BLOSSOM HILL STATION TOD AIR QUALITY AND GREENHOUSE GAS EMISSION ASSESSMENT

San José, California

November 10, 2020
Revised January 28, 2022

Prepared for:

Natalie Noyes
David J. Powers & Associates, Inc.
1736 Franklin Street, Suite 300
Oakland, CA 94612

Prepared by:

Casey Divine
Mimi McNamara
James A. Reyff

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
429 E. Cotati Avenue
Cotati, CA 94931
(707) 794-0400

I&R Project: #19-162

INTRODUCTION

The purpose of this report is to address air quality impacts, community health risks, and greenhouse gas (GHG) impacts associated with the proposed mixed-use development at 605 Blossom Hill Road in San José, California. The air quality impacts from this project would be associated with demolition of the existing land uses, construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

PROJECT DESCRIPTION

The proposed project would remove approximately half of the existing surface parking lot and associated landscaping along Blossom Hill Road and construct a new mixed-use building (Building A) and a new residential building (Building B). The existing bus stop would be relocated to Blossom Hill Road. The proposed project would retain the light rail station and retain but reconfigure 212 parking spaces in the northern half of the project site.

Building A would include up to 22,595 square feet (sf) of commercial space and up to 239 residential units. The applicant has provided three possible configurations for Building A, the first of which would construct 10,775 square feet of commercial space and 239 residential units (Option 1), the second configuration would construct 22,595 sf of commercial space and 231 residential units (Option 2), and the third configuration would construct 15,000 sf of commercial space and 239 residential units (Option 3). In all three configurations, Building A would be six stories tall with a maximum height of 79.6 feet (including mechanical screen) and would include a combination of neighborhood and resident amenity space, and an entrance lobby for building residents. Under Option 2, the second floor would include approximately 8,511 sf of additional commercial space with eight fewer residential units than Option 1. The remaining five floors would be dedicated to residential units, with 3,000 sf of amenity space and a 21,000 sf podium deck on the third floor, and an additional 900 sf of amenity space on the sixth floor.

Building B would contain 89 affordable housing units and combined amenity space on the first two floors Building B parking would be provided in both a surface parking lot adjacent to the building and within the parking garage of Building A. The parking garage for Building A would be wrapped with the building façade. Building A would provide up to 337 vehicle parking spaces and 54 motorcycle parking spaces within the first and second floors of the building.

For the purposes of the analysis, the maximum amount of commercial space (22,595 sf)[2] and number of residential units (328) are assumed.

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

[2] The project's commercial space has decreased from 22,595 sf to 13,590 sf since this analysis. The modeling results of the larger sized project now represents conservative emission and impact results as the decrease in square footage would result in slightly lower emission and risk impacts. These project modifications would not change the project's impacts as discussed further in the report.

AIR POLLUTANTS AND CONTAMINANTS

Air pollutants are governed by multiple federal and state standards to regulate and mitigate health impacts. At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been established: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), suspended particulate matter (PM: $PM_{2.5}$ and PM_{10}), and sulfur dioxide (SO_2). California sets standards, similar to the NAAQS as California Ambient Air Quality Standards (CAAQS). Health effects of the primary criteria pollutants (i.e., the NAAQS) and their potential sources are described below and summarized in Table 1. Note that California includes pollutants or contaminants that are specific to certain industries and not associated with this project. These include hydrogen sulfide and vinyl chloride.

Ozone

O_3 is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_X). The main sources of ROG and NO_X, often referred to as O_3 precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of O_3 precursors. O_3 is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with O_3 production through the photochemical reaction process. O_3 causes eye irritation, airway constriction, shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. While CO transport is limited, it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to O_3 formation, NO_2 also contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high O_3 levels. NO_2 decreases lung function and

may reduce resistance to infection. On January 22, 2010 the U.S. Environmental Protection Agency (EPA) strengthened the health-based NAAQS for NO_2.

Sulfur Dioxide

SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Particulate Matter

PM is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are larger than 2.5 microns but smaller than 10 microns (PM_{10}). $PM_{2.5}$ refers to fine suspended particulate matter with an aerodynamic diameter of 2.5 microns or less that is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Lead

Pb is a metal found naturally in the environment as well as in manufactured products. The major sources of Pb emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of pB emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufactures.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. EPA established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the EPA and the California Air Resources Board (CARB). Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, or schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Table 1. Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood functions and nerve construction. • Behavioral and hearing problems in children.
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardiorespiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Toxic Air Contaminants (TAC)	• Cars and trucks, especially diesels. • Industrial sources such as chrome platers. • Neighborhood businesses such as dry cleaners and service stations. • Building materials and product.	• Cancer. • Chronic eye, lung, or skin irritation. • Neurological and reproductive disorders.

Source: CARB, 2009. ARB Fact Sheet: Air Pollution and Health, see: https://www.arb.ca.gov/research/health/fs/fs1/fs1.htm accessed May 1, 2018

SETTING

The project is in the San Francisco Bay Area Air Basin. The Air Basin includes the counties of San Francisco, Santa Clara, San Mateo, Marin, Napa, Contra Costa, and Alameda, along with the southeast portion of Sonoma County and the southwest portion of Solano County.

This Project is within the jurisdiction of the BAAQMD. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants, and the number of days during which the region exceeds air quality standards, have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Local Climate and Air Quality

Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Climate and topography are major influences on air quality.

Climate and Meteorology

During the summer, mostly clear skies result in warm daytime temperatures and cool nights in the Santa Clara Valley. Winter temperatures are mild, except for very cool but generally frost-less mornings. Further inland where the moderating effect of the bay is not as strong, temperature extremes are greater. Wind patterns are influenced by local terrain, with a northwesterly sea breeze typically developing during the daytime. Winds are usually stronger in the spring and summer. Rainfall amounts are modest, ranging from 13 inches in the lowlands to 20 inches in the hills.

Air Pollution Potential

O_3 and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. O_3 is primarily a problem in the summer, and fine particle pollution in the winter. Most of Santa Clara County is well south of the cooler waters of the San Francisco Bay and far from the cooler marine air which usually reaches across San Mateo County in summer. O_3 frequently forms on hot summer days when the prevailing seasonal northerly winds carry O_3 precursors southward across the county, causing health standards to be exceeded. Santa Clara County experiences many exceedances of the $PM_{2.5}$ standard each winter. This is due to the high population density, wood smoke, industrial and freeway traffic, and poor wintertime air circulation caused by extensive hills to the east and west that block wind flow into the region.

Attainment Status Designations

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all state standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding

those occasions when a violation was caused by an exceptional event, as defined in the criteria. An "unclassified" designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

Table 2 shows the state and federal standards for criteria pollutants and provides a summary of the attainment status for the San Francisco Bay Area with respect to national and state ambient air quality standards.

Table 2. NAAQS, CAAQS, and San Francisco Bay Area Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Mean	0.030 ppm (57 mg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
	1-Hour	0.18 ppm (338 µg/m^3)	Attainment	0.100 ppm	Unclassified
Ozone (O_3)	8-Hour	0.07 ppm (137 µg/m^3)	Nonattainment	0.070 ppm	Nonattainment
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable
Suspended Particulate Matter (PM_{10})	Annual Mean	20 µg/m^3	Nonattainment	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Suspended Particulate Matter ($PM_{2.5}$)	Annual Mean	12 µg/m^3	Nonattainment	12 µg/m^3	Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3	Nonattainment
Sulfur Dioxide (SO_2)	Annual Mean	Not Applicable	Not Applicable	80 µg/m^3 (0.03 ppm)	Attainment
	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	365 µg/m^3 (0.14 ppm)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment

Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s. ppm = parts per million, mg/m^3 = milligrams per cubic meter, µg/m^3 = micrograms per cubic meter

Source: Bay Area Air Quality Management District, 2017. *Air Quality Standards and Attainment Status.* January 5.

Existing Air Pollutant Levels

BAAQMD monitors air pollution at various sites within the Bay Area. The closest air monitoring station (158 Jackson Street) that monitored O_3, CO, NO, NO_2, PM_{10}, and $PM_{2.5}$ over the past 5 years (2015 through 2019) is in the City of San José approximately 5 miles southwest of the project site. The data shows that during the past few years, the project area has exceeded the state and/or federal O_3, PM_{10}, and $PM_{2.5}$ ambient air quality standards. Table 3 lists air quality trends in data collected for the past 5 years and published by the BAAQMD and CARB, which is the most recent time-period available. Ozone standards (includes 1-hr concentration and 8-hr concentration) were exceeded on 0 to 4 days annually in San José and 3 to 15 days throughout the Bay Area. Measured 24-hour PM_{10} and $PM_{2.5}$ concentrations are exceeded on 0 to 6 monitoring days in San José and up to 18 days at any place in the Bay Area (note these levels were influences by smoke from wildfires).

Table 3. Ambient Air Quality Concentrations from 2015 through 2019

Pollutant	Standard	2015	2016	2017	2018	2019
Ozone						
Max 1-hr concentration		94 ppb	87 ppb	121 ppb	78 ppb	95 ppb
No. days exceeded: CAAQS	90 ppb	0	0	3	0	1
Max 8-hr concentration		81 ppb	66 ppb	98 ppb	61 ppb	81 ppb
No. days exceeded: CAAQS	70 ppb	2	0	4	0	2
NAAQS	70 ppb	2	0	4	0	2
Carbon Monoxide						
Max 1-hr concentration		2.4 ppm	2.0 ppm	2.1 ppm	2.5 ppm	1.7 ppm
No. days exceeded: CAAQS	20 ppm	0	0	0	0	0
NAAQS	35 ppm	0	0	0	0	0
Max 8-hr concentration		1.8 ppm	1.4 ppm	1.8 ppm	2.1 ppm	1.3 ppm
No. days exceeded: CAAQS	9.0 ppm	0	0	0	0	0
NAAQS	9 ppm	0	0	0	0	0
PM_{10}						
Max 24-hr concentration		58 µg/m^3	41 µg/m^3	70 µg/m^3	122 µg/m^3	77 µg/m^3
No. days exceeded: CAAQS	50 µg/m^3	1	0	6	4	4
NAAQS	150 µg/m^3	0	0	0	0	0
Max annual concentration		22.0 µg/m^3	18.5 µg/m^3	21.6 µg/m^3	23.1 µg/m^3	19.2 µg/m^3
No. days exceeded: CAAQS	-	-	-	-	-	-
$PM_{2.5}$						
Max 24-hr concentration		49.4 µg/m^3	22.6µg/m^3	49.7 g/m^3	133.9µg/m^3	27.6 µg/m^3
No. days exceeded: NAAQS	35 µg/m^3	2	0	6	15	4
Annual Concentration		10.0 g/m^3	8.4 µg/m^3	9.5 µg/m^3	12.8µg/m^3	12.8µg/m^3
No. days exceeded: CAAQS	12 µg/m^3	-	-	-	-	-
NAAQS	12 µg/m^3	-	-	-	-	-
Nitrogen Dioxide						
Max 1-hr concentration		49 ppb	51 ppb	68 ppb	86 ppb	60 ppb
No. days exceeded: CAAQS	0.18 ppm	0	0	0	0	0
NAAQS	0.100 ppm	0	0	0	0	0
Annual Concentration		13 ppb	11 ppb	12 ppb	13 ppb	11 ppb
No. days exceeded: CAAQS	0.030 ppm	-	-	-	-	-
NAAQS	0.053 ppm	-	-	-	-	-

Source: Bay Area Air Quality Management District, 2020, Web: https://www.baaqmd.gov/about-air-quality/air-quality-summaries. California Air Resource Board, 2020, Web: https://arb.ca.gov/adam/select8/sc8start.php

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children.

The closest sensitive receptors to the project site are residences to the east adjacent to the project site. There are more sensitive receptors at farther distances with residences south of the project site across Blossom Hill Road and a daycare for children (ages 3 months to 4.5 years old) north of the project site (First Step Learning Center). This project would also introduce new sensitive receptors in the form of residents.

Regulatory Framework

Pursuant to the Federal Clean Air Act (FCAA) of 1970, the EPA established the NAAQS. The NAAQS were established for major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and the CARB have established ambient air quality standards for common pollutants: CO, O_3, NO_2, SO_2, Pb, and PM. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the public with a reasonable margin of safety. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each criteria pollutant.

Federal Air Quality Regulations

At the federal level, the EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the FCAA, which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implement Plan (SIP). Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.[3] The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise

[3] See: U.S. Environmental Protection Agency, Web: https://www.epa.gov/criteria-air-pollutants/naaqs-table, Accessed 13 August 2020

their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area which imposes additional control measures. Failure to submit an approvable SIP or to implement the Plan within the mandated timeframe may result in the application of sanctions on transportation funding and stationary air pollution sources in the air basin.

The 1970 FCAA authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The FCAA Amendments of 1990 changed deadlines for attaining NAAQS as well as the remedial actions required of areas of the nation that exceed the standards. Under the FCAA, state and local agencies in areas that exceed the NAAQS are required to develop SIPs to show how they will achieve the NAAQS by specific dates. The FCAA requires that projects receiving federal funds demonstrate conformity to the approved SIP and local air quality attainment Plan for the region. Conformity with the SIP requirements would satisfy the FCAA requirements.

State Air Quality Regulations

The CARB is the agency responsible for the coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA, adopted in 1988. The CCAA requires that all air districts in the state achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from transportation and air-wide emission sources and provides districts with the authority to regulate indirect sources.

CARB is also responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. CARB is primarily responsible for statewide pollution sources and produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. CARB combines this data and submits the completed SIP to the EPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

California Clean Air Act

In 1988, the CCAA required that all air districts in the state endeavor to achieve and maintain CAAQS for CO, O_3, SO_2, and NO_2 by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged

over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the state standards for these pollutants are more stringent than the national standards.

California Air Resources Board Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[4] CARB subsequently developed an Air Quality and Land Use Handbook[5] (Handbook) in 2005 that is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. The 2005 CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds.

Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Plan Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day.
- Within 300 feet of gasoline fueling stations (note that new fueling stations utilize enhanced vapor recovery systems that substantially reduce emissions).
- Within 300 feet of dry-cleaning operations (note that dry cleaning with TACs is being phased out and will be prohibited in 2023).

Bay Area Air Quality Management District

The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB) through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan

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's 2017 Clean Air Plan is the latest Clean Air Plan which contains district-wide control measures to reduce O_3 precursor emissions (i.e.,

[4] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.
[5] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

ROG and NO_X), particulate matter and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan, which was adopted on April 19, 2017 by the BAAQMD's board of directors:

- 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 O_3;
- Provides a control strategy to reduce O_3, particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
- Reviews progress in improving air quality in recent years; and
- Continues and updates emission control measures.

BAAQMD CARE Program

The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[6] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. Recently, BAAQMD identifies an *overburdened* community as an area located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract. The project site is not within a CARE area of an identified overburdened community area as identified by CalEnviroScreen.

Planning Healthy Places

BAAQMD developed a guidebook that provides air quality and public health information intended to assist local governments in addressing potential air quality issues related to exposure of sensitive receptors to exposure of emissions from local sources of air pollutants. The guidance provides tools and recommended best practices that can be implemented to reduce exposures. The information is provided as recommendations to develop policies and implementing measures in city or county General Plans, neighborhood or specific plans, land use development ordinances, or into projects.

[6] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.

BAAQMD California Environmental Quality Act Air Quality Guidelines

The BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines[7] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts. A recent update to the Guidelines was published in May 2017. The detailed health risk modeling methodology based on BAAQMD CEQA guidance is used in this assessment and is contained in *Attachment 1*.

City of San José

San José Envision 2040 General Plan

The San José Envision 2040 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution and toxic air contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project and this assessment:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

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 emission reduction measures.

MS-10.2 Consider 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.

MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.

[7] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

Applicable Goals – Toxic Air Contaminants

Goal MS-11 Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Applicable Policies – Toxic Air Contaminants

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.

MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

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.

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.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 CEQA Air Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 4.

Table 4. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 $\mu g/m^3$	>0.8 $\mu g/m^3$	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect GHG emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually (for 2020)* OR 4.6 metric tons per service population per year (for 2020)*		

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

*BAAQMD does not have a recommended post-2020 GHG threshold.

Source: Bay Area Air Quality Management District, 2017

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: 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?

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types, size, and anticipated construction schedule were input to CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[8] The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

Land Use Inputs

The proposed project land uses[9] were entered into CalEEMod as described in Table 5.

Table 5. Summary of Project Land Use CalEEMod Inputs

Project Land Uses	Size	Units	Square Feet	Acres
Enclosed Parking with Elevator	330	Parking Space	116,260	7.23
Parking Lot	212	Parking Space	150,000	
Apartments Mid Rise	328	Dwelling Unit	381,318	
Strip Mall	22.595	1,000 sf	22,595	

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-

[8] See CARB's EMFAC2021 Emissions Inventory at https://arb.ca.gov/emfac/emissions-inventory

[9] The project's commercial space has decreased from 22,595 sf to 13,590 sf since this analysis. However, construction activities (i.e., schedule, equipment quantities, hours used) would not change with the updated project land uses. The modeling results of the larger sized project in this analysis now represents conservative emission and impact results as the decrease in square footage would result in slightly lower emission and risk impacts. The project's criteria pollutant and GHG emissions and the community risk impacts are well below the significance thresholds and would continue to be with the deceased commercial square footage.

site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on information provided by the project applicant.

The construction schedule assumed that the earliest possible start date would be July 2022 and the project would be built out six days per week over a period of approximately 35 months, or 762 construction workdays. The construction equipment worksheet provided included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase.

Construction Traffic Emissions

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily rate by the number of days in that phase. The traffic information was combined with EMFAC2021 motor vehicle emissions factors.

EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trucks, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling. Since CalEEMod does not directly address cement or asphalt trucks, these were treated as vendor travel distances (7.3 miles).[10] Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Santa Clara County for the years 2022-2025 were used in these calculations. Table 6 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

[10] Note that vendor construction traffic surveys used to develop CalEEMod default assumptions likely included cement truck trips.

Table 6. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Worker Trips[1]	Vendor Trips[1]	Haul Trips	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 Demo 7.3 Concrete/Asphalt	Truck Idle Time = 5 minutes
Demolition	300	0	1,020	5,500 tons of building and 4,815sf of existing pavement hauled. CalEEMod defaults.
Site Preparation	88	0	0	CalEEMod Default
Grading	1,000	0	1,694	Export = 8,539 cy. Import = 5,012 cy. CalEEMod default trips.
Trenching/Foundation	954	0	0	CalEEMod Default
Building Construction	249,920	75,728	960	480 cement truck round trips. CalEEMod Default
Architectural Coating	49,984	0	0	CalEEMod Default
Paving	1,850	0	237	Haul 1,898 cy of asphalt. CalEEMod Default

Notes:
[1] Based on 2022, 2023, 2024, and 2053 EMFAC2021 VMT-based fleet mix for Santa Clara County.
Square feet = sf, Cubic yards = cy

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions and dividing those emissions by the number of active workdays during that year. Table 7 shows the annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. Predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds

Table 7. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2022	0.25	0.93	0.05	0.04
2023	1.57	1.56	0.10	0.07
2024	1.56	1.47	0.09	0.06
2025	0.31	0.43	0.03	0.02
Annualized Daily Construction Emissions (pounds/day)				
2022 (132 construction workdays)	3.75	14.13	0.79	0.56
2023 (261 construction workdays)	12.03	11.99	0.74	0.53
2024 (262 construction workdays)	11.91	11.26	0.69	0.48
2025 (107 construction workdays)	5.87	8.08	0.53	0.33
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include

disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

Mitigation Measure AQ-1: Implement BAAQMD-Recommended Measures to Control Particulate Matter Emissions during Construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off 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 [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, customers, and employees. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. This analysis assumed that the project would be fully built out and operating in the year 2026.

Operational Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model. The weekday trip generation rates were adjusted using the traffic daily rates. The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate.[11] The default trip lengths and trip types specified by CalEEMod were used, including the default conditions for passby and diverted trips. The PM-period passby reduction for "Shopping Center" predicted in the traffic analysis was not applied for this project.

EMFAC2021 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off-road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod default vehicle emission factors and fleet mix were updated using the emission rates and fleet mix from EMFAC2021. On road emission rates from 2028 Santa Clara County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.[12]

[11] Hexagon Transportation Consultants, Inc. 2020. *Blossom Hill Station TOD Volumes*. September.
[12] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

Climate Smart San José

Climate Smart San José is a plan to reduce air pollution, save water, and create a stronger and healthier community. The City approved goals and milestones in February 2018 to ensure the City can substantially reduce GHG emissions through reaching the following goals and milestones:

- All new residential buildings will be Zero Net Carbon Emissions (ZNE) by 2020 and all new commercial buildings will be ZNE by 2030 (Note that ZNE buildings would be all electric with a carbon-free electricity source).
- San Jose Clean Energy (SJCE) will provide 100-percent carbon-free base power by 2021.
- One gigawatt of solar power will be installed in San Jose by 2040.
- 61 percent of passenger vehicles will be powered by electricity by 2030.

The California Energy Commission (CEC) updates the California Building Energy Efficiency Standards every three years, in alignment with the California Code of regulations. Title 24 Parts 6 and 11 of the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) address the need for regulations to improve energy efficiency and combat climate change. The 2019 CAL Green standards include substantial changes intended to increase the energy efficiency of buildings. For example, the code encourages the installation of solar and heat pump water heaters in low-rise residential buildings. The 2019 California Code went before City Council in October 2019 for approval, with an effective date of January 1, 2020. As part of this action, the City adopted a "reach code" that requires development projects to exceed the minimum Building Energy Efficiency requirements.[13] The City's reach code applies only to new residential and non-residential construction in San José. It incentivizes all-electric construction, requires increased energy efficiency and electrification-readiness for those choosing to maintain the presence of natural gas. The code requires that non-residential construction include solar readiness. It also requires additional EV charging readiness and/or electric vehicle service equipment (EVSE) installation for all development types.

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. San Jose Clean Energy is the default electricity provider in San Jose. CalEEMod has a default emission factor of 807 pounds of CO_2 per megawatt of electricity produced; however, SJCE reports a current rate of 0.0806 metric tons per megawatt or 177.69 pounds per megawatt. The City's Greenhouse Gas Reduction Strategy reduces this intensity factor to 0 (carbon-free) by 2030. In addition, SJCE would provide electricity that would be 100-percent carbon free by 2021 before the project becomes operational.[14]

[13] City of San Jose Transportation and Environmental Committee, *Building Reach Code for New Construction Memorandum,* August 2019.
[14]See: https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/climate-smart-san-jos/2019-reach-code-initiative

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions. No hearths were assumed.

Existing Land Use

The existing site consists of only a parking lot for the Blossom Hill Light Rail station; therefore, modeling of existing land uses was not included in this analysis.

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 8 shows the annual and average daily construction emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

Table 8. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2026 Annual Project Operational Emissions (*tons/year*)	2.96	0.79	1.28	0.34
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2026 Average Daily Project Operational Emissions (*pounds/day*)[1]	16.2	4.3	7.0	1.9
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1] Assumes 365-day operation.				

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. During project operation, the project would generate some traffic, consisting of mostly light-duty vehicles. The project does not propose any onsite stationary sources (e.g. emergency generator with diesel engine) at the time of this analysis.

Therefore, project impacts to existing sensitive receptors were addressed for temporary construction activities and operational project traffic impacts only. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of these existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period is typically used, per BAAQMD guidance,[15] with the residential sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project's maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the modeling of TAC and $PM_{2.5}$ emissions, dispersion modeling and cancer risk computations.

[15] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes all adjacent existing residences and other sensitive receptor groups, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third-trimester, infants, children, and adults) with almost continuous exposure to project emissions. Additionally, the risks and hazard values were calculated for infants and children at the learning center identified in Figure 1.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[16] This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction sites. Fugitive $PM_{2.5}$ dust emissions were computed by CalEEMod for the overall construction period and are included as part of the total $PM_{2.5}$ emissions reported in Table 9.

Table 9. Unmitigated Construction Emissions of DPM and Fugitive $PM_{2.5}$ (tons)

TAC Source	2022	2023	2024	2025
PM_{10} Exhaust (DPM)	0.033	0.059	0.052	0.013
$PM_{2.5}$ Fugitive	0.063	0.006	0.006	0.003

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[17] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

[16] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[17] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.

Construction Sources

To represent the construction equipment exhaust emissions, an emission release height of 20 feet (6 meters) was used for the area sources. The 20-foot release height used for the refined modeling of the project's construction equipment exhaust DPM emissions is a conservative estimate of the overall plume height and incorporates both the release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a 5-year meteorological data set (2013-2017) from the San José International Airport prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring Monday - Saturday between 7:00 a.m. to 7:00 p.m., when the majority of construction activity is expected to occur according to the project applicant. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2022-2025 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters) used to represent the breathing heights of residences and a receptor breathing height of 3 feet (1 meter) was used for the children attending the learning center.

Summary of Construction Community Risk Impacts

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant and adult exposures were assumed to occur at all residences during the entire construction period. At the learning center, children between the ages of three months to four and a half years old were assumed. It was also assumed that the children would be at the learning center for 250 days a year,

which aligns with BAAQMD's recommendation for worker schedules.[18] This exposure frequency was used since children would be at the daycare when parents are at work.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation refence exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the MEI. Results indicated that the maximum concentrations from DPM and $PM_{2.5}$ would occur at a residence southeast of the project site across Blossom Hill Road. Due to construction beginning in the middle of 2022, the maximum construction cancer risk impact occurred when third trimester/infant exposure began in 2023.

The construction community risks were also computed and predicted at the location of the First Step Learning Center identified in Figure 1. Table 10 lists the community risks from construction at all these locations. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Community Risks from Project Operation

Operation of the project would have long-term emissions from mobile sources (i.e. traffic). Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-impact source of TACs and do not need to be considered in the CEQA analysis.[19] This project would generate 1,768 daily trips with a majority of the trips being from light-duty vehicles (i.e. passenger cars). Therefore, emissions from project traffic would be negligible and are not included in this analysis.

[18] Bay Area Air Quality Management District, 2016, *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* January.

[19] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

Figure 1. Project Construction Site, Location of Off-Site Sensitive Receptors and Maximum TAC Impacts

Summary of Project-Related Community Risks at the MEI

As shown in Table 10, the unmitigated maximum cancer risks from project construction activities at the residential MEI location would exceed its respective single-source significance threshold. However, with the implementation of the *Mitigation Measure AQ-1 and AQ-2*, the mitigated cancer risk would no longer exceed the BAAQMD single-source significance threshold. The maximum annual $PM_{2.5}$ concentration and HI from construction activities would not exceed their respective single-source significance thresholds, unmitigated or mitigated. Community risk impacts at the First Step Learning Center would be below the BAAQMD single-source thresholds.

Table 10. Maximum Project Risk Impacts at the Offsite Receptors

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Residential Exposure				
Project Construction (Years 1-4)[1]	Unmitigated	**19.55 (infant)**	0.11	0.01
	Mitigated[2]	5.23 (infant)	0.03	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated[2]	*No*	*No*	*No*
First Step Learning Center[3]				
Project Construction (Years 1-4)	Unmitigated	7.15 (infant)	0.02	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

Notes: [1] The maximum construction cancer risk impact occurred when third trimester/infant exposure began in 2023.
[3] Construction equipment with Tier 3 DPF 3 engines and Best Management Practices as Mitigation
[3] Infants and child exposure assumed with children assumed to be 3 months to 4.5 years old

Cumulative Community Risks of all TAC Sources at Project MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e. influence area). These sources include freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified one stationary source with the potential to affect the project MEI. A review of the project area indicates that traffic on State Route 85 and Blossom Hill Road would exceed 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. Community risk impacts from these sources upon the MEI reported in Table 11. Figure 2 shows the location of the sources affecting the MEI Details of the modeling and community risk calculations are included in *Attachment 5.*

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website.[20] This mapping tool identifies the location of nearby stationary sources and their estimated risk and hazard impacts. The Gas N' Go (Facility ID #111360) was the only permitted facility identified using this tool. The screening risks and hazards for the gas dispensing facility was adjusted for distance using BAAQMD's *Gasoline Dispensing Facility Distance Multiplier Tool*. Table 11 lists the risks and hazards from the stationary source.

Roadways – State Route 85 and Blossom Hill Road

A refined analysis of potential health impacts from vehicle traffic on State Route 85 and Blossom Hill Road was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on both roadways near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks were then computed based on the modeled exposures.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on both roadways using the Caltrans (CT) version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions.

