Coating	7/3/2023	9/29/2023	5	65	

Acres of Grading (Site Preparation Phase): 33

Acres of Grading (Grading Phase): 23

Acres of Paving: 2.25

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 201,908; Non-Residential Outdoor: 67,303; Striped Parking Area: 5,878 (Architectural Coating – sqft)

OffRoad Equipment

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

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	207.00	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
Building Construction	9	98.00	38.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

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

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8400e-003	0.0000	5.8400e-003	8.8000e-004	0.0000	8.8000e-004			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.8400e-003**	**1.2427**	**1.2485**	**8.8000e-004**	**1.1553**	**1.1561**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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

3.2 Demolition - 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	lb/day										lb/day					
Hauling	2.2000e-004	7.5900e-003	1.6400e-003	3.0000e-005	8.0000e-004	7.0000e-005	8.7000e-004	2.2000e-004	7.0000e-005	2.9000e-004		3.1532	3.1532	1.1000e-004	5.0000e-004	3.3048
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	0.0425	0.0263	0.3934	1.0900e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0427**	**0.0339**	**0.3950**	**1.1200e-003**	**0.1240**	**6.9000e-004**	**0.1247**	**0.0329**	**6.4000e-004**	**0.0336**		**113.8214**	**113.8214**	**3.1100e-003**	**3.2800e-003**	**114.8770**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4900e-003	0.0000	2.4900e-003	3.8000e-004	0.0000	3.8000e-004			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**2.4900e-003**	**1.2427**	**1.2451**	**3.8000e-004**	**1.1553**	**1.1556**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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

3.2 Demolition - 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	lb/day										lb/day					
Hauling	2.2000e-004	7.5900e-003	1.6400e-003	3.0000e-005	7.6000e-004	7.0000e-005	8.3000e-004	2.1000e-004	7.0000e-005	2.8000e-004		3.1532	3.1532	1.1000e-004	5.0000e-004	3.3048
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	0.0425	0.0263	0.3934	1.0900e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0427**	**0.0339**	**0.3950**	**1.1200e-003**	**0.1176**	**6.9000e-004**	**0.1183**	**0.0313**	**6.4000e-004**	**0.0320**		**113.8214**	**113.8214**	**3.1100e-003**	**3.2800e-003**	**114.8770**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			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**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0510	0.0316	0.4720	1.3100e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		132.8018	132.8018	3.6000e-003	3.3400e-003	133.8866
Total	**0.0510**	**0.0316**	**0.4720**	**1.3100e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**132.8018**	**132.8018**	**3.6000e-003**	**3.3400e-003**	**133.8866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4034	0.0000	8.4034	4.3188	0.0000	4.3188			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.4034**	**1.6126**	**10.0159**	**4.3188**	**1.4836**	**5.8024**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0510	0.0316	0.4720	1.3100e-003	0.1402	7.5000e-004	0.1409	0.0373	6.9000e-004	0.0380		132.8018	132.8018	3.6000e-003	3.3400e-003	133.8866
Total	**0.0510**	**0.0316**	**0.4720**	**1.3100e-003**	**0.1402**	**7.5000e-004**	**0.1409**	**0.0373**	**6.9000e-004**	**0.0380**		**132.8018**	**132.8018**	**3.6000e-003**	**3.3400e-003**	**133.8866**

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					7.0907	0.0000	7.0907	3.4260	0.0000	3.4260			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0907**	**0.9409**	**8.0316**	**3.4260**	**0.8656**	**4.2916**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	lb/day										lb/day					
Hauling	0.0430	1.5032	0.3251	5.7300e-003	0.1574	0.0140	0.1715	0.0432	0.0134	0.0566		624.3283	624.3283	0.0215	0.0989	654.3499
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	0.0425	0.0263	0.3934	1.0900e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0855**	**1.5296**	**0.7185**	**6.8200e-003**	**0.2807**	**0.0147**	**0.2953**	**0.0758**	**0.0140**	**0.0898**		**734.9965**	**734.9965**	**0.0245**	**0.1017**	**765.9221**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0313	0.0000	3.0313	1.4646	0.0000	1.4646			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**3.0313**	**0.9409**	**3.9721**	**1.4646**	**0.8656**	**2.3302**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	lb/day										lb/day					
Hauling	0.0430	1.5032	0.3251	5.7300e-003	0.1503	0.0140	0.1643	0.0414	0.0134	0.0548		624.3283	624.3283	0.0215	0.0989	654.3499
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	0.0425	0.0263	0.3934	1.0900e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0855**	**1.5296**	**0.7185**	**6.8200e-003**	**0.2671**	**0.0147**	**0.2817**	**0.0725**	**0.0140**	**0.0865**		**734.9965**	**734.9965**	**0.0245**	**0.1017**	**765.9221**

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**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0426	1.6335	0.5249	7.7600e-003	0.2574	9.9200e-003	0.2673	0.0741	9.4900e-003	0.0836		832.3597	832.3597	0.0176	0.1222	869.2139
Worker	0.2586	0.1526	2.3773	6.8900e-003	0.8051	3.8600e-003	0.8089	0.2135	3.5500e-003	0.2171		704.7138	704.7138	0.0177	0.0169	710.1806
Total	**0.3012**	**1.7861**	**2.9022**	**0.0147**	**1.0624**	**0.0138**	**1.0762**	**0.2876**	**0.0130**	**0.3007**		**1,537.0735**	**1,537.0735**	**0.0353**	**0.1391**	**1,579.3944**

Mitigated Construction On-Site

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

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0426	1.6335	0.5249	7.7600e-003	0.2464	9.9200e-003	0.2563	0.0714	9.4900e-003	0.0809		832.3597	832.3597	0.0176	0.1222	869.2139
Worker	0.2586	0.1526	2.3773	6.8900e-003	0.7631	3.8600e-003	0.7669	0.2032	3.5500e-003	0.2068		704.7138	704.7138	0.0177	0.0169	710.1806
Total	**0.3012**	**1.7861**	**2.9022**	**0.0147**	**1.0095**	**0.0138**	**1.0232**	**0.2746**	**0.0130**	**0.2877**		**1,537.0735**	**1,537.0735**	**0.0353**	**0.1391**	**1,579.3944**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3485**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0425	0.0263	0.3934	1.0900e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0425**	**0.0263**	**0.3934**	**1.0900e-003**	**0.1232**	**6.2000e-004**	**0.1238**	**0.0327**	**5.7000e-004**	**0.0333**		**110.6682**	**110.6682**	**3.0000e-003**	**2.7800e-003**	**111.5722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3485**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0425	0.0263	0.3934	1.0900e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		110.6682	110.6682	3.0000e-003	2.7800e-003	111.5722
Total	**0.0425**	**0.0263**	**0.3934**	**1.0900e-003**	**0.1168**	**6.2000e-004**	**0.1174**	**0.0311**	**5.7000e-004**	**0.0317**		**110.6682**	**110.6682**	**3.0000e-003**	**2.7800e-003**	**111.5722**

3.6 Paving - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2784**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0396	0.0234	0.3639	1.0500e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		107.8644	107.8644	2.7100e-003	2.5800e-003	108.7011
Total	**0.0396**	**0.0234**	**0.3639**	**1.0500e-003**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**107.8644**	**107.8644**	**2.7100e-003**	**2.5800e-003**	**108.7011**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2784**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0396	0.0234	0.3639	1.0500e-003	0.1168	5.9000e-004	0.1174	0.0311	5.4000e-004	0.0317		107.8644	107.8644	2.7100e-003	2.5800e-003	108.7011
Total	**0.0396**	**0.0234**	**0.3639**	**1.0500e-003**	**0.1168**	**5.9000e-004**	**0.1174**	**0.0311**	**5.4000e-004**	**0.0317**		**107.8644**	**107.8644**	**2.7100e-003**	**2.5800e-003**	**108.7011**

3.7 Architectural Coating - 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					
Archit. Coating	22.2252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**22.4168**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0528	0.0311	0.4852	1.4100e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		143.8191	143.8191	3.6100e-003	3.4400e-003	144.9348
Total	**0.0528**	**0.0311**	**0.4852**	**1.4100e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**143.8191**	**143.8191**	**3.6100e-003**	**3.4400e-003**	**144.9348**

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	22.2252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**22.4168**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0528	0.0311	0.4852	1.4100e-003	0.1557	7.9000e-004	0.1565	0.0415	7.2000e-004	0.0422		143.8191	143.8191	3.6100e-003	3.4400e-003	144.9348
Total	**0.0528**	**0.0311**	**0.4852**	**1.4100e-003**	**0.1557**	**7.9000e-004**	**0.1565**	**0.0415**	**7.2000e-004**	**0.0422**		**143.8191**	**143.8191**	**3.6100e-003**	**3.4400e-003**	**144.9348**