State Route 85

DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road (i.e. freeway), truck percentages described above, traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (i.e. 2026), and season (i.e. annual).

Traffic volumes were assumed to increase 1 percent per year. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[21] which were then applied to the average daily traffic volumes to obtain estimated hourly traffic volumes and emissions for I-280. Based on traffic data from the Santa Clara Valley Transportation Authority's 2018 Monitoring and Conformance Report, traffic speeds during the peak a.m. and p.m. periods were identified.[22] For a 3-hour period during the peak a.m. period, an average travel speed of 30

[20] BAAQMD, Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
[21] The Burden output from EMFAC2007, CARB's previous version of the EMFAC model, was used for this since the current web-based version of EMFAC2011 does not include Burden type output with hour by hour traffic volume information.
[22] Santa Clara Valley Transportation Authority. 2019. *2018 CMP Monitoring and Conformance Report*. May. Web: https://www.vta.org/sites/default/files/2020-08/2018%20Monitoring%20Report.pdf

mph was used for westbound traffic and an average speed of 65 mph was used for eastbound traffic. For the peak p.m. period, an average travel speed of 35 mph was used eastbound traffic and an average travel speed of 65 mph was used for westbound traffic.

Blossom Hill Road

DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road (i.e. major collector), truck percentages described above, traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (i.e. 2026), and season (i.e. annual).

The ADT on Blossom Hill Road was based on the AM and PM peak-hour data background plus project traffic volumes.[23] An ADT of 35,140 vehicles was predicted. The Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[24] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for both roadways. For Blossom Hill Road, an average travel speed of 40 miles per hour (mph) was used for all for all hours of the day based on the posted speed limit.

Dispersion Modeling

Both roadways modeled with the AERMOD model using line-area sources (a series of adjacent area sources along a line) to represent traffic emissions on roadway segments within about 1,000 feet of the project site. Five years (2013-2017) of hourly meteorological data from the San José International Airport prepared for use with the AERMOD model by the BAAQMD, were used for the modeling. TAC and $PM_{2.5}$ concentrations for 2026 were calculated by the model at the same sensitive receptor locations used for the construction health risk modeling. A 30-year exposure was assumed. Table 11 lists the roadway risks and hazards at the location of the MEI.

Summary of Cumulative Risks at the MEI

Table 11 reports both the project and cumulative community risk impacts. The project's community risk from project construction activities would exceed the single-source maximum increased cancer risk of 10.0 per million without mitigation, but with mitigation no longer exceeds the threshold. Additionally, the unmitigated and mitigated cumulative annual maximum $PM_{2.5}$ concentration exceeds the cumulative threshold of greater than 0.8 $\mu g/m^3$ due to the overwhelming influence of traffic from both State Route 85 and Blossom Hill Road. The cancer risk and HI, unmitigated and mitigated, does not exceed their respective cumulative thresholds.

[23] Hexagon Transportation Consultants, Inc. 2020. *Blossom Hill Station TOD Volumes*. September.
[24] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2017 does not include Burden type output with hour by hour traffic volume information.

Table 11. Cumulative Community Risk Impacts at the Location of the MEI

Source		Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**19.55 (infant)**	0.11	0.01
	Mitigated	5.23 (infant)	0.03	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Sources				
State Route 85		4.64	0.36	<0.01
Blossom Hill Road		3.98	0.63	<0.01
Gas N' Go (Facility ID #111360, Gas Dispensing Facility) MEI Distance at >1,000 feet		0.18	-	<0.01
Cumulative Sources	Unmitigated	28.35	**1.10**	<0.04
	Mitigated	14.03	**1.02**	<0.04
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	***Yes***	*No*
	Mitigated	*No*	***Yes***	*No*

Mitigation Measure AQ-2: Use Construction equipment that has low diesel particulate matter exhaust emissions.

Implement a feasible plan to reduce diesel particulate matter emissions by 50 percent such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below TAC significance levels is as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 2 or 3 emission standards for PM (PM_{10} and $PM_{2.5}$) and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices. Note that engines meeting the newer U.S. EPA Tier 4 standards would exceed this requirement.

2. Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment.

3. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 50 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 2 or 3 engines with DPF Level 3 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,

- Change in construction build-out plans to lengthen phases, and
- Application of different building methods that result in less diesel equipment usage.

Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Effectiveness of Mitigation Measure AQ-1 and AQ-2

CalEEMod was used to compute emissions associated with the implementation of Mitigation Measures AQ-1 and AQ-2, assuming that all equipment met U.S. EPA Tier 3 engines standards and DPF 3 and BAAQMD best management practices for construction were included. With these measures implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 73 percent to 5.23 chances per million. A plan that reduces DPM emissions by 50 percent would reduce cancer risk to about 9.78 chances per million, which would be below the BAAQMD single-source significance threshold.

Mitigation Measure AQ-1 and *AQ-2* represent the best available measures to reduce project construction period emissions. With these measures, project annual $PM_{2.5}$ concentrations would be reduced to below the single source threshold (as shown in Table 11), but it is not possible to reduce the $PM_{2.5}$ concentrations levels below the cumulative threshold since existing non-project sources alone cause $PM_{2.5}$ concentrations to exceed the cumulative threshold. Cumulative risks exceed the $PM_{2.5}$ concentration threshold because of the overwhelming influence of the traffic on both State Route 85 and Blossom Hill Road at the MEI. The project's mitigated $PM_{2.5}$ concentration only represents 3 percent of the total mitigated cumulative concentration. According to BAAQMD, project health risks would be less-than-significant if the risks from the project with best available mitigation measures are reduced below the single-source thresholds.[25] The project accomplishes this, and therefore the project would not make a cumulatively considerable contribution to this existing cumulative impact and no additional mitigation would be required on the part of the project to mitigate the exceedance of the cumulative source threshold for annual $PM_{2.5}$ concentration.

[25] Correspondence with Areana Flores, MSc, Environmental Planner, BAAQMD, February 23, 2021

Non-CEQA: Onsite Community Risk Assessment for TAC Sources

The proposed project would provide new residences. Therefore, onsite residential sensitive receptors were assumed to include infants, children, and adults. The same nearby sources of TACs and their impacts upon the on-site sensitive receptors were assessed.[26] Figure 3 shows the on-site sensitive receptors in relation to the nearby TAC sources. The risk impacts from the TAC sources are shown in Table 12**.** See *Attachment 5* for the community risks results.

BAAQMD Permitted Stationary Sources

The stationary source analysis was done in the same manner as described above for the project MEI.

Roadways – State Route 85 and Blossom Hill Road

The roadway analysis was done in the same manner for the off-site sensitive receptors as described in the project traffic dispersion modeling section (see above). A 30-year residential exposure period was used in the risk calculations and a breathing height of 15 feet was used. The residences at Building A would start on the second floor.

Summary of Cumulative Community Risks at the Project Site

Community risk impacts from the TAC sources upon the project site are reported in Table 12. The risks from the singular TAC sources were compared against the BAAQMD single-source threshold. The risks from all the sources were then combined and compared against the BAAQMD cumulative-source threshold. The $PM_{2.5}$ concentrations from the roadways would both thresholds. *Condition of Approval AQ-1* is recommended to reduce the $PM_{2.5}$ concentration from the local roadways.

Table 12. Cumulative Community Risk Impacts Upon the Onsite Sensitive Receptors

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Cumulative Sources			
State Route 85	3.48	0.27	<0.01
Blossom Hill Road	4.10	**0.43**	<0.01
Gas N' Go (Facility ID #111360, Gas Dispensing Facility) MEI Distance at >1,000 feet	0.18	-	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	*No*	***Yes***	*No*
Cumulative Sources	7.76	0.7	<0.03
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold?	*No*	*No*	*No*

[26] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473

Condition of Approval AQ-1: **Include high-efficiency particulate filtration systems in residential ventilation systems.**

The significant exposure for new project residential receptors is judged by two effects: (1) increased cancer risk, and (2) annual $PM_{2.5}$ concentration. Exposure to annual $PM_{2.5}$ concentrations from the surrounding roadway traffic on Blossom Hill Road is above the threshold, while cancer risk impacts are below thresholds. Cancer risk is mostly the result of exposure to diesel particulate matter, although, gasoline vehicle exhaust contributes to this effect. Annual $PM_{2.5}$ concentrations are based on the exposure to $PM_{2.5}$ resulting from emissions attributable to truck and auto exhaust, the wearing of brakes and tires and re-entrainment of roadway dust from vehicles traveling over pavement. The modeled $PM_{2.5}$ exposure to project site drives the condition of approval. Reducing particulate matter exposure would reduce both annual $PM_{2.5}$ exposures and cancer risk.

The project shall include the following measures to minimize long-term annual $PM_{2.5}$ exposure for new project occupants:

1. Install air filtration in the residential buildings where annual $PM_{2.5}$ concentrations exceed 0.3 $\mu g/m^3$, which would be units within 130 feet of the edge of Blossom Hill Road. Note that the analysis provided in this analysis identified maximum impacts to planned residences where some residences may have concentrations below the threshold. Air filtration devices shall be rated MERV13 or higher for all portions of the site. To ensure adequate health protection to sensitive receptors (i.e. third trimester fetuses, infants, children, and adults), this ventilation system, whether mechanical or passive, all fresh air circulated into the dwelling units shall be filtered. Specific portions of the project site that requires this filtration could be further identified by modeling.

2. As part of implementing this measure, an ongoing maintenance plan for the buildings' heating, ventilation, and air conditioning (HVAC) air filtration system shall be required.

3. Ensure that the use agreement and other property documents: (1) require cleaning, maintenance, and monitoring of the affected buildings for air flow leaks, (2) include assurance that new owners or tenants are provided information on the ventilation system, and (3) include provisions that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.

Effectiveness: A system with MERV13 would achieve an 80-percent reduction.[27] Increased cancer risk and $PM_{2.5}$ exposures for MERV13 filtration cases were calculated assuming a combination of outdoor and indoor exposure. For use of MERV13 filtration systems, without the additional use of sealed, inoperable widows and outdoor exposure of three hours to ambient $PM_{2.5}$ concentrations and 21 hours of indoor exposure to filtered air was assumed. In this case, the effective control efficiency using a MERV13 filtration system is about 70 percent for $PM_{2.5}$ exposure. The installation of MERV13 filtration systems to the residential buildings would reduce the maximum annual $PM_{2.5}$ concentration caused by Blossom Hill Road from 0.43 $\mu g/m^3$ to 0.13 $\mu g/m^3$. Therefore, the annual $PM_{2.5}$ concentrations form the roadway would not exceed the single source threshold of 0.3 $\mu g/m^3$.

[27] Bay Area Air Quality Management District (2016). Appendix B: Best Practices to Reduce Exposure to Local Air Pollution, *Planning Healthy Places A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning* (p. 38). http://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en

Figure 3. Onsite Project Sensitive Receptors and Nearby TAC and $PM_{2.5}$ Sources

Greenhouse Gas Emissions

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.[28] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive

[28] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be

achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[29] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic

[29] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[30]

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[31] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[32] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[33] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

GHG Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.6 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[34] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

[30] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[31] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018.* April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf
[32] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017.* Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
[33] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.
[34] Association of Environmental Professionals, 2016. *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*. April.

Impact-GHG 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, the generator, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above. CalEEMod output is included in *Attachment 2*.

Service Population

The project service population efficiency rate is based on the number of employees and residents. To calculate the residential population, a rate of 3.19 persons per household was used from the California Department of Finance and multiplied by the total number of dwelling units (i.e. 328 dwelling units).[35] The residential population would be approximately 1,046 residents.

To estimate the employee population for the restaurant space, retail space, and hotel, the City of San José Employment Density and Floor Area Ratio Assumptions by Land Use Type rates were used.[36] The Retail (Small) rate of 250 gross square feet per employee was used for the 22,595 sf of retail. Based on this rate, there would be approximately 90 employees. Therefore, the total service population would be 1,137 persons.

Construction GHG Emissions

GHG emissions associated with construction were computed to be 2,320 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

[35] State of California, Department of Finance, 2020. *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2020.* May. Web: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

[36] Strategic Economics, 2016. *San Jose Market Overview and Employment Land Analysis.* January. Web: https://www.sanjoseca.gov/home/showdocument?id=22529

Operational GHG Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully developed site under the proposed project. CalEEMod models were run for the opening year (2026) and future year (2030) for both the project and existing land use. It was assumed that electricity from SJCE would be 100 percent carbon free, the single-family homes would 100 percent electrified per the natural gas reach code in the City, and there would be no wood or natural gas hearths included in the project design.

As shown in Table 13, annual emissions from the are predicted to be 1,432 MT of CO_2e in 2030. The service population emissions would be 1.3 MT/CO_2e/year/service population in 2030. To be considered an exceedance in the City of San José, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. The service population emissions would not exceed the service population threshold.

Table 13. Annual Project GHG Emissions (CO_2e) in Metric Tons and by Service Population

Source Category	Proposed Project in 2026	Proposed Project in 2030
Area	4	4
Energy Consumption	150	150
Mobile	1,246	1,162
Solid Waste Generation	88	88
Water Usage	28	28
Metric Ton Total	**1,517**	**1,432**
Bright-Line Significance Threshold	-	*660 MT of CO_2e*
Service Population Emissions[1]	1.3	1.3
Service Population Significance Threshold	-	*2.6 MT of CO_2e/year/service population*
Exceed Both Thresholds?		*No*
Note: [1]Based on a service population of 1,137 persons.		

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute increased cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction and operation. The AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the screening community risk calculations from sources affecting the MEI.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminants (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[37] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[38] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[39] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). However, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD

[37] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* Office of Environmental Health Hazard Assessment. February.
[38] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[39] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates for moderate intensity.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type* →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day)$^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14**
Exposure Frequency (days/year)*		350	350	350	350**
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73**

* Exposure Frequency can change dependent on the type of receptors (i.e. residential, worker, school, daycare). For worker exposures (adult), the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Input Assumptions and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: Blossom Hill Station Mixed-Use Project

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
328 Dwelling Units
7.23 total project acres disturbed
279,051 s.f. residential
65,442 s.f. Common/Stairs/BOH
16525 s.f. office/commercial
20,300 s.f. other, specify: Amenity/Deck Space
116,260 s.f. parking garage 330 spaces
150,000 s.f. parking lot 212 spaces

Construction Hours (Monday - Saturday) 7:00 am to 7:00 pm

Pile Driving? Y/N? TBD

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? ____
IF YES (if BOTH separate values) -->
Kilowatts/Horsepower: _____
Fuel Type: _____
Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**	7/1/2022	**Total phase:**	20			**Overall Import/Export Volumes**
		End Date:	7/23/2022					
2	Concrete/Industrial Saws	81	0.49	8	5	2.0	80	**Demolition Volume**
2	Excavators	162	0.38	8	12	4.8	192	Square footage of buildings to be demolished
1	Rubber-Tired Dozers	255	0.40	4	12	2.4	48	(*or* total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	4	12	2.4	48	? square feet *or*
								5,500 Hauling volume (tons)
								Any pavement demolished and hauled **4,815 tons**
	Site Preperation	**Start Date:**	7/25/2022	**Total phase:**	11			
		End Date:	8/5/2022					
1	Graders	187	0.41	8	10	7.3	80	
1	Rubber Tired Dozers	255	0.40	8	10	7.3	80	
1	Tractors/Loaders/Backhoes	97	0.37	8	5	3.6	40	
	Grading / Excavation	**Start Date:**	8/8/2022	**Total phase:**	50			
		End Date:	10/4/2022					**Soil Hauling Volume**
1	Excavators	162	0.38	8	10	1.6	80	Export volume = **8,539** cubic yards
1	Graders	187	0.41	8	25	4.0	200	Import volume = **5,012** cubic yards
1	Rubber Tired Dozers	255	0.40	8	20	3.2	160	
1	Tractors/Loaders/Backhoes	97	0.37	8	15	2.4	120	
2	Rollers	60	0.38	8	10	1.6	160	
1	Broom Sweeper	64	0.46	4	25	2.0	100	
2	Material Handling Equipment (Trucking)	167	0.40	8	30	4.8	480	
	Trenching/Foundation	**Start Date:**	10/5/2022	**Total phase:**	50			
		End Date:	12/5/2022					
2	Tractor/Loader/Backhoe	97	0.37	8	25	4.0	400	
1	Excavators	162	0.38	8	15	2.4	120	
1	Rubber Tired Loaders	199	0.36	4	20	1.6	80	
1	Broom Sweeper	64	0.46	2	30	1.2	60	
2	Material Handling Equipment (Trucking)	167	0.40	6	10	1.2	120	
	Building - Exterior	**Start Date:**	12/6/2022	**Total phase:**	678			**Cement Trucks 480 Total Round-Trips:**
		End Date:	3/5/2025					
1	Cranes	226	0.29	2	10	0.0	20	Electric? (Y/N) **No** Otherwise assumed diesel
2	Forklifts	89	0.20	4	350	2.1	2800	Liquid Propane (LPG)? (Y/N) **N** Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	10	0.1	80	Or temporary line power? (Y/N) **Y**
1	Welders	46	0.45	2	10	0.0	20	
8	Concrete Trucks	162	0.38	4	20	0.1	640	
4	Material Handling Equipment (Trucking)	167	0.40	2	350	1.0	2800	
2	Air Compressors	78	0.48	4	450	2.7	3600	
2	Aerial Lift	44	0.30	4	20	0.1	160	
Building - Interior/Architectural Coatin		**Start Date:**	12/6/2022	**Total phase:**	678			
		End Date:	3/5/2025					
6	Air Compressors	78	0.48	4	350	2.1	8400	
	Aerial Lift	62	0.31			0.0	0	
	Other Equipment?							
	Paving	**Start Date:**	3/6/2025	**Total phase:**	73			
		End Date:	5/30/2025					
1	Pavers	125	0.42	8	1	0.1	8	
1	Paving Equipment	130	0.36	8	1	0.1	8	
1	Rollers	80	0.38	8	1	0.1	8	**Asphalt 1,898 cubic yards or ____ ~~round trips?~~**
1	Tractors/Loaders/Backhoes	97	0.37	8	10	1.1	80	
2	Concrete Trucks	162	0.38	2	5	0.1	20	
5	Asphalt Delivery Trucks	162	0.38	6	2	0.2	60	
5	Material Handling Equipment (Trucking)	167	0.40	1	30	0.4	150	
1	Landscape Trenchers	80	0.50	6	5	0.4	30	
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs
It is assumed that water trucks would be used during grading
Add or subtract phases and equipment, as appropriate
Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Traffic Consultant Trip Gen					CalEEMod Default		
Land Use	**Size**	**Daily Trips**	**New Trips**	**Weekday Trip Gen**	**Weekday**	**Sat**	**Sun**
Apartments Mid Rise	328	1,784	1,238	***3.77***	6.65	6.39	5.86
Reduction		*-128*			*Rev*	***3.63***	***3.33***
Reduction		*-199*					
Reduction		-219					
Shopping Center	22.595	853	638	***28.24***	44.32	42.04	20.43
Reduction		*-128*			*Rev*	***26.78***	***13.02***
Reduction		*-87*					
Reduction							

Project Trip Generation Estimates - Blossom Hill Station TOD

									AM Peak Hour						PM Peak Hour					
	ITE Land	% of Vehicle	VMT [3]		Reduction		Daily		Pk-Hr	Split		Trip			Pk-Hr	Split		Trip		
ITE Land Use	Use Code	Mode Share	Existing	Project	%	Size	Rate	Trip	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Multifamily Housing (Mid-Rise)	221					328 DU	5.44	1,784	0.36	26%	74%	31	87	118	0.44	61%	39%	88	56	144
15% housing and retail mixed-use reduction [1]					15%			(128)				(1)	(2)	(3)				(7)	(6)	(13)
Location based reduction (Suburb with Multifamily Homes) [2]		88%			12%			(199)				(4)	(10)	(14)				(10)	(6)	(16)
Project Specific VMT reduction [3]			14.85	12.62	15%			(219)				(4)	(11)	(15)				(11)	(7)	(18)
Total Residential Project Trips:								**1,238**				**22**	**64**	**86**				**60**	**37**	**97**
Shopping Center	820					22.595 SF	37.75	853	0.94	62%	38%	13	8	21	3.81	48%	52%	41	45	86
15% housing and retail mixed-use reduction [1]					15%			(128)				(2)	(1)	(3)				(6)	(7)	(13)
Location based reduction (Suburb with Multifamily Homes) [2]		88%			12%			(87)				(1)	(1)	(2)				(4)	(5)	(9)
34% PM Passby Reduction[4]					17%/0%/34%			(108)				0	0	0				(11)	(11)	(22)
Total Retail Project Trips:								**530**				**10**	**6**	**16**				**20**	**22**	**42**
Total New Project Trips								**1,768**				**32**	**70**	**102**				**80**	**59**	**139**

Source: ITE Trip Generation Manual, 10th Edition (2017). Rates for Multifamily Housing (Land Use 221) expressed in trips per DU; rates for Shopping Center (Land Use 820) expressed in trips per 1,000 SF.

[1] A 15% residential/retail internal mixed-use trip reduction was applied per the 2014 Santa Clara VTA TIA Guidelines. The 15% reduction was first applied to the smaller trip generator (retail). The same number of trips were subtracted from the larger trip generator (residential) to account for both trip ends.

[2] The project site is located within the place type Suburban with Multifamily Housing based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode share percentage outputs are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The 12% trip reduction is based on the percent of mode share for other modes of travel besides vehicles.

[3] Based on the existing and project VMTs per capita obtained from the City's VMT Evaluation Tool, a 15% reduction for the residential component of the project was applied. It is assumed that every percent reduction in VMT per capita is equivalent to one percent reduction in peak-hour vehicle trips.

[4] The PM peak hour pass-by trip reduction percentage (34% for Shopping Center) was based on the ITE Trip Generation Handbook (Third Edition). No AM peak hour pass-by trip reduction is provided. The daily pass-by trip reduction (17%) was calculated based on the average of the AM and PM pass-by trip reduction percentages.

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.16	0.62	0.03	0.03	91	
2023	1.40	1.03	0.05	0.05	201	
2024	1.40	0.97	0.05	0.05	202	
2025	0.25	0.23	0.01	0.01	55	
EMFAC						
2022	0.09	0.32	0.02	0.01	314	
2023	0.17	0.54	0.04	0.02	612	
2024	0.16	0.51	0.04	0.02	603	
2025	0.06	0.20	0.02	0.01	242	
Total Construction Emissions by Year						
2022	0.25	0.93	0.05	0.04	405	
2023	1.57	1.56	0.10	0.07	813	
2024	1.56	1.47	0.09	0.06	805	
2025	0.31	0.43	0.03	0.02	297	
	Total Construction Emissions					
Tons	3.69	4.40	0.27	0.19	2,320	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	3.75	14.13	0.79	0.56		132
2023	12.03	11.99	0.74	0.53		261
2024	11.91	11.26	0.69	0.48		262
2025	5.87	8.08	0.53	0.33		107

762

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	2.96	0.79	1.28	0.34		
	Average Daily Emissions (Pounds Per Day)					
Pounds Per Day	16.2	4.3	7.0	1.9		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	4		4	
Energy	150		150	
Mobile	1,246		1,162	
Waste	88		88	
Water	28		28	
TOTAL	1,517	0	1,432	0
Net GHG Emissions		1,517		1,432
Service Population	1,137			
Service Population Emissions		1.33		1.26

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Blossom Hill Station Mixed-Use AQ-GHG Model

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	330.00	Space	0.00	116,260.00	0
Parking Lot	212.00	Space	0.00	150,000.00	0
Apartments Mid Rise	328.00	Dwelling Unit	7.23	381,318.00	938
Strip Mall	22.59	1000sqft	0.00	22,595.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2026
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	177.69	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SJCE CO2 Intentisty Factor 2020 = 177.69

Land Use - Apartment Mid-Rise 328 DU (total sqft includes residential, Common/BOH/Stairs, office, amenity space). Strip Mall: 22,595 sqft. Enclosed Parking and Parking Lot

Construction Phase - Construction Schedule from Project Applicant 01/19/2022

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22. Including concrete trucks into trips and VMT section

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22. Including concrete and asphalt trucks into the Trips and VMT section

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Date: 1/25/2022 11:17 AM

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Trips and VMT - EMFAC2021 Post-Model for truck traffic emissions, cement and asphalt trips added

Demolition - Haul 5,500 sf of building demo and 4,815 tons of pavement

Grading - Export 8,539 cy and import 5,012 cy

Vehicle Trips - Project-Specific Trip Generation Rates from Hexagon (does not include the pass-by reduction)

Woodstoves - No hearts or woodstoves assumed

Energy Use -

Water And Wastewater - 100% WTP assumed

Construction Off-road Equipment Mitigation - BMPs for construction and Tier 3 engines with level 3 DPFs. Temporary power lined assumed instead of diesel generators

Energy Mitigation - SJCE Reach Code post-2021, electricity would be 100% carbon free

Vehicle Emission Factors - EMFAC2021 vechile emissions factors Santa Clara Co 2026

Fleet Mix - EMFAC2021 fleet mix Santa Clara Co 2026

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	704.00
tblConstructionPhase	NumDays	230.00	704.00
tblConstructionPhase	NumDays	20.00	50.00
tblConstructionPhase	NumDays	20.00	74.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	49.20	0.00
tblFireplaces	NumberNoFireplace	13.12	0.00
tblFireplaces	NumberWood	55.76	0.00
tblFleetMix	HHD	6.3120e-003	7.5470e-003
tblFleetMix	HHD	6.3120e-003	7.5470e-003
tblFleetMix	HHD	6.3120e-003	7.5470e-003
tblFleetMix	HHD	6.3120e-003	7.5470e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDA	0.57	0.53
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.2090e-003	5.8310e-003
tblFleetMix	LHD2	5.2090e-003	5.8310e-003
tblFleetMix	LHD2	5.2090e-003	5.8310e-003
tblFleetMix	LHD2	5.2090e-003	5.8310e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.6680e-003	2.5100e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblFleetMix	MH	2.6680e-003	2.5100e-003
tblFleetMix	MH	2.6680e-003	2.5100e-003
tblFleetMix	MH	2.6680e-003	2.5100e-003
tblFleetMix	MHD	8.0910e-003	9.4770e-003
tblFleetMix	MHD	8.0910e-003	9.4770e-003
tblFleetMix	MHD	8.0910e-003	9.4770e-003
tblFleetMix	MHD	8.0910e-003	9.4770e-003
tblFleetMix	OBUS	8.8400e-004	1.0590e-003
tblFleetMix	OBUS	8.8400e-004	1.0590e-003
tblFleetMix	OBUS	8.8400e-004	1.0590e-003
tblFleetMix	OBUS	8.8400e-004	1.0590e-003
tblFleetMix	SBUS	8.8700e-004	6.8400e-004
tblFleetMix	SBUS	8.8700e-004	6.8400e-004
tblFleetMix	SBUS	8.8700e-004	6.8400e-004
tblFleetMix	SBUS	8.8700e-004	6.8400e-004
tblFleetMix	UBUS	3.6400e-004	4.1000e-004
tblFleetMix	UBUS	3.6400e-004	4.1000e-004
tblFleetMix	UBUS	3.6400e-004	4.1000e-004
tblFleetMix	UBUS	3.6400e-004	4.1000e-004
tblGrading	MaterialExported	0.00	8,539.00
tblGrading	MaterialImported	0.00	5,012.00
tblLandUse	LandUseSquareFeet	132,000.00	116,260.00
tblLandUse	LandUseSquareFeet	84,800.00	150,000.00
tblLandUse	LandUseSquareFeet	328,000.00	381,318.00
tblLandUse	LandUseSquareFeet	22,590.00	22,595.00
tblLandUse	LotAcreage	2.97	0.00
tblLandUse	LotAcreage	1.91	0.00
tblLandUse	LotAcreage	8.63	7.23
tblLandUse	LotAcreage	0.52	0.00

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	1.60
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	3.20
tblOffRoadEquipment	UsageHours	8.00	7.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	3.60