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	lb/day										lb/day					
Mitigated	0.5995	14.9631	6.8875	0.0780	2.9554	0.1333	3.0887	0.8027	0.1274	0.9301		8,463.9295	8,463.9295	0.3056	1.2372	8,840.2395
Unmitigated	0.5995	14.9631	6.8875	0.0780	2.9554	0.1333	3.0887	0.8027	0.1274	0.9301		8,463.9295	8,463.9295	0.3056	1.2372	8,840.2395

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	75.44	75.44	75.44	851,230	851,230
Unrefrigerated Warehouse-No Rail	138.64	138.64	138.64	433,891	433,891
Total	214.07	214.07	214.07	1,285,121	1,285,121

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
Parking Lot	9.50	7.30	31.00	0.00	0.00	100.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
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
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
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
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Unmitigated	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542

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	0.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-003	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Total	**3.3132**	**2.2000e-004**	**0.0237**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0509**	**0.0509**	**1.3000e-004**		**0.0542**

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	0.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-003	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Total	**3.3132**	**2.2000e-004**	**0.0237**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0509**	**0.0509**	**1.3000e-004**		**0.0542**

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

469 Piercy Road

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	134.60	1000sqft	3.09	134,605.00	0
Parking Lot	97.97	1000sqft	2.25	97,965.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per site plan

Construction Phase - Per construction timeline

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - Parking lot = truck trips

Area Coating -

Energy Use - Per San Jose's GHGRS natural gas policy

Water And Wastewater -

Solid Waste -

469 Piercy Road - Santa Clara County, Winter

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

Construction Off-road Equipment Mitigation - Per BAAQMD rule compliance

Waste Mitigation - per AB 939

Fleet Mix - per TA

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	230.00	191.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	11/22/2023	9/29/2023
tblConstructionPhase	PhaseEndDate	9/27/2023	9/29/2023
tblConstructionPhase	PhaseEndDate	9/28/2022	9/30/2022
tblConstructionPhase	PhaseEndDate	11/9/2022	12/2/2022
tblConstructionPhase	PhaseEndDate	10/25/2023	1/5/2023
tblConstructionPhase	PhaseEndDate	10/12/2022	11/1/2022
tblConstructionPhase	PhaseStartDate	10/26/2023	7/3/2023
tblConstructionPhase	PhaseStartDate	11/10/2022	1/6/2023
tblConstructionPhase	PhaseStartDate	10/13/2022	11/2/2022
tblConstructionPhase	PhaseStartDate	9/28/2023	12/5/2022
tblConstructionPhase	PhaseStartDate	9/29/2022	10/3/2022
tblEnergyUse	NT24E	1.07	4.53

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

tblEnergyUse	NT24NG	0.07	0.00
tblEnergyUse	T24NG	3.37	0.00
tblFleetMix	HHD	6.3620e-003	1.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.0410e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.8380e-003	0.00
tblFleetMix	MHD	7.8170e-003	0.00
tblFleetMix	OBUS	9.1200e-004	0.00
tblFleetMix	SBUS	9.2700e-004	0.00
tblFleetMix	UBUS	3.8900e-004	0.00
tblGrading	MaterialExported	0.00	1,655.00
tblLandUse	LandUseSquareFeet	134,600.00	134,605.00
tblLandUse	LandUseSquareFeet	97,970.00	97,965.00
tblVehicleTrips	CNW_TL	7.30	31.00
tblVehicleTrips	CNW_TTP	0.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	0.00	0.77
tblVehicleTrips	ST_TR	1.74	1.03
tblVehicleTrips	SU_TR	0.00	0.77
tblVehicleTrips	SU_TR	1.74	1.03
tblVehicleTrips	WD_TR	0.00	0.77

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

tblVehicleTrips	WD_TR	1.74	1.03

2.0 Emissions Summary

469 Piercy Road - Santa Clara 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	3.2224	33.1221	20.9665	0.0399	19.8049	1.6133	21.4182	10.1417	1.4843	11.6259	0.0000	3,852.5063	3,852.5063	1.1962	0.1022	3,880.0007
2023	24.3512	17.6400	21.3073	0.0454	1.2267	0.7852	2.0119	0.3312	0.7431	1.0743	0.0000	4,456.8222	4,456.8222	0.7170	0.1457	4,516.8977
Maximum	**24.3512**	**33.1221**	**21.3073**	**0.0454**	**19.8049**	**1.6133**	**21.4182**	**10.1417**	**1.4843**	**11.6259**	**0.0000**	**4,456.8222**	**4,456.8222**	**1.1962**	**0.1457**	**4,516.8977**

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	3.2224	33.1221	20.9665	0.0399	8.5435	1.6133	10.1568	4.3561	1.4843	5.8404	0.0000	3,852.5063	3,852.5063	1.1962	0.1022	3,880.0007
2023	24.3512	17.6400	21.3073	0.0454	1.1652	0.7852	1.9504	0.3161	0.7431	1.0592	0.0000	4,456.8222	4,456.8222	0.7170	0.1457	4,516.8977
Maximum	**24.3512**	**33.1221**	**21.3073**	**0.0454**	**8.5435**	**1.6133**	**10.1568**	**4.3561**	**1.4843**	**5.8404**	**0.0000**	**4,456.8222**	**4,456.8222**	**1.1962**	**0.1457**	**4,516.8977**

469 Piercy Road - Santa Clara 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	53.84	0.00	48.33	55.39	0.00	45.67	0.00	0.00	0.00	0.00	0.00	0.00

469 Piercy Road - Santa Clara 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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5572	15.8440	7.0193	0.0776	2.9554	0.1334	3.0888	0.8027	0.1275	0.9302		8,415.8017	8,415.8017	0.3102	1.2413	8,793.4531
Total	**3.8704**	**15.8442**	**7.0431**	**0.0776**	**2.9554**	**0.1335**	**3.0889**	**0.8027**	**0.1276**	**0.9303**		**8,415.8526**	**8,415.8526**	**0.3103**	**1.2413**	**8,793.5074**

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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.5572	15.8440	7.0193	0.0776	2.9554	0.1334	3.0888	0.8027	0.1275	0.9302		8,415.8017	8,415.8017	0.3102	1.2413	8,793.4531
Total	**3.8704**	**15.8442**	**7.0431**	**0.0776**	**2.9554**	**0.1335**	**3.0889**	**0.8027**	**0.1276**	**0.9303**		**8,415.8526**	**8,415.8526**	**0.3103**	**1.2413**	**8,793.5074**

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	Demolition	Demolition	9/1/2022	9/30/2022	5	22	
2	Site Preparation	Site Preparation	10/3/2022	11/1/2022	5	22	
3	Grading	Grading	11/2/2022	12/2/2022	5	23	
4	Building Construction	Building Construction	1/6/2023	9/29/2023	5	191	
5	Paving	Paving	12/5/2022	1/5/2023	5	24	
6	Architectural Coating	Architectural Coating	7/3/2023	9/29/2023	5	65	

Acres of Grading (Site Preparation Phase): 33

Acres of Grading (Grading Phase): 23

Acres of Paving: 2.25

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 201,908; Non-Residential Outdoor: 67,303; Striped Parking Area: 5,878 (Architectural Coating – sqft)

OffRoad Equipment

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

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
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
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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	207.00	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
Building Construction	9	98.00	38.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

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

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8400e-003	0.0000	5.8400e-003	8.8000e-004	0.0000	8.8000e-004			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.8400e-003**	**1.2427**	**1.2485**	**8.8000e-004**	**1.1553**	**1.1561**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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

3.2 Demolition - 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	lb/day										lb/day					
Hauling	2.1000e-004	8.0100e-003	1.6700e-003	3.0000e-005	8.0000e-004	7.0000e-005	8.7000e-004	2.2000e-004	7.0000e-005	2.9000e-004		3.1542	3.1542	1.1000e-004	5.0000e-004	3.3059
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	0.0435	0.0321	0.3708	1.0100e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0437**	**0.0401**	**0.3725**	**1.0400e-003**	**0.1240**	**6.9000e-004**	**0.1247**	**0.0329**	**6.4000e-004**	**0.0336**		**105.7251**	**105.7251**	**3.4900e-003**	**3.6800e-003**	**106.9087**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4900e-003	0.0000	2.4900e-003	3.8000e-004	0.0000	3.8000e-004			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**2.4900e-003**	**1.2427**	**1.2451**	**3.8000e-004**	**1.1553**	**1.1556**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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