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblOffRoadEquipment	UsageHours	8.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	807.98	177.69
tblTripsAndVMT	HaulingTripNumber	476.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,694.00	0.00
tblTripsAndVMT	VendorTripNumber	82.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	355.00	0.00
tblTripsAndVMT	WorkerTripNumber	71.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.31	5.15
tblVehicleEF	HHD	0.41	0.73
tblVehicleEF	HHD	5.9100e-003	7.3800e-004
tblVehicleEF	HHD	1,010.86	795.67
tblVehicleEF	HHD	1,358.12	1,554.97
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.22	0.25
tblVehicleEF	HHD	5.0000e-006	8.0000e-006
tblVehicleEF	HHD	5.31	4.01
tblVehicleEF	HHD	2.65	1.70
tblVehicleEF	HHD	2.32	2.76
tblVehicleEF	HHD	2.4220e-003	2.0130e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.3170e-003	1.9190e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8910e-003	8.7830e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	1.0600e-004
tblVehicleEF	HHD	7.9000e-005	3.4000e-005
tblVehicleEF	HHD	0.43	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	3.5000e-005	3.0300e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.4050e-003	6.9240e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	1.0600e-004
tblVehicleEF	HHD	7.9000e-005	3.4000e-005
tblVehicleEF	HHD	0.49	0.58
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.08	0.13
tblVehicleEF	HHD	3.5000e-005	3.0300e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.3660e-003	1.6750e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.47	0.57
tblVehicleEF	LDA	1.93	2.55
tblVehicleEF	LDA	220.20	235.10
tblVehicleEF	LDA	46.75	60.77

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDA	3.5660e-003	3.6780e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.15	0.21
tblVehicleEF	LDA	0.04	7.1220e-003
tblVehicleEF	LDA	1.1800e-003	1.0710e-003
tblVehicleEF	LDA	1.5670e-003	1.7910e-003
tblVehicleEF	LDA	0.02	2.4930e-003
tblVehicleEF	LDA	1.0860e-003	9.8600e-004
tblVehicleEF	LDA	1.4410e-003	1.6470e-003
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.9090e-003	6.2070e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.16	0.25
tblVehicleEF	LDA	2.1780e-003	2.3240e-003
tblVehicleEF	LDA	4.6300e-004	6.0100e-004
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	7.1350e-003	9.0460e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDT1	2.7310e-003	5.0100e-003
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.71	1.21
tblVehicleEF	LDT1	2.08	4.52
tblVehicleEF	LDT1	264.87	316.42

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDT1	56.84	82.70
tblVehicleEF	LDT1	4.8810e-003	7.9710e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.10
tblVehicleEF	LDT1	0.19	0.34
tblVehicleEF	LDT1	0.04	9.2110e-003
tblVehicleEF	LDT1	1.4310e-003	1.7060e-003
tblVehicleEF	LDT1	1.8820e-003	2.6150e-003
tblVehicleEF	LDT1	0.02	3.2240e-003
tblVehicleEF	LDT1	1.3170e-003	1.5700e-003
tblVehicleEF	LDT1	1.7300e-003	2.4040e-003
tblVehicleEF	LDT1	0.06	0.53
tblVehicleEF	LDT1	0.12	0.15
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.07	0.41
tblVehicleEF	LDT1	0.22	0.46
tblVehicleEF	LDT1	2.6210e-003	3.1280e-003
tblVehicleEF	LDT1	5.6300e-004	8.1800e-004
tblVehicleEF	LDT1	0.06	0.53
tblVehicleEF	LDT1	0.12	0.15
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.07	0.41
tblVehicleEF	LDT1	0.24	0.50
tblVehicleEF	LDT2	2.4210e-003	2.4020e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.65	0.74
tblVehicleEF	LDT2	2.52	3.24

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDT2	280.92	326.78
tblVehicleEF	LDT2	60.84	83.29
tblVehicleEF	LDT2	4.9510e-003	5.3470e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.05	0.06
tblVehicleEF	LDT2	0.21	0.29
tblVehicleEF	LDT2	0.04	8.8560e-003
tblVehicleEF	LDT2	1.2560e-003	1.2430e-003
tblVehicleEF	LDT2	1.6140e-003	2.0020e-003
tblVehicleEF	LDT2	0.02	3.1000e-003
tblVehicleEF	LDT2	1.1560e-003	1.1440e-003
tblVehicleEF	LDT2	1.4840e-003	1.8410e-003
tblVehicleEF	LDT2	0.06	0.28
tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	9.5280e-003	9.2320e-003
tblVehicleEF	LDT2	0.06	0.21
tblVehicleEF	LDT2	0.24	0.33
tblVehicleEF	LDT2	2.7790e-003	3.2300e-003
tblVehicleEF	LDT2	6.0200e-004	8.2300e-004
tblVehicleEF	LDT2	0.06	0.28
tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.21
tblVehicleEF	LDT2	0.27	0.36
tblVehicleEF	LHD1	4.6670e-003	5.0240e-003
tblVehicleEF	LHD1	6.7660e-003	6.5110e-003
tblVehicleEF	LHD1	0.01	0.02

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.61	0.77
tblVehicleEF	LHD1	0.99	2.16
tblVehicleEF	LHD1	8.66	8.48
tblVehicleEF	LHD1	749.59	747.67
tblVehicleEF	LHD1	11.02	17.34
tblVehicleEF	LHD1	7.4200e-004	6.3000e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.50	0.52
tblVehicleEF	LHD1	0.27	0.40
tblVehicleEF	LHD1	8.7200e-004	6.8700e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8310e-003	9.4180e-003
tblVehicleEF	LHD1	8.5970e-003	0.01
tblVehicleEF	LHD1	2.3200e-004	1.9000e-004
tblVehicleEF	LHD1	8.3400e-004	6.5700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4580e-003	2.3550e-003
tblVehicleEF	LHD1	8.1790e-003	0.01
tblVehicleEF	LHD1	2.1300e-004	1.7400e-004
tblVehicleEF	LHD1	1.7170e-003	0.12
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.0400e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.19	0.17
tblVehicleEF	LHD1	0.06	0.10

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD1	8.4000e-005	8.3000e-005
tblVehicleEF	LHD1	7.3150e-003	7.3000e-003
tblVehicleEF	LHD1	1.0900e-004	1.7100e-004
tblVehicleEF	LHD1	1.7170e-003	0.12
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	9.0400e-004	0.00
tblVehicleEF	LHD1	0.10	0.09
tblVehicleEF	LHD1	0.19	0.17
tblVehicleEF	LHD1	0.07	0.11
tblVehicleEF	LHD2	2.8270e-003	2.9010e-003
tblVehicleEF	LHD2	6.0420e-003	5.9100e-003
tblVehicleEF	LHD2	6.5340e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.54	0.49
tblVehicleEF	LHD2	0.55	1.18
tblVehicleEF	LHD2	13.60	13.61
tblVehicleEF	LHD2	727.00	794.48
tblVehicleEF	LHD2	7.15	9.38
tblVehicleEF	LHD2	1.7170e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.60	0.73
tblVehicleEF	LHD2	0.15	0.22
tblVehicleEF	LHD2	1.4660e-003	1.4060e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD2	1.1700e-004	8.1000e-005
tblVehicleEF	LHD2	1.4020e-003	1.3460e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7000e-003	2.6660e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0800e-004	7.5000e-005
tblVehicleEF	LHD2	8.4300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.5700e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	7.0160e-003	7.6510e-003
tblVehicleEF	LHD2	7.1000e-005	9.3000e-005
tblVehicleEF	LHD2	8.4300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.5700e-004	0.00
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.17
tblVehicleEF	MCY	18.17	11.99
tblVehicleEF	MCY	9.11	7.93
tblVehicleEF	MCY	209.94	186.84
tblVehicleEF	MCY	60.17	46.31
tblVehicleEF	MCY	0.07	0.04

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MCY	0.02	7.3810e-003
tblVehicleEF	MCY	1.14	0.55
tblVehicleEF	MCY	0.27	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0610e-003	1.9450e-003
tblVehicleEF	MCY	2.9290e-003	3.4700e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9240e-003	1.8180e-003
tblVehicleEF	MCY	2.7480e-003	3.2560e-003
tblVehicleEF	MCY	0.90	3.85
tblVehicleEF	MCY	0.66	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.16	0.99
tblVehicleEF	MCY	0.51	3.77
tblVehicleEF	MCY	1.91	1.27
tblVehicleEF	MCY	2.0780e-003	1.8470e-003
tblVehicleEF	MCY	5.9500e-004	4.5800e-004
tblVehicleEF	MCY	0.90	0.09
tblVehicleEF	MCY	0.66	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.70	1.20
tblVehicleEF	MCY	0.51	3.77
tblVehicleEF	MCY	2.08	1.38
tblVehicleEF	MDV	2.6580e-003	2.9620e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.67	0.81
tblVehicleEF	MDV	2.67	3.40
tblVehicleEF	MDV	339.08	392.60
tblVehicleEF	MDV	72.17	99.29

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MDV	6.5120e-003	6.9830e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.24	0.35
tblVehicleEF	MDV	0.04	8.9510e-003
tblVehicleEF	MDV	1.3050e-003	1.2470e-003
tblVehicleEF	MDV	1.6620e-003	1.9840e-003
tblVehicleEF	MDV	0.02	3.1330e-003
tblVehicleEF	MDV	1.2040e-003	1.1490e-003
tblVehicleEF	MDV	1.5280e-003	1.8240e-003
tblVehicleEF	MDV	0.06	0.32
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.28	0.41
tblVehicleEF	MDV	3.3510e-003	3.8790e-003
tblVehicleEF	MDV	7.1400e-004	9.8200e-004
tblVehicleEF	MDV	0.06	0.32
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.31	0.45
tblVehicleEF	MH	7.6660e-003	9.9190e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	0.68	0.93
tblVehicleEF	MH	1.87	2.26
tblVehicleEF	MH	1,445.75	1,674.32

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MH	17.15	21.62
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.21	1.44
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.4000e-004	2.8100e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2870e-003	3.3150e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.2100e-004	2.5800e-004
tblVehicleEF	MH	0.52	28.55
tblVehicleEF	MH	0.04	7.36
tblVehicleEF	MH	0.19	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.01	0.18
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.7000e-004	2.1400e-004
tblVehicleEF	MH	0.52	28.55
tblVehicleEF	MH	0.04	7.36
tblVehicleEF	MH	0.19	0.00
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.18
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.6600e-003	0.01
tblVehicleEF	MHD	1.3680e-003	9.5250e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MHD	8.6830e-003	7.9190e-003
tblVehicleEF	MHD	0.40	0.66
tblVehicleEF	MHD	0.19	0.26
tblVehicleEF	MHD	0.97	0.93
tblVehicleEF	MHD	69.63	156.70
tblVehicleEF	MHD	1,051.19	1,196.53
tblVehicleEF	MHD	8.85	7.91
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.3550e-003	5.6890e-003
tblVehicleEF	MHD	0.38	0.84
tblVehicleEF	MHD	1.45	0.91
tblVehicleEF	MHD	1.70	1.39
tblVehicleEF	MHD	2.7700e-004	1.4450e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	7.0640e-003	9.6350e-003
tblVehicleEF	MHD	1.1200e-004	9.6000e-005
tblVehicleEF	MHD	2.6500e-004	1.3820e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7520e-003	9.2100e-003
tblVehicleEF	MHD	1.0300e-004	8.9000e-005
tblVehicleEF	MHD	3.3400e-004	0.02
tblVehicleEF	MHD	0.02	5.1060e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.8000e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.6100e-004	1.4520e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.8000e-005	7.8000e-005
tblVehicleEF	MHD	3.3400e-004	0.02
tblVehicleEF	MHD	0.02	5.1060e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.8000e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	OBUS	7.0720e-003	7.5520e-003
tblVehicleEF	OBUS	2.9940e-003	9.8650e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.61	0.53
tblVehicleEF	OBUS	0.35	0.40
tblVehicleEF	OBUS	1.73	1.78
tblVehicleEF	OBUS	95.34	88.16
tblVehicleEF	OBUS	1,283.24	1,344.05
tblVehicleEF	OBUS	14.49	14.24
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.40	0.36
tblVehicleEF	OBUS	1.45	0.93
tblVehicleEF	OBUS	1.11	0.99
tblVehicleEF	OBUS	1.3100e-004	3.9000e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.5500e-003	0.01
tblVehicleEF	OBUS	1.4900e-004	1.2900e-004
tblVehicleEF	OBUS	1.2600e-004	3.7300e-004

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2100e-003	0.01
tblVehicleEF	OBUS	1.3700e-004	1.1800e-004
tblVehicleEF	OBUS	1.0720e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8300e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.09
tblVehicleEF	OBUS	9.0500e-004	8.3300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4300e-004	1.4100e-004
tblVehicleEF	OBUS	1.0720e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8300e-004	0.00
tblVehicleEF	OBUS	0.03	0.06
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.4710e-003	0.09
tblVehicleEF	SBUS	5.3640e-003	4.9930e-003
tblVehicleEF	SBUS	2.48	1.73
tblVehicleEF	SBUS	0.45	0.84
tblVehicleEF	SBUS	0.76	0.68
tblVehicleEF	SBUS	344.98	188.59
tblVehicleEF	SBUS	1,025.26	1,007.35
tblVehicleEF	SBUS	4.41	3.84

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.3260e-003	4.5020e-003
tblVehicleEF	SBUS	3.24	1.31
tblVehicleEF	SBUS	4.17	2.24
tblVehicleEF	SBUS	0.95	0.50
tblVehicleEF	SBUS	3.0570e-003	1.1130e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.4000e-005	4.2000e-005
tblVehicleEF	SBUS	2.9250e-003	1.0640e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7030e-003	2.6360e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	6.4100e-004	0.03
tblVehicleEF	SBUS	6.2050e-003	8.3130e-003
tblVehicleEF	SBUS	0.27	0.19
tblVehicleEF	SBUS	2.9200e-004	0.00
tblVehicleEF	SBUS	0.08	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2860e-003	1.7120e-003
tblVehicleEF	SBUS	9.7970e-003	9.3590e-003
tblVehicleEF	SBUS	4.4000e-005	3.8000e-005
tblVehicleEF	SBUS	6.4100e-004	0.03
tblVehicleEF	SBUS	6.2050e-003	8.3130e-003
tblVehicleEF	SBUS	0.39	0.31

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	SBUS	2.9200e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.7570e-003	3.7120e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.14	0.50
tblVehicleEF	UBUS	1,654.13	1,064.85
tblVehicleEF	UBUS	1.40	3.15
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1340e-003	6.0350e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5470e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.3030e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	2.7000e-005	0.01
tblVehicleEF	UBUS	2.5800e-004	3.7810e-003
tblVehicleEF	UBUS	1.3000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.2000e-005	7.9860e-003
tblVehicleEF	UBUS	7.3620e-003	0.01
tblVehicleEF	UBUS	0.01	8.5860e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	2.7000e-005	0.01
tblVehicleEF	UBUS	2.5800e-004	3.7810e-003
tblVehicleEF	UBUS	1.3000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	5.2000e-005	7.9860e-003
tblVehicleEF	UBUS	8.0600e-003	0.01
tblVehicleTrips	ST_TR	4.91	3.63
tblVehicleTrips	ST_TR	42.04	26.78
tblVehicleTrips	SU_TR	4.09	3.33
tblVehicleTrips	SU_TR	20.43	13.02
tblVehicleTrips	WD_TR	5.44	3.77
tblVehicleTrips	WD_TR	44.32	28.24
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	6.56	0.00
tblWoodstoves	NumberNoncatalytic	6.56	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1572	0.6157	0.5781	1.0300e-003	0.1600	0.03	0.1900	0.0595	0.0279	0.0874	0.0000	89.9600	89.9600	0.0258	0.0000	90.6054
2023	1.4037	1.0278	1.4171	2.3200e-003	0.0000	0.0539	0.0539	0.0000	0.0525	0.0525	0.0000	200.4246	200.4246	0.0295	0.0000	201.1611
2024	1.4049	0.9658	1.4247	2.3400e-003	0.0000	0.0474	0.0474	0.0000	0.0462	0.0462	0.0000	201.7092	201.7092	0.0292	0.0000	202.4382
2025	0.2541	0.2349	0.3927	6.3000e-004	0.0000	0.0112	0.0112	0.0000	0.0107	0.0107	0.0000	54.4695	54.4695	0.0113	0.0000	54.7508
Maximum	**1.4049**	**1.0278**	**1.4247**	**2.3400e-003**	**0.1600**	**0.0539**	**0.1900**	**0.0595**	**0.0525**	**0.0874**	**0.0000**	**201.7092**	**201.7092**	**0.0295**	**0.0000**	**202.4382**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1178	0.4964	0.6784	1.0200e-003	0.0720	3.88E-03	0.0759	0.0134	3.8800e-003	0.0173	0.0000	89.1474	89.1474	0.0258	0.0000	89.7919
2023	1.3149	1.0432	1.4335	2.1900e-003	0.0000	9.96E-03	9.9600e-003	0.0000	9.9600e-003	9.9600e-003	0.0000	189.4029	189.4029	0.0290	0.0000	190.1272

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

2024	1.3233	1.0499	1.4427	2.2100e-003	0.0000	0.01	0.0100	0.0000	0.0100	0.0100	0.0000	190.6168	190.6168	0.0287	0.0000	191.3345
2025	0.2371	0.2912	0.4178	6.0000e-004	0.0000	2.61E-03	2.6100e-003	0.0000	2.6100e-003	2.6100e-003	0.0000	52.5266	52.5266	0.0112	0.0000	52.8060
Maximum	**1.3233**	**1.0499**	**1.4427**	**2.2100e-003**	**0.0720**	**0.0100**	**0.0759**	**0.0134**	**0.0100**	**0.0173**	**0.0000**	**190.6168**	**190.6168**	**0.0290**	**0.0000**	**191.3345**

	ROG	NOx	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	**7.05**	**-1.28**	**-4.19**	**4.75**	**55.00**	**81.42**	**67.45**	**77.49**	**80.71**	**79.74**	**0.00**	**4.55**	**4.55**	**1.10**	**0.00**	**4.54**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2022**	**9-30-2022**	0.4158	0.3009
2	**10-1-2022**	**12-31-2022**	0.3438	0.3034
3	**1-1-2023**	**3-31-2023**	0.6012	0.5830
4	**4-1-2023**	**6-30-2023**	0.6079	0.5895
5	**7-1-2023**	**9-30-2023**	0.6146	0.5960
6	**10-1-2023**	**12-31-2023**	0.6146	0.5960
7	**1-1-2024**	**3-31-2024**	0.5889	0.5895
8	**4-1-2024**	**6-30-2024**	0.5889	0.5895
9	**7-1-2024**	**9-30-2024**	0.5954	0.5960
10	**10-1-2024**	**12-31-2024**	0.5954	0.5960
11	**1-1-2025**	**3-31-2025**	0.4265	0.4485
12	**4-1-2025**	**6-30-2025**	0.0611	0.0783
		Highest	0.6146	0.5960

2.2 Overall Operational

Unmitigated Operational

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9540	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842
Energy	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	325.8714	325.8714	0.0356	6.7100e-003	328.7617
Mobile	0.9927	0.6361	5.9291	0.0133	1.2513	9.1000e-003	1.2603	0.3121	8.4900e-003	0.3205	0.0000	1,226.8893	1,226.8893	0.0697	0.0590	1,246.2088
Waste						0.0000	0.0000		0.0000	0.0000	35.4422	0.0000	35.4422	2.0946	0.0000	87.8066
Water						0.0000	0.0000		0.0000	0.0000	8.1529	14.1398	22.2927	0.0307	0.0181	28.4383
Total	**2.9618**	**0.7934**	**8.4235**	**0.0142**	**1.2513**	**0.0331**	**1.2843**	**0.3121**	**0.0325**	**0.3445**	**43.5952**	**1,570.8888**	**1,614.4840**	**2.2344**	**0.0838**	**1,695.2996**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9540	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842
Energy	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174
Mobile	0.9927	0.6361	5.9291	0.0133	1.2513	9.1000e-003	1.2603	0.3121	8.4900e-003	0.3205	0.0000	1,226.8893	1,226.8893	0.0697	0.0590	1,246.21
Waste						0.0000	0.0000		0.0000	0.0000	35.4422	0.0000	35.4422	2.0946	0.0000	87.8066
Water						0.0000	0.0000		0.0000	0.0000	8.1529	14.1398	22.2927	0.0307	0.0181	28.4383
Total	**2.9618**	**0.7934**	**8.4235**	**0.0142**	**1.2513**	**0.0331**	**1.2843**	**0.3121**	**0.0325**	**0.3445**	**43.5952**	**1,394.5462**	**1,438.1414**	**2.2017**	**0.0798**	**1,516.9553**

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	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	11.23	10.92	1.47	4.74	10.52

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	7/1/2022	7/23/2022	6	20	
2	Site Preparation	Site Preparation	7/25/2022	8/5/2022	6	11	
3	Grading	Grading	8/8/2022	10/4/2022	6	50	
4	Trenching/Foundation	Trenching	10/5/2022	12/5/2022	6	53	
5	Building Construction	Building Construction	12/6/2022	3/5/2025	6	704	
6	Architectural Coating	Architectural Coating	12/6/2022	3/5/2025	6	704	
7	Paving	Paving	3/6/2025	5/30/2025	6	74	TBD but assumed to occur after interio work

Acres of Grading (Site Preparation Phase): 10.04

Acres of Grading (Grading Phase): 22.5

Acres of Paving: 0

Residential Indoor: 772,169; Residential Outdoor: 257,390; Non-Residential Indoor: 33,893; Non-Residential Outdoor: 11,298; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	2.00	81	0.73
Demolition	Excavators	2	4.80	158	0.38
Demolition	Rubber Tired Dozers	1	2.40	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	2.40	97	0.37

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Site Preparation	Graders	1	7.30	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.30	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	3.60	97	0.37
Grading	Excavators	1	1.60	158	0.38
Grading	Graders	1	4.00	187	0.41
Grading	Other Material Handling Equipment	2	4.80	168	0.40
Grading	Rollers	1	1.60	80	0.38
Grading	Rubber Tired Dozers	1	3.20	247	0.40
Grading	Sweepers/Scrubbers	1	2.00	64	0.46
Grading	Tractors/Loaders/Backhoes	1	2.40	97	0.37
Trenching/Foundation	Excavators	1	2.40	158	0.38
Trenching/Foundation	Other Material Handling Equipment	2	1.20	168	0.40
Trenching/Foundation	Rubber Tired Dozers	1	1.60	247	0.40
Trenching/Foundation	Sweepers/Scrubbers	1	1.20	64	0.46
Trenching/Foundation	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Building Construction	Aerial Lifts	2	1.00	63	0.31
Building Construction	Air Compressors	2	2.70	78	0.48
Building Construction	Cranes	1	1.00	231	0.29
Building Construction	Forklifts	2	2.10	89	0.20
Building Construction	Generator Sets	1	1.00	84	0.74
Building Construction	Other Material Handling Equipment	4	1.00	168	0.40
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	1	1.00	46	0.45
Architectural Coating	Air Compressors	6	2.10	78	0.48
Paving	Other Material Handling Equipment	5	1.00	168	0.40
Paving	Pavers	1	1.00	130	0.42
Paving	Paving Equipment	1	1.00	132	0.36
Paving	Rollers	1	1.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	1.10	97	0.37

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Paving	Trenchers	1	1.00	78	0.50

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	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	13	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved 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	tons/yr										MT/yr					

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0515	0.0000	0.0515	7.8000e-003	0.0000	7.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0667	0.0748	1.3000e-004		3.3000e-003	3.3000e-003		3.1000e-003	3.1000e-003	0.0000	11.2022	11.2022	2.9000e-003	0.0000	11.2747
Total	**7.2200e-003**	**0.0667**	**0.0748**	**1.3000e-004**	**0.0515**	**3.3000e-003**	**0.0548**	**7.8000e-003**	**3.1000e-003**	**0.0109**	**0.0000**	**11.2022**	**11.2022**	**2.9000e-003**	**0.0000**	**11.2747**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0232	0.0000	0.0232	1.7600e-003	0.0000	1.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0100e-003	0.0611	0.0869	1.3000e-004		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	11.2022	11.2022	2.9000e-003	0.0000	11.2747
Total	**3.0100e-003**	**0.0611**	**0.0869**	**1.3000e-004**	**0.0232**	**4.9000e-004**	**0.0237**	**1.7600e-003**	**4.9000e-004**	**2.2500e-003**	**0.0000**	**11.2022**	**11.2022**	**2.9000e-003**	**0.0000**	**11.2747**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0356	0.0000	0.0356	0.0172	0.0000	0.0172	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6900e-003	0.0747	0.0322	8.0000e-005		3.1600e-003	3.1600e-003		2.9000e-003	2.9000e-003	0.0000	7.3615	7.3615	2.3800e-003	0.0000	7.4210
Total	**6.6900e-003**	**0.0747**	**0.0322**	**8.0000e-005**	**0.0356**	**3.1600e-003**	**0.0387**	**0.0172**	**2.9000e-003**	**0.0201**	**0.0000**	**7.3615**	**7.3615**	**2.3800e-003**	**0.0000**	**7.4210**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0160	0.0000	0.0160	3.8700e-003	0.0000	3.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0403	0.0462	8.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	7.3615	7.3615	2.3800e-003	0.0000	7.4210
Total	**2.0500e-003**	**0.0403**	**0.0462**	**8.0000e-005**	**0.0160**	**2.5000e-004**	**0.0163**	**3.8700e-003**	**2.5000e-004**	**4.1200e-003**	**0.0000**	**7.3615**	**7.3615**	**2.3800e-003**	**0.0000**	**7.4210**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction On-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0729	0.0000	0.0729	0.0345	0.0000	0.0345	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0259	0.2623	0.2246	4.2000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	36.8726	36.8726	0.0119	0.0000	37.1708
Total	**0.0259**	**0.2623**	**0.2246**	**4.2000e-004**	**0.0729**	**0.0123**	**0.0852**	**0.0345**	**0.0113**	**0.0458**	**0.0000**	**36.8726**	**36.8726**	**0.0119**	**0.0000**	**37.1708**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Fugitive Dust					0.0328	0.0000	0.0328	7.7600e-003	0.0000	7.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2037	0.2799	4.2000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	36.8726	36.8726	0.0119	0.0000	37.1707
Total	**0.0103**	**0.2037**	**0.2799**	**4.2000e-004**	**0.0328**	**1.4500e-003**	**0.0343**	**7.7600e-003**	**1.4500e-003**	**9.2100e-003**	**0.0000**	**36.8726**	**36.8726**	**0.0119**	**0.0000**	**37.1707**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching/Foundation - 2022

Unmitigated Construction On-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Off-Road	0.0133	0.1302	0.1417	2.2000e-004		6.7300e-003	6.7300e-003		6.1900e-003	6.1900e-003	0.0000	19.7487	19.7487	6.3900e-003	0.0000	19.9084
Total	**0.0133**	**0.1302**	**0.1417**	**2.2000e-004**		**6.7300e-003**	**6.7300e-003**		**6.1900e-003**	**6.1900e-003**	**0.0000**	**19.7487**	**19.7487**	**6.3900e-003**	**0.0000**	**19.9084**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5100e-003	0.1144	0.1597	2.2000e-004		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	19.7487	19.7487	6.3900e-003	0.0000	19.9084

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Total	**5.5100e-003**	**0.1144**	**0.1597**	**2.2000e-004**		**9.6000e-004**	**9.6000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**19.7487**	**19.7487**	**6.3900e-003**	**0.0000**	**19.9084**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8500e-003	0.0478	0.0610	1.0000e-004		2.5500e-003	2.5500e-003		2.4400e-003	2.4400e-003	0.0000	8.6088	8.6088	1.8200e-003	0.0000	8.6544
Total	**5.8500e-003**	**0.0478**	**0.0610**	**1.0000e-004**		**2.5500e-003**	**2.5500e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**8.6088**	**8.6088**	**1.8200e-003**	**0.0000**	**8.6544**

Date: 1/25/2022 11:17 AM

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1400e-003	0.0441	0.0614	9.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	7.7963	7.7963	1.7800e-003	0.0000	7.8409
Total	**2.1400e-003**	**0.0441**	**0.0614**	**9.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**7.7963**	**7.7963**	**1.7800e-003**	**0.0000**	**7.8409**

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0745	0.6009	0.8238	1.3500e-003		0.0307	0.0307		0.0293	0.0293	0.0000	116.7800	116.7800	0.0245	0.0000	117.3914
Total	**0.0745**	**0.6009**	**0.8238**	**1.3500e-003**		**0.0307**	**0.0307**		**0.0293**	**0.0293**	**0.0000**	**116.7800**	**116.7800**	**0.0245**	**0.0000**	**117.3914**

Unmitigated Construction Off-Site

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0290	0.5987	0.8333	1.2200e-003		5.2900e-003	5.2900e-003		5.2900e-003	5.2900e-003	0.0000	105.7584	105.7584	0.0240	0.0000	106.3576
Total	**0.0290**	**0.5987**	**0.8333**	**1.2200e-003**		**5.2900e-003**	**5.2900e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**105.7584**	**105.7584**	**0.0240**	**0.0000**	**106.3576**

Mitigated Construction Off-Site

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.5640	0.8279	1.3600e-003		0.0273	0.0273		0.0261	0.0261	0.0000	117.5284	117.5284	0.0244	0.0000	118.1389
Total	**0.0708**	**0.5640**	**0.8279**	**1.3600e-003**		**0.0273**	**0.0273**		**0.0261**	**0.0261**	**0.0000**	**117.5284**	**117.5284**	**0.0244**	**0.0000**	**118.1389**

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0292	0.6025	0.8386	1.2300e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	106.4361	106.4361	0.0240	0.0000	107.0353
Total	**0.0292**	**0.6025**	**0.8386**	**1.2300e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**106.4361**	**106.4361**	**0.0240**	**0.0000**	**107.0353**

Mitigated Construction Off-Site

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0116	0.0902	0.1445	2.4000e-004		4.0800e-003	4.0800e-003		3.8900e-003	3.8900e-003	0.0000	20.5863	20.5863	4.2500e-003	0.0000	20.6926
Total	**0.0116**	**0.0902**	**0.1445**	**2.4000e-004**		**4.0800e-003**	**4.0800e-003**		**3.8900e-003**	**3.8900e-003**	**0.0000**	**20.5863**	**20.5863**	**4.2500e-003**	**0.0000**	**20.6926**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1100e-003	0.1055	0.1469	2.2000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	18.6433	18.6433	4.1800e-003	0.0000	18.7479
Total	**5.1100e-003**	**0.1055**	**0.1469**	**2.2000e-004**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**18.6433**	**18.6433**	**4.1800e-003**	**0.0000**	**18.7479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9400e-003	0.0340	0.0438	7.0000e-005		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	6.1661	6.1661	4.0000e-004	0.0000	6.1761
Total	**0.0983**	**0.0340**	**0.0438**	**7.0000e-005**		**1.9700e-003**	**1.9700e-003**		**1.9700e-003**	**1.9700e-003**	**0.0000**	**6.1661**	**6.1661**	**4.0000e-004**	**0.0000**	**6.1761**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4400e-003	0.0328	0.0443	7.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	6.1661	6.1661	4.0000e-004	0.0000	6.1761
Total	**0.0948**	**0.0328**	**0.0443**	**7.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**6.1661**	**6.1661**	**4.0000e-004**	**0.0000**	**6.1761**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					
Archit. Coating	1.2664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0628	0.4269	0.5933	9.7000e-004		0.0232	0.0232		0.0232	0.0232	0.0000	83.6446	83.6446	5.0000e-003	0.0000	83.7697
Total	**1.3292**	**0.4269**	**0.5933**	**9.7000e-004**		**0.0232**	**0.0232**		**0.0232**	**0.0232**	**0.0000**	**83.6446**	**83.6446**	**5.0000e-003**	**0.0000**	**83.7697**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2664					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.4445	0.6003	9.7000e-004		4.6700e-003	4.6700e-003		4.6700e-003	4.6700e-003	0.0000	83.6445	83.6445	5.0000e-003	0.0000	83.7696
Total	**1.2859**	**0.4445**	**0.6003**	**9.7000e-004**		**4.6700e-003**	**4.6700e-003**		**4.6700e-003**	**4.6700e-003**	**0.0000**	**83.6445**	**83.6445**	**5.0000e-003**	**0.0000**	**83.7696**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2746					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0596	0.4018	0.5968	9.8000e-004		0.0201	0.0201		0.0201	0.0201	0.0000	84.1808	84.1808	4.7400e-003	0.0000	84.2993
Total	**1.3342**	**0.4018**	**0.5968**	**9.8000e-004**		**0.0201**	**0.0201**		**0.0201**	**0.0201**	**0.0000**	**84.1808**	**84.1808**	**4.7400e-003**	**0.0000**	**84.2993**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2746					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.4474	0.6042	9.8000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	84.1807	84.1807	4.7400e-003	0.0000	84.2992
Total	**1.2942**	**0.4474**	**0.6042**	**9.8000e-004**		**4.7000e-003**	**4.7000e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**84.1807**	**84.1807**	**4.7400e-003**	**0.0000**	**84.2992**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2233					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.8700e-003	0.0662	0.1045	1.7000e-004		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003	0.0000	14.7450	14.7450	8.0000e-004	0.0000	14.7652
Total	**0.2331**	**0.0662**	**0.1045**	**1.7000e-004**		**2.9700e-003**	**2.9700e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**14.7450**	**14.7450**	**8.0000e-004**	**0.0000**	**14.7652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2233					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0784	0.1058	1.7000e-004		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	14.7450	14.7450	8.0000e-004	0.0000	14.7651
Total	**0.2267**	**0.0784**	**0.1058**	**1.7000e-004**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**14.7450**	**14.7450**	**8.0000e-004**	**0.0000**	**14.7651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4300e-003	0.0785	0.1438	2.2000e-004		4.1300e-003	4.1300e-003		3.8000e-003	3.8000e-003	0.0000	19.1382	19.1382	6.1900e-003	0.0000	19.2930
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.4300e-003**	**0.0785**	**0.1438**	**2.2000e-004**		**4.1300e-003**	**4.1300e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**19.1382**	**19.1382**	**6.1900e-003**	**0.0000**	**19.2930**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3500e-003	0.1073	0.1651	2.2000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	19.1382	19.1382	6.1900e-003	0.0000	19.2930
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3500e-003**	**0.1073**	**0.1651**	**2.2000e-004**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**19.1382**	**19.1382**	**6.1900e-003**	**0.0000**	**19.2930**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9927	0.6361	5.9291	0.0133	1.2513	9.1000e-003	1.2603	0.3121	8.4900e-003	0.3205	0.0000	1,226.8893	1,226.8893	0.0697	0.0590	1,246.2088
Unmitigated	0.9927	0.6361	5.9291	0.0133	1.2513	9.1000e-003	1.2603	0.3121	8.4900e-003	0.3205	0.0000	1,226.8893	1,226.8893	0.0697	0.0590	1,246.2088

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,236.56	1,190.64	1092.24	2,793,199	2,793,199
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	637.94	604.96	294.12	899,553	899,553
Total	1,874.50	1,795.60	1,386.36	3,692,753	3,692,753

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.000410	0.022079	0.000684	0.002510
Enclosed Parking with Elevator	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.000410	0.022079	0.000684	0.002510
Parking Lot	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.000410	0.022079	0.000684	0.002510
Strip Mall	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.000410	0.022079	0.000684	0.002510

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.3426	176.3426	0.0328	3.9700e-003	178.3443
NaturalGas Mitigated	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174
NaturalGas Unmitigated	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.74919e+006	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7073	146.7073	2.8100e-003	2.6900e-003	147.5791
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52872.3	2.9000e-004	2.5900e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8215	2.8215	5.0000e-005	5.0000e-005	2.8382
Total		**0.0151**	**0.1293**	**0.0561**	**8.3000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**149.5288**	**149.5288**	**2.8600e-003**	**2.7400e-003**	**150.4173**

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.74919e+006	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7073	146.7073	2.8100e-003	2.6900e-003	147.5791
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52872.3	2.9000e-004	2.5900e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8215	2.8215	5.0000e-005	5.0000e-005	2.8382
Total		**0.0151**	**0.1293**	**0.0561**	**8.3000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**149.5288**	**149.5288**	**2.8600e-003**	**2.7400e-003**	**150.4173**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.26819e+006	102.2146	0.0190	2.3000e-003	103.3748
Enclosed Parking with Elevator	632454	50.9751	9.4700e-003	1.1500e-003	51.5537
Parking Lot	52500	4.2314	7.9000e-004	1.0000e-004	4.2795
Strip Mall	234762	18.9216	3.5100e-003	4.3000e-004	19.1363
Total		**176.3426**	**0.0328**	**3.9800e-003**	**178.3443**

Mitigated

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9540	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842
Unmitigated	1.9540	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0735	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842
Total	**1.9540**	**0.0281**	**2.4383**	**1.3000e-004**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**3.9883**	**3.9883**	**3.8400e-003**	**0.0000**	**4.0842**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0735	0.0281	2.4383	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8400e-003	0.0000	4.0842

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Total	**1.9540**	**0.0281**	**2.4383**	**1.3000e-004**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**3.9883**	**3.9883**	**3.8400e-003**	**0.0000**	**4.0842**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.2927	0.0307	0.0181	28.4383
Unmitigated	22.2927	0.0307	0.0181	28.4383

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.3705 / 13.4727	20.6816	0.0285	0.0167	26.3811
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.6733 / 1.02557	1.6111	2.2300e-003	1.3100e-003	2.0573
Total		**22.2927**	**0.0307**	**0.0181**	**28.4383**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.3705 / 13.4727	20.6816	0.0285	0.0167	26.3811
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.6733 / 1.02557	1.6111	2.2300e-003	1.3100e-003	2.0573
Total		**22.2927**	**0.0307**	**0.0181**	**28.4383**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.4422	2.0946	0.0000	87.8066
Unmitigated	35.4422	2.0946	0.0000	87.8066

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	150.88	30.6273	1.8100	0.0000	75.8778
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.72	4.8150	0.2846	0.0000	11.9288
Total		**35.4422**	**2.0946**	**0.0000**	**87.8066**

Mitigated

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	150.88	30.6273	1.8100	0.0000	75.8778
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.72	4.8150	0.2846	0.0000	11.9288
Total		**35.4422**	**2.0946**	**0.0000**	**87.8066**

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

11.0 Vegetation

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Blossom Hill Station Mixed-Use AQ-GHG Model - 2030

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	330.00	Space	0.00	116,260.00	0
Parking Lot	212.00	Space	0.00	150,000.00	0
Apartments Mid Rise	328.00	Dwelling Unit	7.23	381,318.00	938
Strip Mall	22.59	1000sqft	0.00	22,595.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2030
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	177.69	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SJCE CO2 Intentisty Factor 2020 = 177.69

Land Use - Apartment Mid-Rise 328 DU (total sqft includes residential, Common/BOH/Stairs, office, amenity space). Strip Mall: 22,595 sqft. Enclosed Parking and Parking Lot

Construction Phase - Construction Schedule from Project Applicant 01/19/2022

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22. Including concrete trucks into trips and VMT section

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22. Including concrete and asphalt trucks into the Trips and VMT section

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Date: 1/25/2022 11:20 AM

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Off-road Equipment - Project Applicant Construction Equipment List 1/19/22

Trips and VMT - EMFAC2021 Post-Model for truck traffic emissions, cement and asphalt trips added

Demolition - Haul 5,500 sf of building demo and 4,815 tons of pavement

Grading - Export 8,539 cy and import 5,012 cy

Vehicle Trips - Project-Specific Trip Generation Rates from Hexagon (does not include the pass-by reduction)

Woodstoves - No hearts or woodstoves assumed

Energy Use -

Water And Wastewater - 100% WTP assumed

Construction Off-road Equipment Mitigation - BMPs for construction and Tier 3 engines with level 3 DPFs. Temporary power lined assumed instead of diesel generators

Energy Mitigation - SJCE Reach Code post-2021, electricity would be 100% carbon free

Vehicle Emission Factors - EMFAC2021 vechile emissions factors Santa Clara Co 2030

Fleet Mix - EMFAC2021 fleet mix Santa Clara Co 2030

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	704.00
tblConstructionPhase	NumDays	230.00	704.00
tblConstructionPhase	NumDays	20.00	50.00
tblConstructionPhase	NumDays	20.00	74.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	49.20	0.00
tblFireplaces	NumberNoFireplace	13.12	0.00
tblFireplaces	NumberWood	55.76	0.00
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MH	2.5260e-003	2.2720e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblGrading	MaterialExported	0.00	8,539.00
tblGrading	MaterialImported	0.00	5,012.00
tblLandUse	LandUseSquareFeet	132,000.00	116,260.00
tblLandUse	LandUseSquareFeet	84,800.00	150,000.00
tblLandUse	LandUseSquareFeet	328,000.00	381,318.00
tblLandUse	LandUseSquareFeet	22,590.00	22,595.00
tblLandUse	LotAcreage	2.97	0.00
tblLandUse	LotAcreage	1.91	0.00
tblLandUse	LotAcreage	8.63	7.23
tblLandUse	LotAcreage	0.52	0.00

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	1.60
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	3.20
tblOffRoadEquipment	UsageHours	8.00	7.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	3.60

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblOffRoadEquipment	UsageHours	8.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	807.98	177.69
tblTripsAndVMT	HaulingTripNumber	476.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,694.00	0.00
tblTripsAndVMT	VendorTripNumber	82.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	355.00	0.00
tblTripsAndVMT	WorkerTripNumber	71.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7300e-004
tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4370e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	4.0000e-006
tblVehicleEF	HHD	5.20	3.81
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7380e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0530e-003	1.6560e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7860e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.6530e-003	6.2150e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	9.5900e-004	1.2510e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.40	0.48
tblVehicleEF	LDA	1.69	2.09
tblVehicleEF	LDA	199.86	218.64

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDA	42.17	55.99
tblVehicleEF	LDA	3.1760e-003	3.1650e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.12	0.18
tblVehicleEF	LDA	0.04	7.0780e-003
tblVehicleEF	LDA	9.1600e-004	8.3800e-004
tblVehicleEF	LDA	1.2750e-003	1.4820e-003
tblVehicleEF	LDA	0.02	2.4770e-003
tblVehicleEF	LDA	8.4300e-004	7.7100e-004
tblVehicleEF	LDA	1.1720e-003	1.3620e-003
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	3.2350e-003	4.3400e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9770e-003	2.1610e-003
tblVehicleEF	LDA	4.1700e-004	5.5400e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	4.6990e-003	6.3290e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2730e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.53	0.90
tblVehicleEF	LDT1	1.82	3.41

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDT1	241.46	296.02
tblVehicleEF	LDT1	51.55	76.24
tblVehicleEF	LDT1	3.7700e-003	5.8700e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27
tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	1.0550e-003	1.2600e-003
tblVehicleEF	LDT1	1.4610e-003	2.0740e-003
tblVehicleEF	LDT1	0.02	3.1980e-003
tblVehicleEF	LDT1	9.7000e-004	1.1590e-003
tblVehicleEF	LDT1	1.3440e-003	1.9070e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	6.4760e-003	0.01
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.9260e-003
tblVehicleEF	LDT1	5.1000e-004	7.5400e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	9.4480e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.55	0.64

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LDT2	2.25	2.73
tblVehicleEF	LDT2	249.80	304.99
tblVehicleEF	LDT2	53.79	77.16
tblVehicleEF	LDT2	4.0490e-003	4.5010e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8380e-003
tblVehicleEF	LDT2	1.0100e-003	9.8900e-004
tblVehicleEF	LDT2	1.3400e-003	1.6580e-003
tblVehicleEF	LDT2	0.02	3.0930e-003
tblVehicleEF	LDT2	9.3000e-004	9.1000e-004
tblVehicleEF	LDT2	1.2320e-003	1.5240e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	6.5290e-003	6.8650e-003
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	3.0150e-003
tblVehicleEF	LDT2	5.3200e-004	7.6300e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	9.4890e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3350e-003
tblVehicleEF	LHD1	5.1950e-003	4.0280e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93
tblVehicleEF	LHD1	10.09	15.88
tblVehicleEF	LHD1	7.2900e-004	5.8900e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6600e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3430e-003
tblVehicleEF	LHD1	7.0190e-003	9.1890e-003
tblVehicleEF	LHD1	2.1000e-004	1.3400e-004
tblVehicleEF	LHD1	8.7500e-004	6.3700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3360e-003
tblVehicleEF	LHD1	6.6710e-003	8.7610e-003
tblVehicleEF	LHD1	1.9300e-004	1.2300e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.00
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.6000e-005
tblVehicleEF	LHD1	6.8120e-003	6.4980e-003
tblVehicleEF	LHD1	1.0000e-004	1.5700e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.00
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5080e-003
tblVehicleEF	LHD2	5.3390e-003	4.4570e-003
tblVehicleEF	LHD2	4.8110e-003	8.7200e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11
tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4560e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.7000e-005
tblVehicleEF	LHD2	1.4370e-003	1.3930e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6340e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	9.8000e-005	5.2000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.00
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2800e-004
tblVehicleEF	LHD2	6.5570e-003	6.8600e-003
tblVehicleEF	LHD2	6.4000e-005	8.4000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.00
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3410e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1380e-003	1.9970e-003
tblVehicleEF	MCY	2.8620e-003	3.4160e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8640e-003
tblVehicleEF	MCY	2.6760e-003	3.1970e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13
tblVehicleEF	MCY	2.0760e-003	1.8350e-003
tblVehicleEF	MCY	5.8600e-004	4.2300e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0970e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.54	0.66
tblVehicleEF	MDV	2.29	2.78

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MDV	301.13	364.04
tblVehicleEF	MDV	63.46	91.48
tblVehicleEF	MDV	5.2660e-003	5.4050e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27
tblVehicleEF	MDV	0.04	8.8920e-003
tblVehicleEF	MDV	1.0200e-003	9.7100e-004
tblVehicleEF	MDV	1.3440e-003	1.6080e-003
tblVehicleEF	MDV	0.02	3.1120e-003
tblVehicleEF	MDV	9.4000e-004	8.9400e-004
tblVehicleEF	MDV	1.2360e-003	1.4780e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	6.8620e-003	8.0910e-003
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.5970e-003
tblVehicleEF	MDV	6.2800e-004	9.0400e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.9460e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0740e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3360e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1400e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	0.00
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9900e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	0.00
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4650e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72
tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7600e-003
tblVehicleEF	MHD	0.34	0.73
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5500e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2000e-005
tblVehicleEF	MHD	1.5500e-004	6.2600e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6960e-003	5.1780e-003
tblVehicleEF	MHD	1.0300e-004	7.6000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3200e-003
tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46
tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1100e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.8820e-003	0.01

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	OBUS	1.5600e-004	1.1800e-004
tblVehicleEF	OBUS	1.3600e-004	2.9700e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.00
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.00
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2160e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8480e-003
tblVehicleEF	SBUS	2.71	1.09
tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4600e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.6000e-005
tblVehicleEF	SBUS	1.9600e-003	7.1300e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6100e-003
tblVehicleEF	SBUS	0.02	8.1870e-003
tblVehicleEF	SBUS	6.2000e-005	4.2000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.00
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6390e-003
tblVehicleEF	SBUS	9.2880e-003	8.7390e-003
tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.00
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5020e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8220e-003
tblVehicleEF	UBUS	1.5000e-005	1.3000e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6090e-003
tblVehicleEF	UBUS	1.4000e-005	1.2000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblVehicleEF	UBUS	9.2610e-003	8.3780e-003
tblVehicleEF	UBUS	0.01	7.3890e-003
tblVehicleEF	UBUS	1.4000e-005	3.0000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	0.00
tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	0.01	9.1730e-003
tblVehicleTrips	ST_TR	4.91	3.63
tblVehicleTrips	ST_TR	42.04	26.78
tblVehicleTrips	SU_TR	4.09	3.33
tblVehicleTrips	SU_TR	20.43	13.02
tblVehicleTrips	WD_TR	5.44	3.77
tblVehicleTrips	WD_TR	44.32	28.24
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	6.56	0.00
tblWoodstoves	NumberNoncatalytic	6.56	0.00

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9536	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837
Energy	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	325.8714	325.8714	0.0356	6.7100e-003	328.7617
Mobile	0.8444	0.5060	5.0377	0.0124	1.2513	7.3300e-003	1.2586	0.3121	6.8400e-003	0.3189	0.0000	1,144.3628	1,144.3628	0.0577	0.0529	1,161.5609
Waste						0.0000	0.0000		0.0000	0.0000	35.4422	0.0000	35.4422	2.0946	0.0000	87.8066
Water						0.0000	0.0000		0.0000	0.0000	8.1529	14.1398	22.2927	0.0307	0.0181	28.4383
Total	**2.8131**	**0.6633**	**7.5280**	**0.0133**	**1.2513**	**0.0313**	**1.2826**	**0.3121**	**0.0308**	**0.3429**	**43.5952**	**1,488.3623**	**1,531.9574**	**2.2224**	**0.0776**	**1,610.6512**

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Area	1.9536	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837
Energy	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174
Mobile	0.8444	0.5060	5.0377	0.0124	1.2513	7.3300e-003	1.2586	0.3121	6.8400e-003	0.3189	0.0000	1,144.3628	1,144.3628	0.0577	0.0529	1,161.56
Waste						0.0000	0.0000		0.0000	0.0000	35.4422	0.0000	35.4422	2.0946	0.0000	87.8066
Water						0.0000	0.0000		0.0000	0.0000	8.1529	14.1398	22.2927	0.0307	0.0181	28.4383
Total	**2.8131**	**0.6633**	**7.5280**	**0.0133**	**1.2513**	**0.0313**	**1.2826**	**0.3121**	**0.0308**	**0.3429**	**43.5952**	**1,312.0197**	**1,355.6148**	**2.1897**	**0.0737**	**1,432.3069**

	ROG	NOx	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**	**11.85**	**11.51**	**1.47**	**5.11**	**11.07**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8444	0.5060	5.0377	0.0124	1.2513	7.3300e-003	1.2586	0.3121	6.8400e-003	0.3189	0.0000	1,144.3628	1,144.3628	0.0577	0.0529	1,161.5609

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Unmitigated	0.8444	0.5060	5.0377	0.0124	1.2513	7.3300e-003	1.2586	0.3121	6.8400e-003	0.3189	0.0000	1,144.3628	1,144.3628	0.0577	0.0529	1,161.5609

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,236.56	1,190.64	1092.24	2,793,199	2,793,199
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	637.94	604.96	294.12	899,553	899,553
Total	1,874.50	1,795.60	1,386.36	3,692,753	3,692,753

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Enclosed Parking with Elevator	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Parking Lot	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Strip Mall	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	176.3426	176.3426	0.0328	3.9700e-003	178.3443
NaturalGas Mitigated	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174
NaturalGas Unmitigated	0.0151	0.1293	0.0561	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.5288	149.5288	2.8700e-003	2.7400e-003	150.4174

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.74919e+006	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7073	146.7073	2.8100e-003	2.6900e-003	147.5791
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52872.3	2.9000e-004	2.5900e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8215	2.8215	5.0000e-005	5.0000e-005	2.8382

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Total		**0.0151**	**0.1293**	**0.0561**	**8.3000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**149.5288**	**149.5288**	**2.8600e-003**	**2.7400e-003**	**150.4173**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.74919e+006	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7073	146.7073	2.8100e-003	2.6900e-003	147.5791
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52872.3	2.9000e-004	2.5900e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8215	2.8215	5.0000e-005	5.0000e-005	2.8382
Total		**0.0151**	**0.1293**	**0.0561**	**8.3000e-004**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**149.5288**	**149.5288**	**2.8600e-003**	**2.7400e-003**	**150.4173**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.26819e+006	102.2146	0.0190	2.3000e-003	103.3748

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Enclosed Parking with Elevator	632454	50.9751	9.4700e-003	1.1500e-003	51.5537
Parking Lot	52500	4.2314	7.9000e-004	1.0000e-004	4.2795
Strip Mall	234762	18.9216	3.5100e-003	4.3000e-004	19.1363
Total		**176.3426**	**0.0328**	**3.9800e-003**	**178.3443**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9536	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837
Unmitigated	1.9536	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0731	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837
Total	**1.9536**	**0.0281**	**2.4342**	**1.3000e-004**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**3.9883**	**3.9883**	**3.8200e-003**	**0.0000**	**4.0837**

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2858					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0731	0.0281	2.4342	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	3.9883	3.9883	3.8200e-003	0.0000	4.0837
Total	**1.9536**	**0.0281**	**2.4342**	**1.3000e-004**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**3.9883**	**3.9883**	**3.8200e-003**	**0.0000**	**4.0837**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.2927	0.0307	0.0181	28.4383
Unmitigated	22.2927	0.0307	0.0181	28.4383

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.3705 / 13.4727	20.6816	0.0285	0.0167	26.3811
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.6733 / 1.02557	1.6111	2.2300e-003	1.3100e-003	2.0573
Total		**22.2927**	**0.0307**	**0.0181**	**28.4383**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.3705 / 13.4727	20.6816	0.0285	0.0167	26.3811
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.6733 / 1.02557	1.6111	2.2300e-003	1.3100e-003	2.0573
Total		**22.2927**	**0.0307**	**0.0181**	**28.4383**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.4422	2.0946	0.0000	87.8066
Unmitigated	35.4422	2.0946	0.0000	87.8066

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

Apartments Mid Rise	150.88	30.6273	1.8100	0.0000	75.8778
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.72	4.8150	0.2846	0.0000	11.9288
Total		**35.4422**	**2.0946**	**0.0000**	**87.8066**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	150.88	30.6273	1.8100	0.0000	75.8778
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	23.72	4.8150	0.2846	0.0000	11.9288
Total		**35.4422**	**2.0946**	**0.0000**	**87.8066**

9.0 Operational Offroad

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

Blossom Hill Station Mixed-Use AQ-GHG Model - Santa Clara County, Annual

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 Emissions Calculations

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2022	0.0902	0.3169	0.9983	0.0032	0.2146	0.0218	0.2364	0.0323	0.0089	0.0412	306.2158	0.0147	0.0253	314.1130
2023	0.1657	0.5369	1.8375	0.0063	0.4257	0.0426	0.4683	0.0641	0.0170	0.0811	596.9026	0.0283	0.0488	612.1664
2024	0.1555	0.5087	1.7164	0.0062	0.4269	0.0424	0.4693	0.0642	0.0168	0.0810	587.7638	0.0270	0.0478	602.6738
2025	0.0600	0.1971	0.6582	0.0025	0.1749	0.0173	0.1922	0.0263	0.0068	0.0331	236.1465	0.0105	0.0191	242.0924
Toxic Air Contaminants (1 Mile Trip Length)														
2022	0.0766	0.1038	0.3531	0.0004	0.0208	0.0025	0.0233	0.0031	0.0011	0.0043	41.5833	0.0070	0.0055	43.4069
2023	0.1436	0.1919	0.6588	0.0008	0.0413	0.0049	0.0462	0.0062	0.0021	0.0084	80.9155	0.0135	0.0107	84.4362
2024	0.1358	0.1868	0.6206	0.0008	0.0414	0.0049	0.0463	0.0062	0.0021	0.0083	79.6703	0.0129	0.0104	83.1042
2025	0.0528	0.0743	0.2396	0.0003	0.0170	0.0020	0.0189	0.0026	0.0008	0.0034	32.0083	0.0050	0.0042	33.3758

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	300	0	1020	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	20400
Site Preparation	8	0	88	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	950.4	0	0
Grading	20	0	1000	0	1,694	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	10800	0	33880
Trenching	18	0	954	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	10303.2	0	0
Building Construction	355	82	249920	57728	960	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	2699136	421414.4	7008
Architectural Coating	71	0	49984	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	539827.2	0	0
Paving	25	0	1850	0	237	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	19980	0	1730.1

Number of Days Per Year					
2022	7/1/22	12/31/22	184	132	
2023	1/1/23	12/31/23	365	261	
2024	1/1/24	12/31/24	366	262	
2025	1/1/25	5/30/25	150	107	
			1065	**762**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	7/1/2022	7/23/2022	6	20
Site Preparation	7/25/2022	8/5/2022	6	11
Grading	8/8/2022	10/4/2022	6	50
Trenching	10/5/2022	12/5/2022	6	53
Building Construction	12/6/2022	3/5/2025	6	704
Architectural Coating	12/6/2022	3/5/2025	6	704
Paving	3/6/2025	5/30/2025	6	74