3.2 Demolition - 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	lb/day										lb/day					
Hauling	2.1000e-004	8.0100e-003	1.6700e-003	3.0000e-005	7.6000e-004	7.0000e-005	8.3000e-004	2.1000e-004	7.0000e-005	2.8000e-004		3.1542	3.1542	1.1000e-004	5.0000e-004	3.3059
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	0.0435	0.0321	0.3708	1.0100e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0437**	**0.0401**	**0.3725**	**1.0400e-003**	**0.1176**	**6.9000e-004**	**0.1183**	**0.0313**	**6.4000e-004**	**0.0320**		**105.7251**	**105.7251**	**3.4900e-003**	**3.6800e-003**	**106.9087**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			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**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0522	0.0386	0.4450	1.2100e-003	0.1479	7.5000e-004	0.1486	0.0392	6.9000e-004	0.0399		123.0851	123.0851	4.0500e-003	3.8200e-003	124.3234
Total	**0.0522**	**0.0386**	**0.4450**	**1.2100e-003**	**0.1479**	**7.5000e-004**	**0.1486**	**0.0392**	**6.9000e-004**	**0.0399**		**123.0851**	**123.0851**	**4.0500e-003**	**3.8200e-003**	**124.3234**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4034	0.0000	8.4034	4.3188	0.0000	4.3188			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.4034**	**1.6126**	**10.0159**	**4.3188**	**1.4836**	**5.8024**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0522	0.0386	0.4450	1.2100e-003	0.1402	7.5000e-004	0.1409	0.0373	6.9000e-004	0.0380		123.0851	123.0851	4.0500e-003	3.8200e-003	124.3234
Total	**0.0522**	**0.0386**	**0.4450**	**1.2100e-003**	**0.1402**	**7.5000e-004**	**0.1409**	**0.0373**	**6.9000e-004**	**0.0380**		**123.0851**	**123.0851**	**4.0500e-003**	**3.8200e-003**	**124.3234**

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					7.0907	0.0000	7.0907	3.4260	0.0000	3.4260			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0907**	**0.9409**	**8.0316**	**3.4260**	**0.8656**	**4.2916**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	lb/day										lb/day					
Hauling	0.0420	1.5853	0.3307	5.7300e-003	0.1574	0.0141	0.1715	0.0432	0.0135	0.0566		624.5334	624.5334	0.0214	0.0990	654.5644
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	0.0435	0.0321	0.3708	1.0100e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0855**	**1.6174**	**0.7014**	**6.7400e-003**	**0.2807**	**0.0147**	**0.2953**	**0.0758**	**0.0140**	**0.0899**		**727.1043**	**727.1043**	**0.0248**	**0.1022**	**758.1672**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0313	0.0000	3.0313	1.4646	0.0000	1.4646			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**3.0313**	**0.9409**	**3.9721**	**1.4646**	**0.8656**	**2.3302**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	lb/day										lb/day					
Hauling	0.0420	1.5853	0.3307	5.7300e-003	0.1503	0.0141	0.1643	0.0414	0.0135	0.0549		624.5334	624.5334	0.0214	0.0990	654.5644
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	0.0435	0.0321	0.3708	1.0100e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0855**	**1.6174**	**0.7014**	**6.7400e-003**	**0.2671**	**0.0147**	**0.2818**	**0.0725**	**0.0140**	**0.0865**		**727.1043**	**727.1043**	**0.0248**	**0.1022**	**758.1672**

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**

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

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0413	1.7281	0.5435	7.7700e-003	0.2574	9.9600e-003	0.2674	0.0741	9.5300e-003	0.0836		833.5490	833.5490	0.0175	0.1225	870.4948
Worker	0.2660	0.1861	2.2497	6.3800e-003	0.8051	3.8600e-003	0.8089	0.2135	3.5500e-003	0.2171		653.2906	653.2906	0.0200	0.0193	659.5299
Total	**0.3073**	**1.9142**	**2.7931**	**0.0142**	**1.0624**	**0.0138**	**1.0763**	**0.2876**	**0.0131**	**0.3007**		**1,486.8396**	**1,486.8396**	**0.0375**	**0.1418**	**1,530.0247**