Category		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX	CH4_IDLEX	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
																														19	22	23	8	9	10						
Hauling	HHDT	100.0	1	0.000336069	9.99559E-05	0.334782686	0	0.03310055	0.00090044	5.40242E-07	4.483889	2.394965381	2.425661108	4.976619	0.80025212	0.000437	0.00781215	0.015152394	3.00977E-07		0.082553	0.035118	0.002476	0.027281	1.13121E-06		0.028893	0.00878	0.002364	0.0260976	1.04E-06	879.57525	1666.1519	0.0304447	0.206587	0.125617727	9.9441E-08	0.141105	0.265545018	2.37172E-05
	MHD	0.0	0	0.031515776	0.007787406	0.029205731	0	0.06043566	0.06371349	0.055649648	1.0387322	1.574899018	1.281987369	0.651982	0.50133311	1.235154	0.0015398	0.011852234	9.03428E-05	0.299	0.045475	0.012	0.003039	0.018341	0.000122251	0.04499	0.015916	0.003	0.002908	0.0175392	0.0001124	165.30449	1248.3979	9.138443	0.013325	0.01083345	0.009681558	0.025434	0.161707499	0.006082033
Vendor	HHDT	50.0	0.5	0.000168035	4.9978E-05	0.167391343	0	0.01655027	0.00045022	2.70121E-07	2.2419445	1.19748269	1.212830554	2.488309	0.40012606	0.000218	0.00390607	0.007576197	1.50489E-07		0.041276	0.017559	0.001238	0.013641	5.65606E-07		0.014447	0.00439	0.001182	0.0130488	5.201E-07	439.78762	833.07593	0.0152224	0.103293	0.062808863	4.97205E-08	0.070553	0.132772509	1.18586E-05
	MHD	50.0	0.5	0.015757888	0.003893703	0.014602865	0	0.03021783	0.03185674	0.027824824	0.5193661	0.787449509	0.640993685	0.325991	0.25066655	0.617577	0.0007699	0.005926117	4.51714E-05		0.022737	0.006	0.00152	0.00917	6.11256E-05		0.007958	0.0015	0.001454	0.0087696	5.62E-05	82.652243	624.19896	4.5692215	0.006663	0.005416725	0.004840779	0.012717	0.080853749	0.003041017
			1	0.015925922	0.003943681	0.181994209	0	0.0467681	0.03230697	0.027825094	2.7613106	1.9849322	1.853824238	2.8143	0.65079261	0.617795	0.00467597	0.013502314	4.53219E-05	0.299	0.064014	0.023559	0.002758	0.022811	6.16912E-05	0.04499	0.022405	0.00589	0.002636	0.0218184	5.672E-05	522.43987	1457.2749	4.5844439	0.109956	0.068225588	0.004840829	0.08327	0.213626258	0.003052875
Worker	LDA	50.0	0.5	0.149177765	0.044561622	0	0	0.0052479	0.11263736	0.173274914	0	0.024317518	0.130550761	0	0.38047308	1.66115	0	0.001284787	0.0003322		0.003617	0.004	0	0.000645	0.001031601		0.001266	0.001	0	0.0005943	0.0009486	0	129.97191	33.60301	0	0.001310136	0.036940779	0	0.002455006	0.015975366
	LDT1	25.0	0.25	0.163672189	0.04534354	0	0	0.00877232	0.13253357	0.156978608	0	0.039934741	0.10679354	0	0.42304103	1.522563	0	0.000832408	0.000222353		0.002307	0.002	0	0.000549	0.000813891		0.000807	0.0005	0	0.0005057	0.0007484	0	84.201583	22.49169	0	0.001941857	0.029918043	0	0.002786346	0.010206525
	LDT2	25.0	0.25	0.076308507	0.02182669	0	0	0.00342455	0.05722772	0.108982243	0	0.021597911	0.095920489	0	0.23784255	1.023259	0	0.00087885	0.000226117		0.002221	0.002	0	0.000357	0.000555279		0.000778	0.0005	0	0.0003289	0.0005106	0	88.910083	22.872371	0	0.000845787	0.023009113	0	0.001755061	0.009970144
			1	0.389158461	0.111731852	0	0	0.01744476	0.30239865	0.439235766	0	0.08585017	0.333264791	0	1.04135666	4.206971	0	0.002996045	0.00078067	0.299	0.008145	0.008	0	0.001552	0.002400772	0.04499	0.002851	0.002	0	0.0014288	0.0022075	0	303.08358	78.967071	0	0.004097779	0.089867936	0	0.006996412	0.036152036

		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX	CH4_IDLEX	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
Category																														19	22	23	8	9	10						
Hauling	HHDT	100.0	1	0.000287604	8.55424E-05	0.332404817	0	0.01953334	0.00077057	5.28839E-07	4.1629787	1.930480649	2.692504026	5.211988	0.79481483	0.000555	0.00746083	0.0148834	2.65981E-07		0.081444	0.035123	0.002283	0.025833	9.98684E-07		0.028506	0.008781	0.002179	0.0247116	9.183E-07	850.51039	1643.0479	0.0269048	0.235881	0.125647179	9.74075E-08	0.136898	0.262148415	2.46823E-05
	MHD	0.0	0	0.028424515	0.006961572	0.027529656	0	0.04434978	0.05660825	0.052337336	0.9240436	1.219274528	1.396113281	0.673566	0.40377012	1.152494	0.00150213	0.011767743	8.73526E-05	0.299	0.045469	0.012	0.002542	0.014931	0.000112942	0.04499	0.015914	0.003	0.002431	0.0142769	0.0001038	161.33734	1239.5984	8.8359741	0.012943	0.009906777	0.009245497	0.024829	0.159885109	0.006096523
Vendor	HHDT	50.0	0.5	0.000143802	4.27712E-05	0.166202408	0	0.00976667	0.00038529	2.6442E-07	2.0814893	0.965240325	1.346252013	2.605994	0.39740742	0.000277	0.00373041	0.007441725	1.32991E-07		0.040722	0.017561	0.001142	0.012916	4.99342E-07		0.014253	0.00439	0.001089	0.0123558	4.591E-07	425.2552	821.52395	0.0134524	0.11794	0.06282359	4.87037E-08	0.068449	0.131074208	1.23411E-05
	MHD	50.0	0.5	0.014212257	0.003480786	0.013764828	0	0.02217489	0.02830413	0.026168668	0.4620218	0.609637264	0.698056641	0.336783	0.20188506	0.576247	0.00075106	0.005883871	4.36763E-05		0.022735	0.006	0.001271	0.007465	5.64711E-05		0.007957	0.0015	0.001216	0.0071384	5.192E-05	80.66867	619.79918	4.417987	0.006471	0.004953388	0.004622749	0.012414	0.079942554	0.003048262
		1	0.01435606	0.003523557	0.179967236	0	0.03194156	0.02868941	0.026168932	2.5435111	1.574877589	2.044308654	2.942777	0.59929248	0.576524	0.00448148	0.013325596	4.38093E-05	0.299	0.063457	0.023561	0.002413	0.020382	5.69705E-05	0.04499	0.02221	0.00589	0.002305	0.0194942	5.238E-05	505.92387	1441.3231	4.4314394	0.124412	0.067776978	0.004622797	0.080863	0.211016762	0.003060603
Worker	LDA	50.0	0.5	0.143306127	0.042683769	0	0	0.0045285	0.10768412	0.159592017	0	0.021192179	0.122461753	0	0.35029931	1.546631	0	0.001252255	0.000323762		0.0036	0.004	0	0.000614	0.000990927		0.00126	0.001	0	0.0005655	0.0009111	0	126.68013	32.749475	0	0.001154545	0.034539145	0	0.002249406	0.015441065
	LDT1	25.0	0.25	0.156677436	0.04332923	0	0	0.0077825	0.12516577	0.145126689	0	0.035722679	0.100614187	0	0.38639431	1.408382	0	0.000820722	0.000217772		0.002307	0.002	0	0.000514	0.000767762		0.000807	0.0005	0	0.0004735	0.000706	0	83.019433	22.02833	0	0.00173807	0.028010471	0	0.002554131	0.009913954
	LDT2	25.0	0.25	0.074138692	0.021036563	0	0	0.00307324	0.05534742	0.101569939	0	0.019062039	0.088569484	0	0.22117686	0.96209	0	0.000860099	0.000220741		0.002219	0.002	0	0.000345	0.000540097		0.000777	0.0005	0	0.0003173	0.0004966	0	87.013301	22.328622	0	0.000769908	0.021709383	0	0.001617133	0.009562758
			1	0.374122256	0.107049562	0	0	0.015382	0.28819731	0.406288645	0	0.075976897	0.311645425	0	0.95807047	3.917103	0	0.002933076	0.000762276	0.299	0.008126	0.008	0	0.001473	0.002298785	0.04499	0.002844	0.002	0	0.0013563	0.0021137	0	296.71286	77.106427	0	0.003662524	0.084258998	0	0.00642067	0.034917777

Category		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX	CH4_IDLEX	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
																														19	22	23	8	9	10						
Hauling	HHDT	100.0	1	0.000195977	5.82846E-05	0.329789936	0	0.01860554	0.00052501	4.36152E-07	4.1112137	1.850604526	2.731408381	5.19556	0.77488683	0.000626	0.00728035	0.014635772	1.93499E-07		0.081298	0.035125	0.002182	0.025474	6.09682E-07		0.028454	0.008781	0.002082	0.0243688	5.606E-07	832.31669	1617.1297	0.019573	0.232934	0.121678903	8.02769E-08	0.134072	0.258076714	1.94763E-05
	MHD	0.0	0	0.025794994	0.006259754	0.026359118	0	0.03811329	0.05096401	0.04894298	0.8943127	1.112921974	1.40789614	0.671381	0.34617278	1.07433	0.00148998	0.011664295	8.43209E-05	0.299	0.045399	0.012	0.002128	0.012985	0.000106814	0.04499	0.01589	0.003	0.002035	0.0124151	9.821E-05	160.25985	1229.1806	8.5293121	0.013383	0.009658327	0.008772715	0.024689	0.158249654	0.006031915
Vendor	HHDT	50.0	0.5	9.79886E-05	2.91423E-05	0.164894968	0	0.00930277	0.0002625	2.18076E-07	2.0556069	0.925302263	1.36570419	2.59778	0.38744341	0.000313	0.00364017	0.007317886	9.67497E-08		0.040649	0.017563	0.001091	0.012737	3.04841E-07		0.014227	0.004391	0.001041	0.0121844	2.803E-07	416.15835	808.56485	0.0097865	0.116467	0.060839451	4.01385E-08	0.067036	0.129038357	9.73817E-06
	MHD	50.0	0.5	0.012897497	0.003129877	0.013179559	0	0.01905664	0.02548201	0.02447149	0.4471563	0.556460987	0.70394807	0.335691	0.17308639	0.537165	0.00074499	0.005832147	4.21605E-05		0.0227	0.006	0.001064	0.006492	5.3407E-05		0.007945	0.0015	0.001018	0.0062075	4.911E-05	80.129824	614.5903	4.2646561	0.006691	0.004829164	0.004386358	0.012344	0.079124827	0.003015958
			1	0.012995486	0.003159019	0.178074527	0	0.02835941	0.02574451	0.024471708	2.5027632	1.48176325	2.06965226	2.933471	0.56052298	0.537478	0.00438516	0.013150033	4.22572E-05	0.299	0.063348	0.023563	0.002155	0.01923	5.37119E-05	0.04499	0.022172	0.005891	0.002059	0.0183919	4.939E-05	496.28827	1423.1552	4.2744426	0.123158	0.065668615	0.004386398	0.07938	0.208163184	0.003025696
Worker	LDA	50.0	0.5	0.136796864	0.040510207		0	0.00394285	0.10236849	0.147535756	0	0.018684555	0.115476587	0	0.32485557	1.445873	0	0.001219878	0.000315615		0.003584	0.004	0	0.000585	0.000954881		0.001254	0.001	0	0.000539	0.000878	0	123.40405	31.925346	0	0.001026569	0.03235985	0	0.002081025	0.014940319
	LDT1	25.0	0.25	0.148814258	0.041105424		0	0.00690435	0.11745495	0.134116008	0	0.0319581	0.094816504	0	0.35468144	1.306204	0	0.00080836	0.000213259		0.002306	0.002	0	0.000482	0.00072446		0.000807	0.0005	0	0.0004435	0.0006661	0	81.76883	21.571794	0	0.001555571	0.026204278	0	0.00234364	0.009623613
	LDT2	25.0	0.25	0.072043204	0.020150051		0	0.00277508	0.05338915	0.094795741	0	0.017007912	0.082407943	0	0.2073317	0.905899	0	0.00084201	0.000215566		0.002217	0.002	0	0.000333	0.000526973		0.000776	0.0005	0	0.0003065	0.0004845	0	85.183477	21.80511	0	0.000704556	0.020482149	0	0.001504676	0.009197602
			1	0.357654326	0.101765681		0	0.01362228	0.2734126	0.376447505	0	0.067650567	0.292701033	0	0.88686871	3.657977	0	0.002870248	0.000744439	0.299	0.008107	0.008	0	0.001401	0.002206314	0.04499	0.002837	0.002	0	0.001289	0.0020286	0	290.35636	75.302249	0	0.003286696	0.079046277	0	0.005929341	0.033761535

		Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDLEX	PM10_RUNEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDLEX	PM25_RUNEX	PM25_STREX	CO2_NBIO_IDLEX	CO2_NBIO_RUNEX	CO2_NBIO_STREX	CH4_IDLEX	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
Category																														19	22	23	8	9	10						
Hauling	HHDT	100.0	1	0.000161301	4.7964E-05	0.32711902	0	0.0177996	0.00043204	4.20633E-07	4.0614561	1.774057666	2.751173324	5.17629	0.75653561	0.000685	0.00709894	0.014348163	1.69191E-07		0.081222	0.035128	0.002097	0.025031	5.20395E-07		0.028428	0.008782	0.002	0.0239449	4.78SE-07	813.97326	1586.8336	0.0171142	0.229861	0.117132109	7.74759E-08	0.131219	0.253304032	1.42154E-05
	MHD	0.0	0	0.023118162	0.005603296	0.025250869	0	0.03248334	0.04529114	0.045776126	0.8648942	1.006394097	1.403484797	0.668176	0.29693932	1.000247	0.00147206	0.011511702	8.11155E-05	0.299	0.04526	0.012	0.001762	0.011186	0.000100932	0.04499	0.015841	0.003	0.001685	0.0106942	9.28E-05	158.59304	1213.6546	8.2050726	0.013842	0.0095355	0.008314196	0.024457	0.156018341	0.005858252
Vendor	HHDT	50.0	0.5	8.06503E-05	2.3982E-05	0.16355951	0	0.0088998	0.00021602	2.10316E-07	2.0307281	0.887028833	1.375586662	2.588145	0.3782678	0.000342	0.00354947	0.007174082	8.45956E-08		0.040611	0.017564	0.001048	0.012516	2.60198E-07		0.014214	0.004391	0.001	0.0119725	2.392E-07	406.98663	793.41681	0.0085571	0.114931	0.058566054	3.87379E-08	0.06561	0.126652016	7.10769E-06
	MHD	50.0	0.5	0.011559081	0.002801648	0.012625434	0	0.01624167	0.02264557	0.022888063	0.4324471	0.503197049	0.701742398	0.334088	0.14846966	0.500124	0.00073603	0.005755851	4.05577E-05		0.02263	0.006	0.000881	0.005593	5.04658E-05		0.00792	0.0015	0.000843	0.0053471	4.64E-05	79.296518	606.82729	4.1025363	0.006921	0.00476775	0.004157098	0.012228	0.078009171	0.002929126
			1	0.011639731	0.00282563	0.176184944	0	0.02514147	0.02286159	0.022888273	2.4631751	1.390225882	2.07732906	2.922233	0.52673746	0.500466	0.0042855	0.012929933	4.08423E-05	0.299	0.063241	0.023564	0.001929	0.018109	5.0726E-05	0.04499	0.022134	0.005891	0.001842	0.0173196	4.664E-05	486.28315	1400.2441	4.1110934	0.121851	0.063333805	0.004157137	0.077838	0.204661187	0.002936234
Worker	LDA	50.0	0.5	0.132316144	0.038798622	0	0	0.00347076	0.09896031	0.136662954	0	0.01669164	0.109258161	0	0.30329008	1.355747	0	0.001187649	0.000307718		0.003568	0.004	0	0.00056	0.000924606		0.001249	0.001	0	0.0005155	0.0008501	0	120.14294	31.126584	0	0.000920346	0.030308682	0	0.001942389	0.014436598
	LDT1	25.0	0.25	0.140646011	0.03898451	0	0	0.0061396	0.10983229	0.123932987	0	0.028671908	0.089369531	0	0.32677601	1.213816	0	0.000795316	0.000208804		0.002305	0.002	0	0.000453	0.000687493		0.000807	0.0005	0	0.0004172	0.0006321	0	80.449305	21.121122	0	0.001394323	0.02448908	0	0.00215684	0.009323014
	LDT2	25.0	0.25	0.070892203	0.019532741	0	0	0.00252234	0.05275079	0.088626233	0	0.01535685	0.07730776	0	0.19535268	0.854482	0	0.000824383	0.000210579		0.002215	0.002	0	0.000323	0.000515217		0.000775	0.0005	0	0.0002971	0.0004737	0	83.400309	21.300669	0	0.000648121	0.019328106	0	0.001412647	0.008875809
			1	0.343854358	0.097315873	0	0	0.01213271	0.26154339	0.349222174	0	0.060720398	0.275935452	0	0.82541877	3.424044	0	0.002807347	0.000727101	0.299	0.008088	0.008	0	0.001336	0.002127316	0.04499	0.002831	0.002	0	0.0012299	0.001956	0	283.99255	73.548375	0	0.00296279	0.074125868	0	0.005511876	0.032635421

CalEEMod EMFAC2021 Emission Factors Input — Year 2026

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005024	0.002901	0.014329	0.224308568	0.007552	0	0	0.077545	0
A	CH4_RUNEX	0.001675	0.00501	0.002402	0.002962	0.006511	0.00591	0.009525	0.111846137	0.009865	0.533854641	0.154451	0.090415	0.009919
A	CH4_STREX	0.056959	0.091594	0.07317	0.0841	0.020518	0.010947	0.007919	7.49827E-08	0.016116	0.003711567	0.172746	0.004993	0.025168
A	CO_IDLEX	0	0	0	0	0.193382	0.139764	0.664762	5.153655195	0.53297	0	0	1.729088	0
A	CO_RUNEX	0.573055	1.207794	0.74197	0.807087	0.767637	0.490256	0.257149	0.733099915	0.401188	6.307010922	11.99329	0.836984	0.927158
A	CO_STREX	2.554061	4.515511	3.238665	3.39519	2.163001	1.175504	0.934813	0.000737725	1.778436	0.497532984	7.931677	0.675054	2.264736
A	CO2_NBIO_IDLEX	0	0	0	0	8.476906	13.60976	156.6958	795.6699429	88.15791	0	0	188.587	0
A	CO2_NBIO_RUNEX	235.102	316.4191	326.7826	392.6003	747.6667	794.4808	1196.529	1554.973392	1344.054	1064.852599	186.8446	1007.354	1674.317
A	CO2_NBIO_STREX	60.77252	82.69943	83.28568	99.28707	17.33995	9.379616	7.914622	0.013527798	14.24203	3.148221534	46.30646	3.836494	21.6173
A	NOX_IDLEX	0	0	0	0	0.04434	0.086409	0.837392	4.013652026	0.3605	0	0	1.308491	0
A	NOX_RUNEX	0.030375	0.103204	0.056004	0.074529	0.516639	0.725632	0.906229	1.701647234	0.930849	0.294278253	0.54585	2.244119	1.44219
A	NOX_STREX	0.20795	0.337562	0.292244	0.347081	0.400976	0.21716	1.391692	2.760133946	0.991531	0.038127875	0.123182	0.502734	0.298756
A	PM10_IDLEX	0	0	0	0	0.000687	0.001406	0.001445	0.002012959	0.00039	0	0	0.001113	0
A	PM10_PMBW	0.007122	0.009211	0.008856	0.008951	0.077204	0.090087	0.045088	0.081458247	0.049896	0.125580022	0.012	0.044699	0.044944
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009418	0.010663	0.012	0.035131691	0.012	0.044105924	0.004	0.010543	0.013261
A	PM10_RUNEX	0.001071	0.001706	0.001243	0.001247	0.012107	0.020463	0.009635	0.024769283	0.014798	0.005547054	0.001945	0.011633	0.027752
A	PM10_STREX	0.001791	0.002615	0.002002	0.001984	0.00019	8.13E-05	9.63E-05	3.29375E-07	0.000129	1.21095E-05	0.00347	4.23E-05	0.000281
A	PM25_IDLEX	0	0	0	0	0.000657	0.001346	0.001382	0.001919468	0.000373	0	0	0.001064	0
A	PM25_PMBW	0.002493	0.003224	0.0031	0.003133	0.027021	0.03153	0.015781	0.028510387	0.017464	0.043953008	0.0042	0.015645	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002355	0.002666	0.003	0.008782923	0.003	0.011026481	0.001	0.002636	0.003315
A	PM25_RUNEX	0.000986	0.00157	0.001144	0.001149	0.011546	0.019561	0.00921	0.02369428	0.014149	0.005303299	0.001818	0.011114	0.026508
A	PM25_STREX	0.001647	0.002404	0.001841	0.001824	0.000174	7.48E-05	8.86E-05	3.02848E-07	0.000118	1.11343E-05	0.003256	3.89E-05	0.000258
A	ROG_DIURN	0.254504	0.529723	0.279092	0.322903	0.116726	0.060196	0.021313	0.000106002	0.073271	0.010212124	3.854231	0.032962	28.55295
A	ROG_HTSK	0.07369	0.147578	0.075291	0.084543	0.028726	0.014862	0.005106	3.36143E-05	0.016123	0.003780717	3.558543	0.008313	7.360966
A	ROG_IDLEX	0	0	0	0	0.020461	0.015058	0.024261	0.32445582	0.04037	0	0	0.189085	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.006207	0.021876	0.009232	0.012163	0.073128	0.102722	0.027662	0.017018907	0.041494	0.059153068	0.991178	0.051281	0.070828
A	ROG_RUNLS	0.190989	0.413908	0.208399	0.244508	0.165357	0.082688	0.042018	0.000302729	0.081242	0.00798618	3.769688	0.021611	0.176029
A	ROG_STREX	0.254258	0.45831	0.332523	0.408327	0.100626	0.053154	0.043043	4.06848E-07	0.08541	0.013136414	1.267526	0.028372	0.103602
A	SO2_IDLEX	0	0	0	0	8.25E-05	0.00013	0.001452	0.006923512	0.000833	0	0	0.001712	0
A	SO2_RUNEX	0.002324	0.003128	0.00323	0.003879	0.0073	0.007651	0.011344	0.014049606	0.012819	0.008586151	0.001847	0.009359	0.016412
A	SO2_STREX	0.000601	0.000818	0.000823	0.000982	0.000171	9.27E-05	7.82E-05	1.33736E-07	0.000141	3.11234E-05	0.000458	3.79E-05	0.000214
A	TOG_DIURN	0.254504	0.529723	0.279092	0.322903	0.116726	0.060196	0.021313	0.000106002	0.073271	0.010212124	0.085098	0.032962	28.55295
A	TOG_HTSK	0.07369	0.147578	0.075291	0.084543	0.028726	0.014862	0.005106	3.36143E-05	0.016123	0.003780717	3.558543	0.008313	7.360966
A	TOG_IDLEX	0	0	0	0	0.028987	0.020219	0.041853	0.579654551	0.053441	0	0	0.308305	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.009046	0.031907	0.013457	0.017701	0.08958	0.119	0.040924	0.131035808	0.057178	0.601092032	1.200425	0.149659	0.091829
A	TOG_RUNLS	0.190989	0.413908	0.208399	0.244508	0.165357	0.082688	0.042018	0.000302729	0.081242	0.00798618	3.769688	0.021611	0.176029
A	TOG_STREX	0.27838	0.501792	0.364071	0.447067	0.110173	0.058197	0.047127	4.45447E-07	0.093513	0.01438272	1.378329	0.031064	0.113431
A	N2O_IDLEX	0	0	0	0	0.00063	0.00168	0.024186	0.128345993	0.012682	0	0	0.024778	0
A	N2O_RUNEX	0.003678	0.007971	0.005347	0.006983	0.039725	0.080555	0.153578	0.248265947	0.156351	0.163683708	0.038475	0.124	0.068939
A	N2O_STREX	0.027983	0.036165	0.034432	0.036101	0.033064	0.017628	0.005689	8.0417E-06	0.013951	0.006034849	0.007381	0.004502	0.032161

CalEEMod EMFAC2021 Fleet Mix Input — Year 2026

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.00041	0.022079	0.000684	0.00251
Enclosed Parking with Ele\	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.00041	0.022079	0.000684	0.00251
Parking Lot	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.00041	0.022079	0.000684	0.00251
Strip Mall	0.525374	0.039228	0.232277	0.130076	0.023447	0.005831	0.009477	0.007547	0.001059	0.00041	0.022079	0.000684	0.00251

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	1.89020752	1.35208E-05	133.7551311	0.0001234	37.81927211	0.000271
HHDT	DSL	8867.7948	0.063432193	1016011.772	0.9370067	130548.9889	0.93383
HHDT	ELEC	110.53021	0.000790633	11535.56622	0.0106386	1443.077984	0.010322
HHDT	NG	863.460788	0.006176418	56635.38916	0.0522314	7769.707198	0.055577
		9843.676		1084316.482		139799.5934	
LDA	GAS	598869.79	0.188087055	22031465.99	0.8579225	2780456.286	0.873258
LDA	DSL	1478.94439	0.000464492	42434.32107	0.0016524	6277.404518	0.001972
LDA	ELEC	64495.2374	0.020256021	2739705.459	0.1066863	312996.4352	0.098303
LDA	PIH	20380.4343	0.006400884	866414.1348	0.0337388	84273.09573	0.026468
		685224.406		25680019.9		3184003.221	
LDT1	GAS	50750.4663	0.2227592	1625960.476	0.9897832	225981.5443	0.991902
LDT1	DSL	18.4777091	8.11043E-05	256.5587046	0.0001562	50.46000376	0.000221
LDT1	ELEC	263.582249	0.001156942	10628.88084	0.0064702	1254.204016	0.005505
LDT1	PIH	130.681887	0.000573602	5898.081605	0.0035904	540.3696012	0.002372
		51163.2081		1642743.998		227826.578	
LDT2	GAS	296178.924	0.20930348	10561284.8	0.9761727	1383933.976	0.977997
LDT2	DSL	1079.58935	0.000762923	39200.14241	0.0036232	5104.360187	0.003607
LDT2	ELEC	2705.07863	0.001911623	90693.21971	0.0083827	13682.37248	0.009669
LDT2	PIH	2986.35294	0.002110393	127896.2709	0.0118214	12348.56941	0.008726
		302949.945		10819074.44		1415069.278	
LHDT1	GAS	19567.3461	0.045442701	734252.9018	0.6249776	291524.3015	0.677029
LHDT1	DSL	10635.3066	0.024699162	416619.2958	0.3546159	133778.7779	0.310684
LHDT1	ELEC	378.059313	0.000877995	23974.57119	0.0204066	5290.737608	0.012287
		30580.712	0.071019859	1174846.769		430593.817	
LHDT2	GAS	2513.65139	0.025065399	91174.02508	0.3142883	37449.6603	0.373437
LHDT2	DSL	4995.25765	0.049811253	193100.7206	0.6656423	62834.05723	0.626563
LHDT2	ELEC	96.3837305	0.00096111	5822.064359	0.0200694	1278.564611	0.012749
		7605.29277	0.075837763	290096.81		100283.7175	
MCY	GAS	28797.0402	0.022079204	167092.4818	1	57594.08046	1
MDV	GAS	162557.871	0.206502619	5631323.146	0.9567528	753924.3557	0.957735
MDV	DSL	2430.29858	0.003087288	84111.5401	0.0142904	11337.22426	0.014402
MDV	ELEC	2850.95624	0.003621664	95858.34981	0.0162862	14435.41314	0.018338
MDV	PIH	1813.35149	0.00230356	74577.72271	0.0126706	7498.208428	0.009525
		169652.477		5885870.759		787195.2015	
MH	GAS	2263.18626	6.910777091	21108.37627	0.6847412	226.409153	0.691354
MH	DSL	1010.77355	3.086458598	9718.417172	0.3152588	101.0773548	0.308646
		3273.9598		30826.79344		327.4865078	
MHDT	GAS	1410.72587	0.008877802	72468.64229	0.138924	28225.80314	0.177627
MHDT	DSL	10675.1143	0.067179283	435455.3677	0.8347775	127504.1973	0.802393
MHDT	ELEC	167.584141	0.001054619	8816.663208	0.0169017	2173.174133	0.013676
MHDT	NG	107.631411	0.000677332	4901.770989	0.0093968	1001.681745	0.006304
		12361.0558		521642.4442		158904.8563	
OBUS	GAS	419.199707	0.022896962	18162.11175	0.222027	8387.347733	0.458122
OBUS	DSL	949.045188	0.051837469	62674.48039	0.766179	9750.024999	0.532553
OBUS	ELEC	4.48415939	0.000244928	364.7881281	0.0044594	89.71906104	0.004901
OBUS	NG	9.10124392	0.000497116	599.9791039	0.0073346	81.00107088	0.004424
		1381.8303		81801.35938		18308.09286	
SBUS	GAS	183.793304	0.016745925	9054.55067	0.3599899	735.1732154	0.066984
SBUS	DSL	674.99811	0.061500976	15210.89393	0.6047531	9773.972631	0.890534
SBUS	ELEC	7.58722201	0.000691293	244.2394962	0.0097104	87.39442404	0.007963
SBUS	NG	26.1646758	0.002383937	642.552257	0.0255465	378.8645055	0.034519
		892.543311		25152.23635		10975.40478	
UBUS	GAS	46.3552203	0.021676301	4840.86478	0.0818022	185.4208811	0.086705
UBUS	DSL	396.770048	0.185534807	44084.04198	0.744944	1587.080193	0.742139
UBUS	ELEC	28.6595887	0.11400839	2995.55797	0.4127709	114.6383548	0.456034
UBUS	NG	62.8453498	0.029387298	7257.192256	0.122634	251.3813993	0.117549
		534.630207		59177.65698		2138.520829	

CalEEMod EMFAC2021 Emission Factors Input — Year 2030

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004335	0.002508	0.015544	0.200689575	0.007521	0	0	0.081907	0
A	CH4_RUNEX	0.001251	0.003273	0.001878	0.002097	0.004028	0.004457	0.009465	0.087739612	0.010745	0.633168094	0.142987	0.08726	0.006074
A	CH4_STREX	0.045719	0.070684	0.060357	0.065129	0.016442	0.00872	0.006578	4.40093E-08	0.013432	0.002502449	0.157242	0.005216	0.022777
A	CO_IDLEX	0	0	0	0	0.182077	0.135546	0.628457	4.997868655	0.549826	0	0	1.823721	0
A	CO_RUNEX	0.484447	0.895501	0.639473	0.660784	0.544761	0.383737	0.155266	0.628349624	0.288528	7.378159276	11.04655	0.716417	0.371762
A	CO_STREX	2.08878	3.413929	2.729559	2.781248	2.051418	1.109837	0.71851	0.00087263	1.464305	0.531636543	7.830862	0.671301	1.918466
A	CO2_NBIO_IDLEX	0	0	0	0	7.808851	13.36322	143.3801	719.710734	89.80588	0	0	181.8136	0
A	CO2_NBIO_RUNEX	218.6415	296.0222	304.9904	364.0422	665.9344	713.025	1074.538	1395.928332	1245.372	969.9926525	185.5769	941.807	1656.25
A	CO2_NBIO_STREX	55.99265	76.24029	77.1602	91.4769	15.88489	8.544837	6.787068	0.009437452	12.01881	3.025945099	42.83228	3.929487	20.12804
A	NOX_IDLEX	0	0	0	0	0.036306	0.076255	0.72827	3.806064714	0.333548	0	0	1.088868	0
A	NOX_RUNEX	0.023158	0.066035	0.041164	0.048222	0.312391	0.495733	0.584719	1.446947564	0.825827	0.255958394	0.509869	1.567888	1.278466
A	NOX_STREX	0.178975	0.272625	0.247045	0.271696	0.32724	0.178285	1.220957	2.603954429	0.931305	0.025581732	0.103081	0.520702	0.298107
A	PM10_IDLEX	0	0	0	0	0.000666	0.001456	0.000655	0.001737607	0.000311	0	0	0.000746	0
A	PM10_PMBW	0.007078	0.009138	0.008838	0.008892	0.0744	0.086908	0.04333	0.082108579	0.049981	0.147119217	0.012	0.043749	0.04494
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009343	0.010534	0.012	0.035145225	0.012	0.05700071	0.004	0.010442	0.013343
A	PM10_RUNEX	0.000838	0.00126	0.000989	0.000971	0.009189	0.01687	0.00542	0.023402177	0.012621	0.004822062	0.001997	0.008575	0.022807
A	PM10_STREX	0.001482	0.002074	0.001658	0.001608	0.000134	5.67E-05	8.23E-05	1.43954E-07	0.000118	1.26121E-05	0.003416	4.58E-05	0.000233
A	PM25_IDLEX	0	0	0	0	0.000637	0.001393	0.000626	0.001655588	0.000297	0	0	0.000713	0
A	PM25_PMBW	0.002477	0.003198	0.003093	0.003112	0.02604	0.030418	0.015165	0.028738003	0.017493	0.051491726	0.0042	0.015312	0.015729
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002336	0.002634	0.003	0.008786306	0.003	0.014250178	0.001	0.00261	0.003336
A	PM25_RUNEX	0.000771	0.001159	0.00091	0.000894	0.008761	0.016127	0.005178	0.022386582	0.012067	0.00460949	0.001864	0.008187	0.021783
A	PM25_STREX	0.001362	0.001907	0.001524	0.001478	0.000123	5.22E-05	7.56E-05	1.3236E-07	0.000109	1.15963E-05	0.003197	4.21E-05	0.000214
A	ROG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626
A	ROG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	ROG_IDLEX	0	0	0	0	0.01758	0.01365	0.020875	0.311156106	0.039789	0	0	0.197824	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.00434	0.013675	0.006865	0.008091	0.050519	0.082873	0.014952	0.014289903	0.031966	0.05310504	0.890508	0.040189	0.050568
A	ROG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	ROG_STREX	0.197184	0.337555	0.26551	0.301161	0.07823	0.041209	0.034167	2.38553E-07	0.071386	0.008378471	1.134366	0.029472	0.088942
A	SO2_IDLEX	0	0	0	0	7.6E-05	0.000128	0.00132	0.006214699	0.000846	0	0	0.001639	0
A	SO2_RUNEX	0.002161	0.002926	0.003015	0.003597	0.006498	0.00686	0.010167	0.012580529	0.011835	0.007389377	0.001835	0.008739	0.016224
A	SO2_STREX	0.000554	0.000754	0.000763	0.000904	0.000157	8.45E-05	6.71E-05	9.32988E-08	0.000119	2.99145E-05	0.000423	3.88E-05	0.000199
A	TOG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626
A	TOG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	TOG_IDLEX	0	0	0	0	0.0248	0.018097	0.03926	0.541395418	0.052568	0	0	0.32342	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.006329	0.019954	0.010004	0.011775	0.060583	0.095343	0.026358	0.103810529	0.046832	0.694289379	1.091848	0.133799	0.062589
A	TOG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	TOG_STREX	0.215892	0.36958	0.2907	0.329734	0.085652	0.045119	0.037409	2.61185E-07	0.078158	0.009173371	1.234067	0.032269	0.097381
A	N2O_IDLEX	0	0	0	0	0.000589	0.00168	0.022195	0.116327365	0.013129	0	0	0.023481	0
A	N2O_RUNEX	0.003165	0.00587	0.004501	0.005405	0.035467	0.074134	0.137514	0.223022009	0.151496	0.151061958	0.036967	0.112558	0.068485
A	N2O_STREX	0.025397	0.032408	0.031653	0.032172	0.028461	0.015119	0.00476	3.77164E-06	0.011347	0.00458201	0.006341	0.004848	0.033159

CalEEMod EMFAC2021 Fleet Mix Input — Year 2030

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.514977	0.035448	0.239576	0.135703	0.02426	0.00617	0.009659	0.007844	0.001064	0.000396	0.02195	0.000681	0.002272
Enclosed Parking with Ele\	0.514977	0.035448	0.239576	0.135703	0.02426	0.00617	0.009659	0.007844	0.001064	0.000396	0.02195	0.000681	0.002272
Parking Lot	0.514977	0.035448	0.239576	0.135703	0.02426	0.00617	0.009659	0.007844	0.001064	0.000396	0.02195	0.000681	0.002272
Strip Mall	0.514977	0.035448	0.239576	0.135703	0.02426	0.00617	0.009659	0.007844	0.001064	0.000396	0.02195	0.000681	0.002272

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	1.48761568	9.81801E-06	172.849851	0.000152	29.76421444	0.000196
HHDT	DSL	9231.23405	0.060924558	1024356.864	0.9007481	136537.8407	0.901126
HHDT	ELEC	530.250085	0.003499559	54761.34921	0.0481533	6663.696554	0.043979
HHDT	NG	938.272575	0.006192438	57937.9272	0.0509466	8287.794951	0.054698
		10701.2443		1137228.99		151519.0964	
LDA	GAS	602124.626	0.184735004	21985012.74	0.8461961	2796633.75	0.858022
LDA	DSL	966.571543	0.000296549	27899.12475	0.0010738	4169.431018	0.001279
LDA	ELEC	74807.2796	0.022951267	2981995.184	0.114776	356617.9586	0.109412
LDA	PIH	24661.5156	0.007566283	986083.3495	0.037954	101975.3669	0.031287
		702559.993		25980990.4		3259396.506	
LDT1	GAS	47587.4471	0.220781409	1511766.355	0.9787303	212019.26	0.983661
LDT1	DSL	0.76846667	3.56529E-06	17.05570223	1.104E-05	2.625517308	1.22E-05
LDT1	ELEC	459.59884	0.002132303	19527.56637	0.0126423	2229.167753	0.010342
LDT1	PIH	311.959599	0.001447333	13308.95728	0.0086163	1289.952942	0.005985
		48359.774		1544619.935		215541.0062	
LDT2	GAS	315384.001	0.207524795	11011602.46	0.9644118	1467132.745	0.965383
LDT2	DSL	1158.98987	0.000762623	40906.34603	0.0035826	5439.347127	0.003579
LDT2	ELEC	5453.19362	0.003588238	171698.9957	0.0150376	27128.05332	0.01785
LDT2	PIH	4846.71192	0.003189169	193738.4599	0.0169679	20041.15378	0.013187
		326842.897		11417946.26		1519741.3	
LHDT1	GAS	19753.0188	0.042469943	727605.5091	0.5718283	294290.548	0.632739
LHDT1	DSL	11269.2779	0.024229491	427352.764	0.3358584	141753.3387	0.304777
LHDT1	ELEC	2074.53776	0.004460356	117461.3639	0.0923134	29061.9606	0.062485
		33096.8344	0.07115979	1272419.637		465105.8473	
LHDT2	GAS	2461.018	0.023436275	87198.39839	0.2764804	36665.50124	0.349166
LHDT2	DSL	5433.24767	0.051740819	199824.8391	0.6335857	68343.42067	0.650834
LHDT2	ELEC	523.424852	0.004984575	28364.00967	0.0899339	6941.368001	0.066103
		8417.69052	0.08016167	315387.2472		105008.9219	
MCY	GAS	29945.6713	0.021950206	170059.0451	1	59891.3425	1
MDV	GAS	174344.044	0.2032491	5962226.801	0.9422971	807535.9337	0.94142
MDV	DSL	2406.78655	0.002805815	79682.09193	0.0125933	11072.81735	0.012909
MDV	ELEC	5418.75334	0.006317146	169876.9029	0.0268481	26922.57502	0.031386
MDV	PIH	2963.42173	0.003454737	115546.1715	0.0182614	12253.74886	0.014285
		185133.006		6327331.967		857785.0749	
MH	GAS	2034.68785	6.562577556	19970.25646	0.6642899	203.5501727	0.65652
MH	DSL	1064.93836	3.434797413	10092.30624	0.3357101	106.4938359	0.34348
		3099.62621		30062.5627		310.0440086	
MHDT	GAS	1369.78361	0.008097456	69786.55357	0.1286334	27406.63039	0.162014
MHDT	DSL	10679.1279	0.063129513	415833.3823	0.766481	127641.7789	0.754553
MHDT	ELEC	991.138618	0.005859102	51102.91436	0.094195	12793.3276	0.075628
MHDT	NG	136.843702	0.00080895	5799.937145	0.0106907	1320.473703	0.007806
		13176.8939		542522.7874		169162.2106	
OBUS	GAS	373.850854	0.019905227	15017.95753	0.1835305	7480.007877	0.398264
OBUS	DSL	1041.41451	0.05544883	64198.49481	0.784553	10721.4028	0.570848
OBUS	ELEC	23.470396	0.001249652	1822.61906	0.0222738	469.5956826	0.025003
OBUS	NG	12.4197043	0.000661272	789.0471667	0.0096427	110.535368	0.005885
		1451.15547		81828.11857		18781.54172	
SBUS	GAS	198.199726	0.017610498	9649.073176	0.3683175	792.7989059	0.070442
SBUS	DSL	659.302865	0.058580564	14502.39326	0.5535749	9546.70548	0.848247
SBUS	ELEC	42.2755564	0.00375628	1362.719324	0.0520167	492.3385095	0.043745
SBUS	NG	29.1983511	0.00259434	683.5221158	0.0260909	422.7921234	0.037566
		928.976499		26197.70788		11254.63502	
UBUS	GAS	46.8993965	0.021676301	4897.692973	0.0818022	187.5975859	0.086705
UBUS	DSL	338.509163	0.156454601	37119.08129	0.6199702	1354.036652	0.625818
UBUS	ELEC	78.6722459	0.256009323	8935.028159	1.0016223	314.6889835	1.024037
UBUS	NG	76.8255673	0.035507794	8920.556737	0.1489929	307.3022692	0.142031
		540.906373		59872.35916		2163.625491	