Mitigated Construction On-Site

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

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

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0413	1.7281	0.5435	7.7700e-003	0.2464	9.9600e-003	0.2564	0.0714	9.5300e-003	0.0809		833.5490	833.5490	0.0175	0.1225	870.4948
Worker	0.2660	0.1861	2.2497	6.3800e-003	0.7631	3.8600e-003	0.7669	0.2032	3.5500e-003	0.2068		653.2906	653.2906	0.0200	0.0193	659.5299
Total	**0.3073**	**1.9142**	**2.7931**	**0.0142**	**1.0095**	**0.0138**	**1.0233**	**0.2746**	**0.0131**	**0.2877**		**1,486.8396**	**1,486.8396**	**0.0375**	**0.1418**	**1,530.0247**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3485**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0435	0.0321	0.3708	1.0100e-003	0.1232	6.2000e-004	0.1238	0.0327	5.7000e-004	0.0333		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0435**	**0.0321**	**0.3708**	**1.0100e-003**	**0.1232**	**6.2000e-004**	**0.1238**	**0.0327**	**5.7000e-004**	**0.0333**		**102.5709**	**102.5709**	**3.3800e-003**	**3.1800e-003**	**103.6028**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3485**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0435	0.0321	0.3708	1.0100e-003	0.1168	6.2000e-004	0.1174	0.0311	5.7000e-004	0.0317		102.5709	102.5709	3.3800e-003	3.1800e-003	103.6028
Total	**0.0435**	**0.0321**	**0.3708**	**1.0100e-003**	**0.1168**	**6.2000e-004**	**0.1174**	**0.0311**	**5.7000e-004**	**0.0317**		**102.5709**	**102.5709**	**3.3800e-003**	**3.1800e-003**	**103.6028**

3.6 Paving - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2784**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0407	0.0285	0.3443	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.9935	99.9935	3.0600e-003	2.9500e-003	100.9485
Total	**0.0407**	**0.0285**	**0.3443**	**9.8000e-004**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**99.9935**	**99.9935**	**3.0600e-003**	**2.9500e-003**	**100.9485**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.2456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2784**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0407	0.0285	0.3443	9.8000e-004	0.1168	5.9000e-004	0.1174	0.0311	5.4000e-004	0.0317		99.9935	99.9935	3.0600e-003	2.9500e-003	100.9485
Total	**0.0407**	**0.0285**	**0.3443**	**9.8000e-004**	**0.1168**	**5.9000e-004**	**0.1174**	**0.0311**	**5.4000e-004**	**0.0317**		**99.9935**	**99.9935**	**3.0600e-003**	**2.9500e-003**	**100.9485**

3.7 Architectural Coating - 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					
Archit. Coating	22.2252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**22.4168**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0543	0.0380	0.4591	1.3000e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		133.3246	133.3246	4.0800e-003	3.9300e-003	134.5979
Total	**0.0543**	**0.0380**	**0.4591**	**1.3000e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**133.3246**	**133.3246**	**4.0800e-003**	**3.9300e-003**	**134.5979**

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	22.2252					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**22.4168**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0543	0.0380	0.4591	1.3000e-003	0.1557	7.9000e-004	0.1565	0.0415	7.2000e-004	0.0422		133.3246	133.3246	4.0800e-003	3.9300e-003	134.5979
Total	**0.0543**	**0.0380**	**0.4591**	**1.3000e-003**	**0.1557**	**7.9000e-004**	**0.1565**	**0.0415**	**7.2000e-004**	**0.0422**		**133.3246**	**133.3246**	**4.0800e-003**	**3.9300e-003**	**134.5979**

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	lb/day										lb/day					
Mitigated	0.5572	15.8440	7.0193	0.0776	2.9554	0.1334	3.0888	0.8027	0.1275	0.9302		8,415.8017	8,415.8017	0.3102	1.2413	8,793.4531
Unmitigated	0.5572	15.8440	7.0193	0.0776	2.9554	0.1334	3.0888	0.8027	0.1275	0.9302		8,415.8017	8,415.8017	0.3102	1.2413	8,793.4531

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	75.44	75.44	75.44	851,230	851,230
Unrefrigerated Warehouse-No Rail	138.64	138.64	138.64	433,891	433,891
Total	214.07	214.07	214.07	1,285,121	1,285,121

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
Parking Lot	9.50	7.30	31.00	0.00	0.00	100.00	100	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.571175	0.055403	0.188166	0.116095	0.020429	0.005041	0.007817	0.006362	0.000912	0.000389	0.024445	0.000927	0.002838

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
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
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
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
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

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	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Unmitigated	3.3132	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542

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	0.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-003	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Total	**3.3132**	**2.2000e-004**	**0.0237**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0509**	**0.0509**	**1.3000e-004**		**0.0542**

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	0.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-003	2.2000e-004	0.0237	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0509	0.0509	1.3000e-004		0.0542
Total	**3.3132**	**2.2000e-004**	**0.0237**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**0.0509**	**0.0509**	**1.3000e-004**		**0.0542**

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

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