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDL	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNEX	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2022	HHDT	Aggregate	Aggregate	Gasoline	3.827367	105.1913	105.1913	0	76.57795	9.246272	0	1.235102	0.00578	0	0.001696	0.005	0.036521	0.006286	0	0.001845	0.02	0.104346	2407.176	0	49.64979	0.419155	0	0.000162	0.231899	0	0.038678	2.628217	0	0.000881	0.16301	1.46846	10.96573	3.835087	0	0.000965	0.16301	1.46846	10.96573	0.039703	94.77398	0	0.712144	0.023797	0	0.000491
Santa Clara	2022	HHDT	Aggregate	Aggregate	Diesel	8126.63	984491.3	984491.3	0	118998.6	2.444518	67.79787	2.544846	0.027272	0.034513	0	0.008769	0.027987	0.028505	0.036074	0	0.035077	0.079962	1677.544	1267.87	0	0.001458	0.236832	0	0.264298	1.997403	0	0.031398	5.098937	0	0	0	0	0	0.035744	5.804752	0	0	0	0	0.202666	0.125232	70.47019	0	0.015885	0.120052	0
Santa Clara	2022	HHDT	Aggregate	Natural Ga	Natural Ga	660.7756	47681.36	47681.36	0	5809.397	1.356717	13.62116	0	0.001899	0.022358	0	0	0.009	0.047596	0.002065	0.024316	0	0.036	0.135989	1429.3	10316.77	0	2.688526	36.13158	0	0.291372	2.10314	0	0.062535	0.56302	0	0	0	0	2.77132	36.92822	0	0	0	0	0.851705	14.53027	73.87982	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Gasoline	604047.8	22374250	22374250	0	2805661	0.053791	0	0.287921	0.00126	0	0.002062	0.002	0.002656	0.00137	0	0.002242	0.008	0.007588	287.1374	0	73.33113	0.002925	0	0.081262	0.005394	0	0.035089	0.011654	0	0.381731	0.098272	0.249754	1.530333	0.017001	0	0.417946	0.098272	0.249754	1.530333	0.032827	0.847106	0	3.666246	0.002839	0	0.000725
Santa Clara	2022	LDA	Aggregate	Aggregate	Diesel	1988.847	60930.09	60930.09	0	8564.495	0.263546	0	0	0.019976	0	0	0.002	0.00269	0.020879	0	0	0.008	0.007686	236.272	0	0	0.00151	0	0	0.037225	0	0	0.032513	0	0	0	0	0	0	0.037014	0	0	0	0	0	0.0031	0.352928	0	0	0.002239	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Electricity	49768.56	2058456	0	2058456	247155.6	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	14080.33	626833.5	326494.8	300338.7	58222.18	0.003418	0	0.11551	0.000718	0	0.002292	0.002	0.001368	0.000781	0	0.002492	0.008	0.003908	145.2228	0	67.22203	0.000469	0	0.042745	0.000623	0	0.021047	0.001478	0	0.173285	0.039673	0.035067	0.451466	0.002157	0	0.189725	0.039673	0.035067	0.451466	0.019838	0.224082	0	1.339893	0.001436	0	0.000665
Santa Clara	2022	LDT1	Aggregate	Aggregate	Gasoline	54974.08	1779154	1779154	0	245182.1	0.160037	0	0.42895	0.001971	0	0.003006	0.002	0.003236	0.002144	0	0.003269	0.008	0.009246	338.1243	0	90.32061	0.007798	0	0.120165	0.011179	0	0.040992	0.03517	0	0.630523	0.182138	0.532387	2.932213	0.051284	0	0.69034	0.182138	0.532387	2.932213	0.035502	1.699209	0	6.115696	0.003343	0	0.000893
Santa Clara	2022	LDT1	Aggregate	Aggregate	Diesel	28.88602	444.5778	444.5778	0	84.95747	1.664076	0	0	0.241157	0	0	0.002	0.003731	0.252061	0	0	0.008	0.01066	415.6618	0	0	0.013984	0	0	0.065488	0	0	0.301058	0	0	0	0	0	0	0.342735	0	0	0	0	0	0.0031	1.609282	0	0	0.003939	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Electricity	182.9928	6367.047	0	6367.047	860.9347	0	0	0	0	0	0	0.002	0.001541	0	0	0	0.008	0.004403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	24.31577	1158.953	555.2268	603.7259	100.5457	0.003144	0	0.11551	0.00042	0	0.001472	0.002	0.001376	0.000457	0	0.001601	0.008	0.003931	133.572	0	73.48077	0.00043	0	0.042675	0.000571	0	0.020981	0.001359	0	0.173285	0.025111	0.023155	0.300675	0.001984	0	0.189725	0.025111	0.023155	0.300675	0.020121	0.206104	0	1.339893	0.00132	0	0.000726
Santa Clara	2022	LDT2	Aggregate	Aggregate	Gasoline	274728.5	9911730	9911730	0	1286654	0.087216	0	0.387125	0.001308	0	0.002055	0.002	0.003124	0.001422	0	0.002235	0.008	0.008926	357.8859	0	92.09899	0.003418	0	0.092802	0.006919	0	0.040202	0.013801	0	0.439671	0.088088	0.231141	1.442564	0.020134	0	0.481384	0.088088	0.231141	1.442564	0.034673	0.960886	0	4.129331	0.003538	0	0.00091
Santa Clara	2022	LDT2	Aggregate	Aggregate	Diesel	933.788	35569.23	35569.23	0	4479.453	0.049482	0	0	0.005617	0	0	0.002	0.003089	0.005871	0	0	0.008	0.008825	319.8313	0	0	0.000662	0	0	0.05039	0	0	0.01425	0	0	0	0	0	0	0.016223	0	0	0	0	0	0.0031	0.132603	0	0	0.003031	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Electricity	669.3585	23693.95	0	23693.95	3436.204	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	1256.28	57825.99	28723.51	29102.47	5194.718	0.003259	0	0.11551	0.000565	0	0.001911	0.002	0.001372	0.000614	0	0.002078	0.008	0.00392	138.4921	0	79.93529	0.000446	0	0.042681	0.000592	0	0.020988	0.00141	0	0.173285	0.026873	0.02547	0.333582	0.002057	0	0.189725	0.026873	0.02547	0.333582	0.020799	0.213696	0	1.339893	0.001369	0	0.00079
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Gasoline	19023.54	692949.2	692949.2	0	283422.4	0.22563	0.03858	0.680855	0.001666	0	0.000355	0.002	0.0273	0.001812	0	0.000386	0.008	0.078	910.666	121.4496	25.8752	0.010696	0.11838	0.036173	0.012587	0.003045	0.052713	0.053941	0.441903	0.183796	0.053097	0.287419	3.005479	0.078711	0.644824	0.199044	0.053097	0.287419	3.005479	0.044851	1.310703	3.750518	3.032062	0.009003	0.001201	0.000256
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Diesel	9466.897	364941.3	364941.3	0	119081.7	2.046185	2.148991	0	0.042212	0.027161	0	0.003	0.0273	0.044121	0.028389	0	0.012	0.078	640.1321	134.8074	0	0.009365	0.005098	0	0.100853	0.021239	0	0.201618	0.10976	0	0	0	0	0.229529	0.124954	0	0	0	0	0.156672	0.574472	0.909745	0	0.006066	0.001277	0
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Gasoline	2479.119	89333.8	89333.8	0	36935.18	0.214022	0.038116	0.662237	0.001522	0	0.000288	0.002	0.03185	0.001655	0	0.000313	0.008	0.091	1017.016	140.0339	25.93331	0.008303	0.117781	0.035049	0.012366	0.003023	0.05141	0.03933	0.436803	0.174741	0.049582	0.263161	2.773988	0.057391	0.637382	0.19132	0.049582	0.263161	2.773988	0.044954	1.055116	3.755463	3.106689	0.010054	0.001384	0.000256
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Diesel	4276.175	167672	167672	0	53788.9	1.602621	2.114348	0	0.036809	0.027077	0	0.003	0.03185	0.038473	0.028302	0	0.012	0.091	773.4619	214.911	0	0.00832	0.005098	0	0.121859	0.033859	0	0.179126	0.10976	0	0	0	0	0.203923	0.124954	0	0	0	0	0.1727	0.476085	0.909745	0	0.007329	0.002036	0
Santa Clara	2022	MCY	Aggregate	Aggregate	Gasoline	27595.09	162924	162924	0	55190.18	0.60517	0	0.149724	0.001772	0	0.003556	0.001	0.0042	0.001891	0	0.003773	0.004	0.012	188.9834	0	50.90901	0.173457	0	0.19335	0.041009	0	0.008761	1.156556	0	1.442993	3.560376	3.734124	3.980024	1.378949	0	1.568432	3.560376	3.734124	3.980024	0.008705	13.58248	0	8.107621	0.001868	0	0.000503
Santa Clara	2022	MDV	Aggregate	Aggregate	Gasoline	150747.3	5216512	5216512	0	697659.3	0.136769	0	0.517519	0.001357	0	0.002255	0.002	0.003193	0.001475	0	0.002452	0.008	0.009123	434.2294	0	112.1929	0.005018	0	0.119363	0.009481	0	0.045397	0.021781	0	0.614579	0.106179	0.293735	1.762049	0.031733	0	0.672881	0.106179	0.293735	1.762049	0.034617	1.174347	0	4.66825	0.004293	0	0.001109
Santa Clara	2022	MDV	Aggregate	Aggregate	Diesel	2337.328	86668.85	86668.85	0	11158.46	0.05815	0	0	0.005454	0	0	0.002	0.003153	0.0057	0	0	0.008	0.009009	417.1884	0	0	0.000553	0	0	0.065728	0	0	0.011906	0	0	0	0	0	0	0.013554	0	0	0	0	0	0.0031	0.20344	0	0	0.003953	0	0
Santa Clara	2022	MDV	Aggregate	Aggregate	Electricity	623.6975	22215.8	0	22215.8	3205.616	0	0	0	0	0	0	0.002	0.001523	0	0	0	0.008	0.004351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	MDV	Aggregate	Aggregate	Plug-in Hyb	789.5612	33722.81	17285.18	16437.63	3264.836	0.003363	0	0.11551	0.000723	0	0.002366	0.002	0.001369	0.000786	0	0.002574	0.008	0.003913	142.9094	0	99.86367	0.000458	0	0.042456	0.000605	0	0.020778	0.001454	0	0.173285	0.030414	0.029758	0.381921	0.002122	0	0.189725	0.030414	0.029758	0.381921	0.021528	0.220512	0	1.339893	0.001413	0	0.000987
Santa Clara	2022	MH	Aggregate	Aggregate	Gasoline	2642.084	23105.28	23105.28	0	264.3141	0.551445	0	0.40416	0.001917	0	0.000461	0.003	0.015756	0.002085	0	0.000502	0.012	0.045017	1949.266	0	32.13484	0.02167	0	0.038467	0.030967	0	0.041056	0.101032	0	0.168576	13.95792	0.32254	4.985527	0.147425	0	0.184569	13.95792	0.32254	4.985527	0.044583	2.705832	0	3.782453	0.01927	0	0.000318
Santa Clara	2022	MH	Aggregate	Aggregate	Diesel	940.8008	9155.21	9155.21	0	94.08008	4.438358	0	0	0.104654	0	0	0.004	0.015675	0.109386	0	0	0.016	0.044785	1080.89	0	0	0.005865	0	0	0.170295	0	0	0.126278	0	0	0	0	0	0	0.143759	0	0	0	0	0	0.143863	0.424501	0	0	0.010242	0	0
Santa Clara	2022	MHDT	Aggregate	Aggregate	Gasoline	1426.535	69284.18	69284.18	0	28542.11	0.686176	0.088062	0.462297	0.001432	0	0.000593	0.003	0.015756	0.001558	0	0.000645	0.012	0.045017	1819.358	542.4673	48.22005	0.022377	0.249961	0.051086	0.030967	0.006806	0.032093	0.113907	1.006391	0.293642	0.041091	0.336192	3.327263	0.166213	1.468523	0.321501	0.041091	0.336192	3.327263	0.044929	2.41434	15.04306	6.517433	0.017986	0.005363	0.000477
Santa Clara	2022	MHDT	Aggregate	Aggregate	Diesel	10189.55	428042.3	428042.3	0	121266.8	1.73167	15.28688	1.483339	0.020297	0.042841	0	0.003	0.015941	0.021215	0.044778	0	0.012	0.045546	1158.231	2324.123	0	0.002426	0.013407	0	0.18248	0.366167	0	0.052238	0.288656	0	0	0	0	0.05947	0.328613	0	0	0	0	0.196531	0.168917	7.277505	0	0.010968	0.022008	0
Santa Clara	2022	MHDT	Aggregate	Natural Ga	Natural Ga	84.48052	3914.205	3914.205	0	796.8889	0.162027	6.474875	0	0.001029	0.016219	0	0	0.003	0.016011	0.001119	0.01764	0	0.012	0.045746	1002.329	5210.514	0	0.725882	17.91735	0	0.204331	1.062197	0	0.010371	0.256004	0	0	0	0	0.740815	18.28597	0	0	0	0	1.06	2.991509	30.51881	0	0	0	0
Santa Clara	2022	OBUS	Aggregate	Aggregate	Gasoline	470.9234	21653.3	21653.3	0	9422.235	0.596343	0.064966	0.407047	0.000863	0	0.000262	0.003	0.01568	0.000939	0	0.000285	0.012	0.044799	1804.41	384.2235	32.13915	0.017165	0.194553	0.036748	0.027969	0.005221	0.030733	0.084851	0.744858	0.194941	0.033671	0.142865	2.559429	0.123815	1.086895	0.213436	0.033671	0.142865	2.559429	0.044907	1.918016	5.766114	4.119591	0.017838	0.003798	0.000318
Santa Clara	2022	OBUS	Aggregate	Aggregate	Diesel	852.1679	61336.68	61336.68	0	8739.295	1.430263	8.186956	1.463102	0.021712	0.009363	0	0.003	0.01808	0.022694	0.009786	0	0.012	0.051656	1287.997	1601.524	0	0.002446	0.020931	0	0.202924	0.252321	0	0.052654	0.450629	0	0	0	0	0.059942	0.513007	0	0	0	0	0.209454	0.176751	7.212161	0	0.012197	0.015165	0
Santa Clara	2022	OBUS	Aggregate	Natural Ga	Natural Ga	6.12419	392.3999	392.3999	0	54.50529	0.261572	1.567279	0	0.000722	0.003187	0	0	0.003	0.016148	0.000785	0.003466	0	0.012	0.046137	1035.05	1183.472	0	0.750937	4.605624	0	0.211002	0.241259	0	0.010729	0.065805	0	0	0	0	0.766387	4.700378	0	0	0	0	1.06	3.149633	5.746939	0	0	0	0
Santa Clara	2022	SBUS	Aggregate	Aggregate	Gasoline	160.4139	7959.43	7959.43	0	641.6556	0.522721	0.925562	0.689048	0.000853	0	0.00055	0.002	0.015721	0.000928	0	0.000599	0.008	0.044917	820.0467	2616.389	59.14656	0.01243	2.458676	0.074784	0.027982	0.086242	0.063619	0.606464	10.62737	0.42659	0.108472	0.246255	1.510943	0.088229	15.50744	0.467063	0.108472	0.246255	1.510943	0.045	1.548936	82.15497	10.71476	0.008107	0.025866	0.000585
Santa Clara	2022	SBUS	Aggregate	Aggregate	Diesel	662.5162	15413.71	15413.71	0	9593.235	4.235498	22.873	0.450634	0.022112	0.02288	0	0.003	0.015721	0.023112	0.023915	0	0.012	0.044917	1152.917	2246.353	0	0.002834	0.008182	0	0.181642	0.353914	0	0.061017	0.17615	0	0	0	0	0.069464	0.200533	0	0	0	0	0.140239	0.185604	4.488491	0	0.010917	0.021272	0
Santa Clara	2022	SBUS	Aggregate	Natural Ga	Natural Ga	22.59677	578.3532	578.3532	0	327.2012	0.608852	5.295722	0	0.003378	0.010765	0	0	0.003	0.015721	0.003674	0.011708	0	0.012	0.044917	1281.922	4050.07	0	3.549889	15.56318	0	0.261328	0.825633	0	0.050721	0.222367	0	0	0	0	3.622922	15.88337	0	0	0	0	1.06	12.18179	19.41173	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Gasoline	45.81104	4784.037	4784.037	0	183.2442	0.03147	0	0.560776	0.000899	0	8.88E-05	0.002	0.03185	0.000978	0	9.66E-05	0.008	0.091	974.6428	0	38.21309	0.002303	0	0.053785	0.004696	0	0.082445	0.006534	0	0.197701	0.064874	0.125778	0.787098	0.009534	0	0.216458	0.064874	0.125778	0.787098	0.045	0.577943	0	5.5933	0.009635	0	0.000378
Santa Clara	2022	UBUS	Aggregate	Aggregate	Diesel	435.6475	48716.13	48716.13	0	1742.59	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.743	0	0	0.003215	0	0	0.173422	0	0	0.069208	0	0	0	0	0	0	0.078788	0	0	0	0	0	0.187775	0.079368	0	0	0.01043	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0	199.0027	20.18703	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Natural Ga	41.84875	4783.781	4783.781	0	167.395	0.058772	0	0	0.000282	0	0	0.008181	0.0385	0.000295	0	0	0.032723	0.11	1299.039	0	0	4.245393	0	0	0.264818	0	0	0.060658	0	0	0	0	0	0	4.332735	0	0	0	0	0	0.97	49.03622	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DIU	PM2.5_TIR	PM2.5_TOT	PM10_RUN	PM10_IDL	PM10_STR	PM10_DIU	PM10_TIR	PM10_TOT	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	114.3093	0	69.10781	8.107874	0	1.602501	0.00493	0	0.0017	0.005	0.035266	0.005362	0	0.001849	0.02	0.100759	2306.817	0	49.81185	0.340225	0	0.00018	0.208909	0	0.045697	2.104867	0	0.000979	0.158374	1.426645	10.65375	3.071416	0	0.001072	0.158374	1.426645	10.65375	0.040468	83.0074	0	1.02738	0.022805	0	0.000492
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	991289	0	120860.8	1.969368	63.40488	2.849455	0.025957	0.031631	0	0.008769	0.027531	0.027131	0.033061	0	0.035077	0.078661	1656.801	12241.32	0	0.000809	0.237446	0	0.26103	1.928625	0	0.017417	5.112156	0	0	0	0	0.019828	5.819801	0	0	0	0	0.214624	0.087393	74.20136	0	0.015689	0.115918	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0	411.5054	103.2044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Ga	753.7366	53295.97	53295.97	0	6914.034	1.208444	13.92832	0	0.001774	0.024237	0	0.009	0.046729	0.001929	0.02636	0	0.036	0.133512	1398.51	10630.2	0	2.44811	37.44665	0	0.285095	2.167036	0	0.054572	0.572265	0	0	0	0	2.520799	38.25947	0	0	0	0	0.860105	13.78246	74.03965	0	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	22370251	0	2795479	0.047412	0	0.27189	0.001217	0	0.001992	0.002	0.002656	0.001323	0	0.002167	0.008	0.007588	282.586	0	71.87767	0.002603	0	0.076449	0.004995	0	0.034134	0.01016	0	0.353794	0.094758	0.240611	1.480552	0.014823	0	0.387359	0.094758	0.240611	1.480552	0.033781	0.787617	0	3.436611	0.002794	0	0.000711
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	56220.8	0	8000.531	0.238318	0	0	0.018559	0	0	0.002	0.002698	0.019399	0	0	0.008	0.007709	234.6327	0	0	0.001413	0	0	0.036966	0	0	0.030417	0	0	0	0	0	0.034627	0	0	0	0	0	0.0031	0.342459	0	0	0.002223	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	0	2268185	265250.1	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	15805.32	700610.9	356649.7	343961.3	65355	0.00334	0	0.11551	0.000664	0	0.002171	0.002	0.001373	0.000722	0	0.002361	0.008	0.003922	141.9339	0	66.50966	0.000457	0	0.042604	0.000605	0	0.020916	0.001444	0	0.173285	0.040642	0.036088	0.447056	0.002108	0	0.189725	0.040642	0.036088	0.447056	0.019705	0.219019	0	1.339893	0.001403	0	0.000658
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	1744480	0	239737.9	0.143293	0	0.404336	0.00185	0	0.002837	0.002	0.003239	0.002012	0	0.003085	0.008	0.009253	333.6435	0	88.48953	0.006987	0	0.112557	0.010257	0	0.039834	0.031222	0	0.583212	0.174145	0.503091	2.807011	0.045546	0	0.638542	0.174145	0.503091	2.807011	0.035775	1.553409	0	5.660037	0.003298	0	0.000875
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	391.8698	0	75.17737	1.659056	0	0	0.24041	0	0	0.002	0.003728	0.25128	0	0	0.008	0.010651	415.6155	0	0	0.013928	0	0	0.06548	0	0	0.299852	0	0	0	0	0	0.341362	0	0	0	0	0	0.0031	1.601395	0	0	0.003938	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0	7068.184	916.4832	0	0	0	0	0	0	0.002	0.00154	0	0	0	0.008	0.0044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	43.27677	2048.369	944.1579	1104.211	178.9495	0.003025	0	0.11551	0.000387	0	0.00141	0.002	0.001383	0.000421	0	0.001534	0.008	0.003951	128.5161	0	72.38136	0.000412	0	0.042439	0.000544	0	0.020762	0.001308	0	0.173285	0.024584	0.021781	0.285922	0.001909	0	0.189725	0.024584	0.021781	0.285922	0.019359	0.198314	0	1.339893	0.001271	0	0.000716
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	10140967	0	1311796	0.077207	0	0.358346	0.001265	0	0.002003	0.002	0.003125	0.001375	0	0.002179	0.008	0.008929	351.1382	0	90.07377	0.003121	0	0.087759	0.006381	0	0.038646	0.012417	0	0.410727	0.085119	0.224187	1.404898	0.018118	0	0.449694	0.085119	0.224187	1.404898	0.035545	0.896823	0	3.892097	0.003471	0	0.00089
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	36936.87	0	4673.401	0.046157	0	0	0.005431	0	0	0.002	0.003102	0.005677	0	0	0.008	0.008863	315.6668	0	0	0.00065	0	0	0.049733	0	0	0.013984	0	0	0	0	0	0.015919	0	0	0	0	0	0.0031	0.132099	0	0	0.002991	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0	38931.7	5663.051	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	1696.55	77270.66	37142.68	40127.98	7015.234	0.003154	0	0.11551	0.000504	0	0.001759	0.002	0.001378	0.000548	0	0.001913	0.008	0.003938	134.0231	0	78.93358	0.000429	0	0.042457	0.000568	0	0.020778	0.001364	0	0.173285	0.02624	0.024448	0.318232	0.00199	0	0.189725	0.02624	0.024448	0.318232	0.020144	0.206812	0	1.339893	0.001325	0	0.00078
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	711085.5	0	285767.8	0.197814	0.037373	0.6588	0.001595	0	0.000328	0.002	0.0273	0.001734	0	0.000356	0.008	0.078	889.7424	120.2664	25.83956	0.009485	0.115635	0.034516	0.011082	0.003012	0.051891	0.047656	0.428153	0.172233	0.050564	0.277601	2.913784	0.069539	0.62476	0.188574	0.050564	0.277601	2.913784	0.044872	1.225109	3.753425	3.080251	0.008796	0.001189	0.000255
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	384084.8	0	123365.6	1.780633	2.029274	0	0.038253	0.026974	0	0.003	0.0273	0.039983	0.028193	0	0.012	0.078	635.427	132.908	0	0.008623	0.005098	0	0.100112	0.02094	0	0.185652	0.10976	0	0	0	0	0.211352	0.124954	0	0	0	0	0.16551	0.518876	0.909745	0	0.006021	0.001259	0
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	90793.04	0	37162.58	0.187016	0.036817	0.642061	0.001446	0	0.00026	0.002	0.03185	0.001572	0	0.000283	0.008	0.091	997.3845	138.7974	25.72325	0.007074	0.114568	0.033461	0.01097	0.002967	0.050452	0.033047	0.42203	0.165607	0.046993	0.25097	2.676301	0.048222	0.613826	0.181319	0.046993	0.25097	2.676301	0.044967	0.961891	3.759407	3.119312	0.00986	0.001372	0.000254
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	176769.2	0	56346.87	1.416942	1.998258	0	0.034177	0.027026	0	0.003	0.03185	0.035723	0.028248	0	0.012	0.091	764.5039	212.1206	0	0.007824	0.005098	0	0.120448	0.03342	0	0.168448	0.10976	0	0	0	0	0.191767	0.124954	0	0	0	0	0.178982	0.44054	0.909745	0	0.007244	0.00201	0
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	164894.5	0	55788.99	0.586927	0	0.142374	0.001778	0	0.003413	0.001	0.0042	0.001899	0	0.003626	0.004	0.012	188.3093	0	49.59811	0.167622	0	0.187482	0.040223	0	0.008379	1.105923	0	1.392636	3.5601	3.745685	3.947874	1.324135	0	1.513873	3.5601	3.745685	3.947874	0.00876	13.08956	0	8.051197	0.001862	0	0.00049
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	5358084	0	712433.9	0.11759	0	0.470106	0.001289	0	0.002144	0.002	0.003187	0.001402	0	0.002331	0.008	0.009106	426.0995	0	109.7064	0.004406	0	0.110292	0.008479	0	0.043081	0.018826	0	0.559259	0.101975	0.285798	1.72733	0.02744	0	0.612315	0.101975	0.285798	1.72733	0.035428	1.067328	0	4.333252	0.004212	0	0.001085
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	86834.44	0	11267.05	0.053096	0	0	0.00515	0	0	0.002	0.003181	0.005383	0	0	0.008	0.00909	413.3141	0	0	0.000529	0	0	0.065118	0	0	0.011397	0	0	0	0	0	0.012975	0	0	0	0	0	0.0031	0.202592	0	0	0.003916	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0	40073.7	5799.833	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hyb	986.0895	41899.14	20787.35	21111.79	4077.48	0.003256	0	0.11551	0.000638	0	0.002151	0.002	0.001376	0.000693	0	0.002339	0.008	0.00393	138.3296	0	98.37574	0.000441	0	0.042261	0.000581	0	0.020595	0.001408	0	0.173285	0.02985	0.028058	0.359617	0.002054	0	0.189725	0.02985	0.028058	0.359617	0.020837	0.213457	0	1.339893	0.001368	0	0.000973
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	22546.87	0	252.3754	0.479133	0	0.412521	0.001781	0	0.000428	0.003	0.015756	0.001937	0	0.000466	0.012	0.045017	1948.243	0	31.87585	0.018146	0	0.038028	0.02809	0	0.042647	0.082252	0	0.163779	13.03985	0.30297	4.773625	0.120022	0	0.179318	13.03985	0.30297	4.773625	0.044742	2.111943	0	3.629376	0.01926	0	0.000315
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	9344.849	0	95.91578	4.269554	0	0	0.097907	0	0	0.004	0.015675	0.102334	0	0	0.016	0.044785	1081.435	0	0	0.005704	0	0	0.17038	0	0	0.122812	0	0	0	0	0	0.139813	0	0	0	0	0	0.150005	0.410284	0	0	0.010247	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	70785.86	0	2838541	0.562864	0.088304	0.453053	0.001386	0	0.000555	0.003	0.015756	0.001507	0	0.000603	0.012	0.045017	1792.411	536.9661	47.19918	0.018074	0.254589	0.049387	0.026381	0.007064	0.032566	0.09086	1.010025	0.279571	0.037187	0.302385	3.037923	0.132583	1.473826	0.306095	0.037187	0.302385	3.037923	0.04497	1.909686	15.08517	6.156285	0.01772	0.005308	0.000467
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	431550.4	0	122418.2	1.337342	13.57242	1.624162	0.016518	0.035742	0	0.003	0.015941	0.017265	0.037358	0	0.012	0.045546	1151.562	2263.789	0	0.001721	0.012298	0	0.181429	0.356661	0	0.037048	0.26478	0	0	0	0	0.042176	0.301431	0	0	0	0	0.209014	0.132571	7.583386	0	0.010905	0.021437	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0	101.8022	59.6458	0	0	0	0	0	0	0.003	0.00799	0	0	0	0.012	0.022828	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Ga	83.841	4047.874	4047.874	0	762.81	0.141319	6.52743	0	0.001137	0.017647	0	0.003	0.016002	0.001236	0.019193	0	0.012	0.045721	989.385	5296.533	0	0.740055	17.59163	0	0.201693	1.079733	0	0.010574	0.25135	0	0	0	0	0.755281	17.95355	0	0	0	0	1.06	2.992708	33.64344	0	0	0	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	20830.08	0	9181.619	0.553081	0.064991	0.405616	0.000893	0	0.000264	0.003	0.01568	0.000972	0	0.000287	0.012	0.044799	1784.092	381.8461	31.89445	0.015808	0.194938	0.036281	0.026177	0.005253	0.030766	0.078109	0.745234	0.192301	0.034706	0.154035	2.766253	0.113977	1.087444	0.210546	0.034706	0.154035	2.766253	0.044918	1.743956	5.768375	4.071703	0.017638	0.003775	0.000315
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	61645.66	0	8910.755	1.203188	7.410097	1.541404	0.020323	0.008632	0	0.003	0.018018	0.021242	0.009022	0	0.012	0.05148	1282.538	1552.949	0	0.001991	0.020568	0	0.202064	0.244668	0	0.04286	0.442828	0	0	0	0	0.048793	0.504126	0	0	0	0	0.215865	0.153454	7.510858	0	0.012145	0.014706	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Ga	6.1456	409.5466	409.5466	0	54.69584	0.219315	1.549107	0	0.000923	0.00362	0	0.003	0.016148	0.001004	0.003937	0	0.012	0.046137	1017.405	1188.285	0	0.774069	4.381267	0	0.207405	0.24224	0	0.01106	0.0626	0	0	0	0	0.789994	4.471404	0	0	0	0	1.06	3.211954	6.724204	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	8309.308	0	667.9468	0.519317	0.925703	0.7051	0.000862	0	0.00056	0.002	0.015721	0.000937	0	0.000609	0.008	0.044917	815.0909	2602.033	58.66947	0.011871	2.46208	0.074918	0.027733	0.086224	0.064904	0.057744	10.62943	0.427061	0.112221	0.259299	1.591441	0.084259	15.51043	0.467578	0.112221	0.259299	1.591441	0.045	1.469507	82.16746	10.56434	0.008058	0.025724	0.00058
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	15392.68	0	9659.876	4.028015	22.39863	0.467155	0.020908	0.02125	0	0.003	0.015721	0.021853	0.022211	0	0.012	0.044917	1148.524	2237.814	0	0.002748	0.008083	0	0.18095	0.352568	0	0.059161	0.174017	0	0	0	0	0.06735	0.198106	0	0	0	0	0.144154	0.181489	4.581854	0	0.010876	0.021191	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0	3.510494	4.378365	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.012	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Ga	23.50762	595.8705	595.8705	0	340.3903	0.587321	5.282702	0	0.003378	0.011076	0	0.003	0.015721	0.003674	0.012046	0	0.012	0.044917	1271.127	4058.811	0	3.490611	15.40242	0	0.259128	0.827415	0	0.049874	0.22007	0	0	0	0	3.562424	15.7193	0	0	0	0	1.06	11.90284	20.11199	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	4798.244	0	183.7884	0.026807	0	0.443444	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.2924	0	36.84613	0.002031	0	0.041715	0.004215	0	0.070149	0.005614	0	0.147842	0.038144	0.09212	0.456803	0.008192	0	0.161868	0.038144	0.09212	0.456803	0.045	0.571128	0	6.073786	0.009157	0	0.000364
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	48829.71	0	1746.672	0.386256	0	0	0.007022	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.965	0	0	0.003215	0	0	0.173457	0	0	0.065028	0	0	0	0	0	0.078788	0	0	0	0	0	0.18785	0.079368	0	0	0.010432	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0	199.0027	20.18703	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Ga	42.26114	4829.673	4829.673	0	169.0446	0.05878	0	0	0.000282	0	0	0.008182	0.0385	0.000295	0	0	0.032727	0.11	1299.127	0	0	4.245742	0	0	0.264835	0	0	0.060663	0	0	0	0	0	4.333091	0	0	0	0	0	0.97	49.04231	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_DIU	PM2.5_TIR	PM10_RUI	PM10_IDL	PM10_STR	PM10_DIU	PM10_TIR	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2024	HHDT	Aggregate	Aggregate	Gasoline	2.588708	115.1526	115.1526	0	51.79487	7.013725	0	1.695629	0.003612	0	0.001433	0.005	0.03384	0.003929	0	0.001559	0.02	0.096686	2166.164	0	50.04419	0.246012	0	0.000205	0.192927	0	0.049797	1.47824	0	0.001115	0.149022	1.34233	10.02547	2.157045	0	0.001221	0.149022	1.34233	10.02547	0.04274	52.51903	0	1.60109	0.021415	0	0.000495
Santa Clara	2024	HHDT	Aggregate	Aggregate	Diesel	8486.693	1001095	1001095	0	124748.4	1.894567	62.88367	2.898867	0.025674	0.03017	0	0.008877	0.027454	0.026835	0.031534	0	0.035082	0.07844	1634.1	11997.01	0	0.000777	0.23663	0	0.257453	1.890134	0	0.016732	5.094584	0	0	0	0	0.019048	5.799796	0	0	0	0	0	0.215084	0.082524	74.10576	0	0.015474	0.113605	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Electricity	28.33039	2794.261	0	2794.261	378.7946	0	0	0	0	0	0	0.008585	0.014055	0	0	0	0.034341	0.040158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Natural Ga	794.401	54591.27	54591.27	0	7249.717	1.128254	13.55515	0	0.001724	0.024776	0	0.009	0.047521	0.001875	0.026946	0	0.036	0.135775	1387.534	10583.64	0	2.344742	36.30276	0	0.282858	2.157544	0	0.050833	0.550696	0	0	0	0	0.412728	37.08609	0	0	0	0	0	0.85184	13.40196	74.43135	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Gasoline	600108.2	22290344	22290344	0	2786617	0.042281	0	0.257993	0.001177	0	0.001931	0.002	0.002656	0.00128	0	0.0021	0.008	0.007587	277.9403	0	70.44944	0.002338	0	0.072036	0.004672	0	0.033228	0.008937	0	0.328953	0.090491	0.230394	1.422636	0.013041	0	0.360162	0.090491	0.230394	1.422636	0.034712	0.737516	0	3.233068	0.002748	0	0.000696
Santa Clara	2024	LDA	Aggregate	Aggregate	Diesel	1750.024	51573.48	51573.48	0	7442.61	0.213181	0	0	0.016747	0	0	0.002	0.002706	0.017504	0	0	0.008	0.00773	232.7849	0	0	0.001289	0	0	0.036675	0	0	0.027749	0	0	0	0	0	0.03159	0	0	0	0	0	0.0031	0.331109	0	0	0.002206	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Electricity	57627.4	2472767	0	2472767	282733	0	0	0	0	0	0	0.002	0.001533	0	0	0	0.008	0.00438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Plug-in Hyb	17457.1	767059.2	381568.7	385490.5	72185.1	0.003264	0	0.11551	0.000618	0	0.00207	0.002	0.001377	0.000672	0	0.002252	0.008	0.003935	138.6993	0	65.78653	0.000444	0	0.04244	0.000587	0	0.020762	0.001412	0	0.173285	0.041111	0.037292	0.447104	0.00206	0	0.189725	0.041111	0.037292	0.447104	0.019502	0.214038	0	1.339893	0.001371	0	0.00065
Santa Clara	2024	LDT1	Aggregate	Aggregate	Gasoline	52693.37	1706864	1706864	0	234793.4	0.128357	0	0.381294	0.001737	0	0.002678	0.002	0.00324	0.001889	0	0.002913	0.008	0.009258	328.9675	0	86.69483	0.006261	0	0.105365	0.009424	0	0.03869	0.027741	0	0.539321	0.165332	0.472477	2.667158	0.040475	0	0.590488	0.165332	0.472477	2.667158	0.036079	1.427621	0	5.253053	0.003252	0	0.000857
Santa Clara	2024	LDT1	Aggregate	Aggregate	Diesel	23.46233	343.9308	343.9308	0	66.44459	1.651932	0	0	0.239373	0	0	0.002	0.003724	0.250196	0	0	0.008	0.01064	415.4307	0	0	0.013862	0	0	0.065451	0	0	0.298448	0	0	0	0	0	0.339763	0	0	0	0	0	0.0031	1.593665	0	0	0.003936	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Electricity	211.0028	8008.646	0	8008.646	994.4346	0	0	0	0	0	0	0.002	0.001539	0	0	0	0.008	0.004397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Plug-in Hyb	67.64578	3164.46	1414.302	1750.158	279.7153	0.002933	0	0.11551	0.000367	0	0.001381	0.002	0.001389	0.0004	0	0.001502	0.008	0.003967	124.6157	0	71.36186	0.000397	0	0.042219	0.000522	0	0.020556	0.001268	0	0.173285	0.024153	0.020965	0.279628	0.001851	0	0.189725	0.024153	0.020965	0.279628	0.018771	0.192305	0	1.339893	0.001232	0	0.000705
Santa Clara	2024	LDT2	Aggregate	Aggregate	Gasoline	285585.4	10322758	10322758	0	1336438	0.069091	0	0.334237	0.001227	0	0.001959	0.002	0.003127	0.001334	0	0.00213	0.008	0.008936	344.6046	0	88.12796	0.002864	0	0.082985	0.005943	0	0.037254	0.011242	0	0.384216	0.081741	0.217688	1.368189	0.016404	0	0.420668	0.081741	0.217688	1.368189	0.036359	0.842122	0	3.673764	0.003407	0	0.000871
Santa Clara	2024	LDT2	Aggregate	Aggregate	Diesel	1015.453	37944.26	37944.26	0	4835.434	0.041515	0	0	0.004813	0	0	0.002	0.003113	0.005031	0	0	0.008	0.008895	311.1925	0	0	0.000609	0	0	0.049029	0	0	0.013105	0	0	0	0	0	0.014919	0	0	0	0	0	0.0031	0.129976	0	0	0.002949	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Electricity	1597.567	55532.59	0	55532.59	8150.927	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Plug-in Hyb	2116.58	94757.71	44376.61	50381.09	8752.056	0.003073	0	0.11551	0.000467	0	0.001672	0.002	0.001383	0.000508	0	0.001819	0.008	0.003953	130.578	0	78.06	0.000416	0	0.042233	0.000547	0	0.020569	0.001329	0	0.173285	0.025949	0.023686	0.309385	0.001939	0	0.189725	0.025949	0.023686	0.309385	0.019635	0.201506	0	1.339893	0.001291	0	0.000772
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Gasoline	19314.14	722529.3	722529.3	0	287751.9	0.17374	0.036221	0.636996	0.001534	0	0.000302	0.002	0.0273	0.001668	0	0.000328	0.008	0.078	871.4559	119.0993	25.78022	0.008358	0.112945	0.032997	0.009778	0.002977	0.050968	0.041718	0.415023	0.163611	0.047402	0.263136	2.768514	0.060875	0.605601	0.179134	0.047402	0.263136	2.768514	0.044898	1.142278	3.756209	3.123927	0.008615	0.001177	0.000255
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Diesel	10107.74	398004.1	398004.1	0	127142.6	1.563015	1.92168	0	0.035058	0.026804	0	0.003	0.0273	0.036643	0.028016	0	0.012	0.078	631.4008	131.1503	0	0.008006	0.005098	0	0.099477	0.020663	0	0.172364	0.10976	0	0	0	0	0.196225	0.124954	0	0	0	0	0	0.172781	0.473594	0.909745	0	0.005983	0.001243	0
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Electricity	70.82836	5110.544	0	5110.544	989.4273	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Gasoline	2506.906	91452.57	91452.57	0	37349.16	0.16518	0.035604	0.621534	0.00139	0	0.000239	0.002	0.03185	0.001512	0	0.000259	0.008	0.091	980.0361	137.5922	25.51292	0.006183	0.111453	0.031983	0.009819	0.00291	0.049384	0.028613	0.40822	0.157242	0.04419	0.238167	2.558385	0.041752	0.595674	0.17216	0.04419	0.238167	2.558385	0.044971	0.899209	3.762546	3.129931	0.009689	0.00136	0.000252
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Diesel	4663.455	183558.4	183558.4	0	58660.4	1.266102	1.895403	0	0.032055	0.027	0	0.003	0.03185	0.033504	0.028221	0	0.012	0.091	756.8682	209.5618	0	0.007406	0.005098	0	0.119245	0.033017	0	0.159439	0.10976	0	0	0	0	0.18151	0.124954	0	0	0	0	0	0.184132	0.411861	0.909745	0	0.007172	0.001986	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Electricity	18.33259	1253.286	0	1253.286	242.668	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MCY	Aggregate	Aggregate	Gasoline	28171.51	1660222.3	1660222.3	0	56343.02	0.571344	0	0.135477	0.001779	0	0.003248	0.001	0.0042	0.001902	0	0.003456	0.004	0.012	187.743	0	48.37697	0.162609	0	0.181972	0.039558	0	0.00802	1.062175	0	1.345317	3.559276	3.75283	3.900294	1.276951	0	1.462608	3.559276	3.75283	3.900294	0.008808	12.6697	0	8.002987	0.001856	0	0.000478
Santa Clara	2024	MDV	Aggregate	Aggregate	Gasoline	156642.4	5468054	5468054	0	726101.1	0.101279	0	0.42828	0.001229	0	0.002042	0.002	0.003184	0.001336	0	0.002221	0.008	0.009096	418.13	0	107.2801	0.003873	0	0.10186	0.007628	0	0.040967	0.01626	0	0.508806	0.097051	0.275722	1.677059	0.023715	0	0.557077	0.097051	0.275722	1.677059	0.036179	0.972241	0	4.022964	0.004134	0	0.001061
Santa Clara	2024	MDV	Aggregate	Aggregate	Diesel	2400.615	86292.69	86292.69	0	11318.82	0.048844	0	0	0.004909	0	0	0.002	0.003206	0.005131	0	0	0.008	0.009159	409.13	0	0	0.00051	0	0	0.064459	0	0	0.010978	0	0	0	0	0	0.012498	0	0	0	0	0	0.0031	0.201538	0	0	0.003877	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Electricity	1678.684	58660.63	0	58660.63	8578.496	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Plug-in Hyb	1250.857	52904.03	25301.52	27602.51	5172.294	0.003138	0	0.11551	0.000561	0	0.001962	0.002	0.001382	0.00061	0	0.002134	0.008	0.003948	133.3485	0	96.65661	0.000423	0	0.042047	0.000554	0	0.020395	0.001357	0	0.173285	0.030318	0.026684	0.341695	0.00198	0	0.189725	0.030318	0.026684	0.341695	0.020087	0.205781	0	1.339893	0.001318	0	0.000956
Santa Clara	2024	MH	Aggregate	Aggregate	Gasoline	2420.57	22012.3	22012.3	0	242.1538	0.420938	0	0.419963	0.001679	0	0.000404	0.003	0.015756	0.001826	0	0.000439	0.012	0.045017	1947.501	0	31.65056	0.015478	0	0.037539	0.025731	0	0.04407	0.06827	0	0.159123	12.21143	0.286769	4.596479	0.09962	0	0.174219	12.21143	0.286769	4.596479	0.044846	1.682224	0	3.497247	0.019253	0	0.000313
Santa Clara	2024	MH	Aggregate	Aggregate	Diesel	977.3606	9498.302	9498.302	0	977.3606	4.117169	0	0	0.091772	0	0	0.004	0.015675	0.095921	0	0	0.016	0.044785	1081.931	0	0	0.005558	0	0	0.170459	0	0	0.11965	0	0	0	0	0	0.136214	0	0	0	0	0	0.155539	0.397281	0	0	0.010252	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Gasoline	1414.552	71600.35	71600.35	0	28302.35	0.470752	0.088485	0.440963	0.001362	0	0.000533	0.003	0.015756	0.001482	0	0.000579	0.012	0.045017	1768.687	531.8002	46.25227	0.015051	0.25808	0.047572	0.022913	0.00727	0.03271	0.074951	1.01271	0.265405	0.033945	0.276365	2.798712	0.109368	1.477744	0.290585	0.033945	0.276365	2.798712	0.04498	1.56073	15.11634	5.825814	0.017485	0.005257	0.000457
Santa Clara	2024	MHDT	Aggregate	Aggregate	Diesel	1039.53	4340443.6	4340443.6	0	123939	1.232824	13.14099	1.642732	0.014397	0.029902	0	0.003	0.015941	0.015048	0.031254	0	0.012	0.045546	1147.309	2248.547	0	0.001507	0.01158	0	0.180759	0.35426	0	0.032455	0.249319	0	0	0	0	0.036947	0.283831	0	0	0	0	0	0.210532	0.120871	7.556027	0	0.010864	0.021292	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Electricity	30.91601	1660.353	0	1660.353	407.4536	0	0	0	0	0	0	0.003	0.007956	0	0	0	0.012	0.022732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Natural Ga	90.59449	4303.581	4303.581	0	827.6228	0.133415	6.499719	0	0.001179	0.018131	0	0.003	0.016007	0.001282	0.019719	0	0.012	0.045734	984.6917	5301.101	0	0.74573	17.31409	0	0.200736	1.080664	0	0.010655	0.247384	0	0	0	0	0.761072	17.6703	0	0	0	0	0	1.06	2.995842	34.7393	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Gasoline	443.1467	19894.31	19894.31	0	8866.48	0.49672	0.06506	0.408547	0.000907	0	0.000252	0.003	0.01568	0.000987	0	0.000274	0.012	0.044799	1764.001	379.4143	31.61308	0.013757	0.195733	0.03606	0.024018	0.005304	0.031028	0.067076	0.746281	0.190964	0.033873	0.154922	2.818385	0.097877	1.088971	0.209081	0.033873	0.154922	2.818385	0.044969	1.491576	5.774637	4.000641	0.017439	0.003751	0.000313
Santa Clara	2024	OBUS	Aggregate	Aggregate	Diesel	893.1376	61949.05	61949.05	0	9141.625	1.178643	7.363387	1.543157	0.019849	0.008167	0	0.003	0.018015	0.020746	0.008536	0	0.012	0.051472	1273.38	1538.564	0	0.001935	0.020479	0	0.200622	0.242401	0	0.04166	0.440905	0	0	0	0	0.047427	0.501937	0	0	0	0	0	0.216021	0.150181	7.500483	0	0.012058	0.014569	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Electricity	1.087481	92.50105	0	92.50105	21.75833	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Natural Ga	7.05737	469.3876	469.3876	0	62.81059	0.190585	1.537414	0	0.00106	0.003899	0	0.003	0.016148	0.001153	0.004241	0	0.012	0.046137	1004.237	1191.581	0	0.789796	4.236895	0	0.20472	0.242912	0	0.011285	0.060537	0	0	0	0	0.806045	4.324062	0	0	0	0	0	1.06	3.254325	7.353064	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Gasoline	172.6948	8584.866	8584.866	0	690.7791	0.50288	0.925939	0.716801	0.000864	0	0.000567	0.002	0.015721	0.000939	0	0.000616	0.008	0.044917	810.6064	2589.131	58.1367	0.011135	2.464862	0.074893	0.027101	0.086311	0.065929	0.054059	10.63288	0.426367	0.113914	0.274691	1.686167	0.078883	15.51547	0.466819	0.113914	0.274691	1.686167	0.045	1.38705	82.18841	10.36621	0.008014	0.025596	0.000575
Santa Clara	2024	SBUS	Aggregate	Aggregate	Diesel	670.5958	15345.26	15345.26	0	9710.228	3.821388	21.90481	0.482851	0.019766	0.019703	0	0.003	0.015721	0.02066	0.020594	0	0.012	0.044917	1144.18	2229	0	0.002665	0.008001	0	0.180266	0.35118	0	0.057376	0.172257	0	0	0	0	0.065318	0.196101	0	0	0	0	0	0.148025	0.1775	4.677792	0	0.010835	0.021107	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Electricity	2.064666	64.35501	0	64.35501	23.64639	0	0	0	0	0	0	0.002539	0.00786	0	0	0	0.010157	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Natural Ga	24.3995	612.0941	612.0941	0	353.3048	0.567729	5.270895	0	0.003378	0.011357	0	0.003	0.015721	0.003674	0.012352	0	0.012	0.044917	1261.305	4066.736	0	3.436672	15.25665	0	0.257125	0.829031	0	0.049103	0.217987	0	0	0	0	3.507376	15.57053	0	0	0	0	0	1.06	11.64901	20.74693	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Gasoline	46.08313	4812.451	4812.451	0	184.3325	0.027483	0	0.457232	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.0836	0	36.94783	0.002034	0	0.043067	0.004288	0	0.071717	0.005634	0	0.152979	0.038099	0.092116	0.456438	0.008221	0	0.167492	0.038099	0.092116	0.456438	0.045	0.581148	0	6.130495	0.009155	0	0.000365
Santa Clara	2024	UBUS	Aggregate	Aggregate	Diesel	437.4745	48917.61	48917.61	0	1749.898	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1101.14	0	0	0.003215	0	0	0.173485	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0.187908	0.079368	0	0	0.010434	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Electricity	5.347565	235.0626	0	235.0626	21.39026	0	0	0	0	0	0	0.008888	0.01925	0	0	0	0.03552	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Natural Ga	42.58696	4865.187	4865.187	0	170.3478	0.058788	0	0	0.000282	0	0	0.008183	0.0385	0.000295	0	0	0.032731	0.11	1299.206	0	0	4.246059	0	0	0.264852	0	0	0.060668	0	0	0	0	0	4.333415	0	0	0	0	0	0.97	49.04786	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
Santa Clara	2025	HHDT	Aggregate	Aggregate	Gasoline	2.330359	124.9448	124.9448	0	46.62582	5.556909	0	1.379041	0.003103	0	0.001399	0.005	0.033068	0.003375	0	0.001521	0.02	0.09448	2106.229	0	50.03138	0.207413	0	0.000226	0.167059	0	0.041557	1.222197	0	0.00123	0.140217	1.263022	9.434649	1.783427	0	0.001346	0.140217	1.263022	9.434649	0.043157	47.7242	0	2.001616	0.020822	0	0.000495
Santa Clara	2025	HHDT	Aggregate	Aggregate	Diesel	8692.575	1008964	1008964	0	127877.1	1.825194	62.42367	2.931995	0.025335	0.028938	0	0.008772	0.027421	0.02648	0.030247	0	0.035088	0.078345	1608.776	11755.34	0	0.00075	0.235891	0	0.253463	1.852058	0	0.016139	5.078674	0	0	0	0	0	0.018373	5.781684	0	0	0	0	0	0.215507	0.078083	74.00904	0	0.015234	0.111316	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Electricity	63.3712	6579.675	0	6579.675	825.9972	0	0	0	0	0	0	0.008551	0.014281	0	0	0	0.034206	0.040802	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Natural Ga	832.405	55779.38	55779.38	0	7555.504	1.049864	13.18492	0	0.00168	0.025258	0	0.009	0.048303	0.001827	0.02747	0	0.036	0.138007	1375.94	10529.31	0	2.235928	35.17609	0	0.280494	2.146469	0	0.047235	0.530122	0	0	0	0	0	2.299347	35.93114	0	0	0	0	0	0.843784	13.01274	74.75478	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Gasoline	598860.3	22133915	22133915	0	2780384	0.038209	0	0.245539	0.001142	0	0.00188	0.002	0.002655	0.001242	0	0.002044	0.008	0.007587	273.2075	0	69.04168	0.002117	0	0.067825	0.004408	0	0.032293	0.007947	0	0.306311	0.087189	0.224301	1.384954	0.011596	0	0.335372	0.087189	0.224301	1.384954	0.035611	0.6952	0	3.049452	0.002701	0	0.000683
Santa Clara	2025	LDA	Aggregate	Aggregate	Diesel	1620.04	46912.85	46912.85	0	6871.193	0.18842	0	0	0.015236	0	0	0.002	0.002712	0.015925	0	0	0.008	0.007748	230.5963	0	0	0.001193	0	0	0.036331	0	0	0.025693	0	0	0	0	0	0	0.02925	0	0	0	0	0	0.0031	0.319914	0	0	0.002185	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Electricity	61443.19	2670452	0	2670452	299852.7	0	0	0	0	0	0	0.002	0.001534	0	0	0	0.008	0.004382	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Plug-in Hyb	19037.66	825567.7	401013	424554.8	78720.74	0.003187	0	0.11551	0.000578	0	0.001985	0.002	0.001382	0.000629	0	0.002159	0.008	0.003948	135.4391	0	65.04608	0.000432	0	0.042249	0.000569	0	0.020584	0.001378	0	0.173285	0.041164	0.03735	0.440525	0.002011	0	0.189725	0.041164	0.03735	0.440525	0.019241	0.209016	0	1.339893	0.001339	0	0.000643
Santa Clara	2025	LDT1	Aggregate	Aggregate	Gasoline	51680.86	1664706	1664706	0	230186	0.115355	0	0.35972	0.001639	0	0.002543	0.002	0.003241	0.001782	0	0.002766	0.008	0.00926	324.1276	0	84.93844	0.005621	0	0.098552	0.008687	0	0.037511	0.02471	0	0.498818	0.156963	0.442299	2.52236	0.038056	0	0.546143	0.156963	0.442299	2.52236	0.036453	1.317416	0	4.886115	0.003204	0	0.00084
Santa Clara	2025	LDT1	Aggregate	Aggregate	Diesel	21.28272	302.8258	302.8258	0	59.13231	1.64381	0	0	0.238169	0	0	0.002	0.00372	0.248938	0	0	0.008	0.010628	415.1682	0	0	0.013797	0	0	0.06541	0	0	0.297038	0	0	0.338158	0	0	0	0	0	0	0	0	0	0.0031	1.585068	0	0	0.003934	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Electricity	234.4578	9323.704	0	9323.704	1109.796	0	0	0	0	0	0	0.002	0.001537	0	0	0	0.008	0.004392	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Plug-in Hyb	98.13198	4519.182	1961.286	2557.896	405.7758	0.002848	0	0.11551	0.000353	0	0.001365	0.002	0.001394	0.000383	0	0.001485	0.008	0.003982	121.0095	0	70.34635	0.000383	0	0.041987	0.000501	0	0.020339	0.001231	0	0.173285	0.023895	0.020384	0.276746	0.001797	0	0.189725	0.023895	0.020384	0.276746	0.018228	0.186748	0	1.339893	0.001196	0	0.000695
Santa Clara	2025	LDT2	Aggregate	Aggregate	Gasoline	290874.7	10447706	10447706	0	1360241	0.06257	0	0.314364	0.001192	0	0.001919	0.002	0.00313	0.001296	0	0.002087	0.008	0.008944	338.2713	0	86.2638	0.002642	0	0.078494	0.005588	0	0.036037	0.010244	0	0.360071	0.079452	0.214938	1.349256	0.014949	0	0.394233	0.079452	0.214938	1.349256	0.03712	0.795621	0	3.47417	0.003344	0	0.000853
Santa Clara	2025	LDT2	Aggregate	Aggregate	Diesel	1049.952	38652.34	38652.34	0	4980.34	0.039332	0	0	0.004727	0	0	0.002	0.003123	0.004941	0	0	0.008	0.008921	306.7182	0	0	0.000603	0	0	0.048324	0	0	0.01298	0	0	0	0	0	0	0.014777	0	0	0	0	0	0.0031	0.129797	0	0	0.002906	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Electricity	2157.059	73663.77	0	73663.77	10962.38	0	0	0	0	0	0	0.002	0.001527	0	0	0	0.008	0.004362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Plug-in Hyb	2561.885	112327.2	51267.44	61059.78	10593.4	0.002995	0	0.11551	0.000438	0	0.00161	0.002	0.001388	0.000477	0	0.001751	0.008	0.003967	127.2609	0	77.17666	0.000403	0	0.041992	0.000528	0	0.020344	0.001295	0	0.173285	0.026071	0.023359	0.305362	0.001893	0	0.189725	0.026071	0.023359	0.305362	0.019143	0.196395	0	1.339893	0.001258	0	0.000763
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Gasoline	19422.46	728337	728337	0	289365.8	0.152112	0.035118	0.61458	0.001478	0	0.000276	0.002	0.0273	0.001607	0	0.0003	0.008	0.078	855.4024	117.9783	25.70715	0.007214	0.110329	0.031611	0.008613	0.002941	0.049929	0.03557	0.40247	0.15588	0.044275	0.247775	2.616411	0.051904	0.587284	0.170669	0.044275	0.247775	2.616411	0.044934	1.05316	3.759094	3.16195	0.008457	0.001166	0.000254
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Diesel	10387.1	408019.3	408019.3	0	130656.7	1.379237	1.823414	0	0.032347	0.026692	0	0.003	0.0273	0.03381	0.027899	0	0.012	0.078	628.07	129.5472	0	0.007468	0.005098	0	0.098953	0.02041	0	0.160779	0.10976	0	0	0	0	0.183036	0.124954	0	0	0	0	0	0.17898	0.435087	0.909745	0	0.005951	0.001228	0
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Electricity	196.402	13079.06	0	13079.06	2746.629	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Gasoline	2512.652	91345.05	91345.05	0	37434.78	0.146187	0.034452	0.600885	0.001346	0	0.00022	0.002	0.03185	0.001464	0	0.000239	0.008	0.091	964.5764	136.4471	25.31105	0.005467	0.108422	0.030581	0.008804	0.002854	0.048245	0.025115	0.395081	0.149459	0.041982	0.228581	2.471298	0.036648	0.576501	0.163639	0.041982	0.228581	2.471298	0.044974	0.850878	3.765161	3.139903	0.009536	0.001349	0.00025
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Diesel	4837.236	188645	188645	0	60846.34	1.139289	1.802658	0	0.030296	0.027005	0	0.003	0.03185	0.031666	0.028226	0	0.012	0.091	750.3571	207.2396	0	0.007043	0.005098	0	0.118219	0.032651	0	0.151622	0.10976	0	0	0	0	0.172612	0.124954	0	0	0	0	0	0.188496	0.387904	0.909745	0	0.00711	0.001964	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Electricity	50.46202	3193.251	0	3193.251	669.175	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MCY	Aggregate	Aggregate	Gasoline	28484.89	166414.5	166414.5	0	56969.79	0.557882	0	0.129146	0.001799	0	0.003253	0.001	0.0042	0.001925	0	0.003464	0.004	0.012	187.2679	0	47.30784	0.158292	0	0.177199	0.038984	0	0.007691	1.024683	0	1.305157	3.558651	3.760078	3.860886	1.236542	0	1.419098	3.558651	3.760078	3.860886	0.008851	12.31202	0	7.965438	0.001851	0	0.000468
Santa Clara	2025	MDV	Aggregate	Aggregate	Gasoline	159532.2	5551044	5551044	0	739781.4	0.087905	0	0.391886	0.001179	0	0.001962	0.002	0.003182	0.001282	0	0.002134	0.008	0.009091	410.3223	0	104.9535	0.003431	0	0.094137	0.006921	0	0.039073	0.014165	0	0.463643	0.092515	0.265086	1.620407	0.020668	0	0.50763	0.092515	0.265086	1.620407	0.036883	0.895922	0	3.753621	0.004056	0	0.001038
Santa Clara	2025	MDV	Aggregate	Aggregate	Diesel	2421.364	85326.8	85326.8	0	11351.14	0.044948	0	0	0.004686	0	0	0.002	0.003225	0.004898	0	0	0.008	0.009216	404.5816	0	0	0.000492	0	0	0.063742	0	0	0.010592	0	0	0	0	0	0	0.012058	0	0	0	0	0	0.0031	0.199936	0	0	0.003834	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Electricity	2274.547	77934.96	0	77934.96	11571.06	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Plug-in Hyb	1542.366	64484.39	29833.21	34651.18	6377.683	0.003036	0	0.11551	0.000507	0	0.00183	0.002	0.001388	0.000551	0	0.00199	0.008	0.003965	128.9983	0	95.11137	0.000407	0	0.041816	0.00053	0	0.02018	0.001313	0	0.173285	0.02949	0.025333	0.327899	0.001916	0	0.189725	0.02949	0.025333	0.327899	0.019431	0.199076	0	1.339893	0.001275	0	0.00094
Santa Clara	2025	MH	Aggregate	Aggregate	Gasoline	2337.876	21506.19	21506.19	0	233.8812	0.37652	0	0.425905	0.001612	0	0.000388	0.003	0.015756	0.001753	0	0.000422	0.012	0.045017	1947.057	0	31.4529	0.013722	0	0.036945	0.023864	0	0.045303	0.059455	0	0.154277	11.38549	0.268831	4.357209	0.086757	0	0.168914	11.38549	0.268831	4.357209	0.044879	1.426924	0	3.382931	0.019249	0	0.000311
Santa Clara	2025	MH	Aggregate	Aggregate	Diesel	994.5437	9603.893	9603.893	0	99.45437	3.976372	0	0	0.086098	0	0	0.004	0.015675	0.08999	0	0	0.016	0.044785	1082.401	0	0	0.005421	0	0	0.170533	0	0	0.116701	0	0	0	0	0	0	0.132856	0	0	0	0	0	0.166635	0.385118	0	0	0.010256	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Gasoline	1412.263	72039.87	72039.87	0	28256.55	0.394798	0.086175	0.424333	0.001347	0	0.000513	0.003	0.015756	0.001465	0	0.000558	0.012	0.045017	1746.959	526.7233	45.37618	0.012585	0.261076	0.04598	0.019987	0.007219	0.032398	0.061949	1.015127	0.253154	0.030988	0.250472	2.558011	0.060397	1.481271	0.277172	0.030988	0.250472	2.558011	0.044991	1.276089	15.1444	5.531626	0.01727	0.005207	0.000449
Santa Clara	2025	MHDT	Aggregate	Aggregate	Diesel	10548.06	435100.6	435100.6	0	125915.2	1.128155	12.74108	1.646559	0.012461	0.024792	0	0.003	0.015941	0.013024	0.025912	0	0.012	0.045545	1141.328	2229.374	0	0.00131	0.010957	0	0.179817	0.351239	0	0.028195	0.235896	0	0	0	0	0.032098	0.268549	0	0	0	0	0	0.211891	0.109646	7.535393	0	0.010808	0.021111	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Electricity	90.80851	4838.906	0	4838.906	1182.343	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Natural Ga	98.90628	4590.307	4590.307	0	911.9208	0.12435	6.45266	0	0.002126	0.018594	0	0.003	0.016009	0.001333	0.020223	0	0.012	0.045741	979.0142	5290.545	0	0.751438	16.97256	0	0.199578	1.078512	0	0.010737	0.242504	0	0	0	0	0	0.766898	17.32175	0	0	0	0	0	1.06	2.996166	35.80775	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Gasoline	430.7023	18962.49	18962.49	0	8617.491	0.460353	0.06398	0.405045	0.000939	0	0.000255	0.003	0.01568	0.001022	0	0.000278	0.012	0.044799	1744.286	377.0226	31.37018	0.012641	0.195762	0.035581	0.02242	0.005219	0.030806	0.061504	0.74652	0.188569	0.033827	0.158433	2.881145	0.089747	1.089321	0.206459	0.033827	0.158433	2.881145	0.04498	1.352776	5.776073	3.953891	0.017244	0.003727	0.00031
Santa Clara	2025	OBUS	Aggregate	Aggregate	Diesel	921.4116	62304.89	62304.89	0	9451.527	1.133246	7.151668	1.532624	0.018916	0.007596	0	0.003	0.018017	0.019772	0.007939	0	0.012	0.051478	1259.126	1532.11	0	0.001844	0.020685	0	0.198376	0.241385	0	0.039711	0.445333	0	0	0	0	0.045208	0.506978	0	0	0	0	0	0.216212	0.14449	7.587325	0	0.011923	0.014508	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Electricity	2.672031	221.771	0	221.771	53.46199	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Natural Ga	8.125306	537.7468	537.7468	0	72.31523	0.164816	1.526623	0	0.001183	0.004157	0	0.003	0.016148	0.001287	0.004521	0	0.012	0.046137	987.912	1189.826	0	0.803903	4.103659	0	0.201392	0.242554	0	0.011486	0.058633	0	0	0	0	0	0.820442	4.188085	0	0	0	0	0	1.06	3.29233	7.933419	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Gasoline	178.2436	8812.851	8812.851	0	712.9742	0.487257	0.905562	0.722985	0.000866	0	0.000573	0.002	0.015721	0.000942	0	0.000623	0.008	0.044917	806.3455	2576.863	57.67146	0.010523	2.465929	0.074733	0.026439	0.084425	0.066434	0.051046	10.63602	0.42511	0.118631	0.292211	1.797789	0.074486	15.52005	0.465442	0.118631	0.292211	1.797789	0.045	1.308927	82.20747	10.20511	0.007972	0.025475	0.00057
Santa Clara	2025	SBUS	Aggregate	Aggregate	Diesel	673.2048	15283.75	15283.75	0	9748.005	3.614242	21.38359	0.496308	0.018677	0.018235	0	0.003	0.015721	0.019521	0.019059	0	0.012	0.044917	1139.829	2219.616	0	0.002583	0.007936	0	0.179581	0.349701	0	0.055601	0.170862	0	0	0	0	0.063298	0.194514	0	0	0	0	0	0.151888	0.17348	4.777291	0	0.010794	0.021018	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Electricity	4.481168	145.0761	0	145.0761	51.24766	0	0	0	0	0	0	0.002	0.002556	0.00786	0	0	0	0.010226	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Natural Ga	25.28439	627.586	627.586	0	366.118	0.5494	5.260001	0	0.003378	0.011617	0	0.003	0.015721	0.003674	0.012635	0	0.012	0.044917	1252.115	4074.049	0	3.386209	15.12215	0	0.255252	0.830522	0	0.048382	0.216066	0	0	0	0	0	3.455875	15.43326	0	0	0	0	0	1.06	11.41153	21.33281	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Gasoline	46.21918	4826.658	4826.658	0	184.8767	0.027276	0	0.449893	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	925.8676	0	36.64281	0.001993	0	0.043054	0.004259	0	0.070843	0.005515	0	0.152699	0.04366	0.092112	0.471505	0.008047	0	0.167186	0.04366	0.092112	0.471505	0.045	0.586139	0	5.942314	0.009153	0	0.000362
Santa Clara	2025	UBUS	Aggregate	Aggregate	Diesel	405.3675	44987.37	44987.37	0	1621.47	0.382968	0	0	0.006962	0	0	0.008	0.03238	0.0385	0.007277	0	0	0.032951	0.11	1121.875	0	0	0.003193	0	0	0.176752	0	0	0.06875	0	0	0	0	0.078266	0	0	0	0	0	0	0.22	0.0787	0	0	0.01063	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Electricity	23.31202	2427.54	0	2427.54	93.24809	0	0	0	0	0	0	0.008	0.008977	0.01925	0	0	0	0.035907	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Natural Ga	58.16247	6762.418	6762.418	0	232.6499	0.060506	0	0	0.000287	0	0	0.008408	0.0385	0.0003	0	0	0	0.033634	0.11	1317.877	0	0	4.320397	0	0	0.268658	0	0	0.06173	0	0	0	0	0	4.409282	0	0	0	0	0	0.97	50.3461	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUI	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2026	HHDT	Aggregate	Aggregate	Gasoline	1.890208	133.7551	133.7551	0	37.81927	3.912832	0	0.833967	0.00242	0	0.001119	0.005	0.0327	0.002632	0	0.001218	0.02	0.093428	2030.337	0	50.00574	0.151681	0	0.000277	0.138602	0	0.029726	0.841165	0	0.001504	0.124256	1.119044	7.839877	1.227426	0	0.001647	0.124256	1.119044	7.839877	0.044272	33.21272	0	2.727013	0.020072	0	0.000494
Santa Clara	2026	HHDT	Aggregate	Aggregate	Diesel	8867.795	1016012	1016012	0	130549	1.761105	62.03312	2.955473	0.025195	0.027767	0	0.008774	0.027513	0.026334	0.029023	0	0.035095	0.07861	1583.151	11526.41	0	0.000725	0.23528	0	0.249426	1.815991	0	0.015602	5.065515	0	0	0	0	0	0.017762	5.766703	0	0	0	0	0.215914	0.07407	73.94194	0	0.014991	0.109148	0
Santa Clara	2026	HHDT	Aggregate	Aggregate	Electricity	110.5302	11535.57	0	11535.57	1443.078	0	0	0	0	0	0	0.008558	0.014729	0	0	0	0.034232	0.042083	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	HHDT	Aggregate	Aggregate	Natural Ga	863.4608	56635.39	56635.39	0	7769.707	0.976371	12.77067	0	0.001645	0.025604	0	0.009	0.049192	0.001789	0.027847	0	0.036	0.140547	1365.074	10446.87	0	2.127999	33.90059	0	0.278279	2.129663	0	0.043949	0.508241	0	0	0	0	0	2.18721	34.62523	0	0	0	0	0.835034	12.62839	75.02016	0	0	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Gasoline	598869.8	22031466	22031466	0	2780456	0.034968	0	0.23463	0.001102	0	0.001828	0.002	0.002655	0.001199	0	0.001988	0.008	0.007585	268.3766	0	67.64288	0.001934	0	0.063951	0.004196	0	0.031426	0.007138	0	0.285908	0.083161	0.217573	1.338275	0.010415	0	0.313033	0.083161	0.217573	1.338275	0.036474	0.659308	0	2.884139	0.002659	0	0.000669
Santa Clara	2026	LDA	Aggregate	Aggregate	Diesel	1478.944	42434.32	42434.32	0	6277.405	0.163286	0	0	0.013397	0	0	0.002	0.002717	0.014003	0	0	0.008	0.007761	228.026	0	0	0.001079	0	0	0.035926	0	0	0.023239	0	0	0	0	0	0	0.026457	0	0	0	0	0	0.0031	0.307439	0	0	0.002161	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Electricity	64495.24	2739705	0	2739705	312996.4	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	20380.43	866414.1	412496.8	453917.3	84273.1	0.003124	0	0.11551	0.000542	0	0.001902	0.002	0.001386	0.000589	0	0.002068	0.008	0.00396	132.7519	0	64.33622	0.000421	0	0.042044	0.000552	0	0.020392	0.001351	0	0.173285	0.040391	0.037456	0.436203	0.001971	0	0.189725	0.040391	0.037456	0.436203	0.019017	0.204877	0	1.339893	0.001312	0	0.000636
Santa Clara	2026	LDT1	Aggregate	Aggregate	Gasoline	50750.47	1625960	1625960	0	225981.5	0.104002	0	0.340042	0.001548	0	0.002421	0.002	0.003241	0.001684	0	0.002633	0.008	0.009261	319.1884	0	83.2086	0.005058	0	0.092241	0.008041	0	0.036412	0.022051	0	0.461638	0.148727	0.41724	2.377298	0.032177	0	0.505436	0.148727	0.41724	2.377298	0.036833	1.219346	0	4.549174	0.003156	0	0.000823
Santa Clara	2026	LDT1	Aggregate	Aggregate	Diesel	18.47771	256.5587	256.5587	0	50.46	1.626008	0	0	0.235786	0	0	0.002	0.003714	0.246448	0	0	0.008	0.010612	414.3219	0	0	0.013655	0	0	0.065277	0	0	0.293995	0	0	0	0	0	0	0.334693	0	0	0	0	0	0.0031	1.580267	0	0	0.003926	0	0
Santa Clara	2026	LDT1	Aggregate	Aggregate	Electricity	263.5822	10628.88	0	10628.88	1254.204	0	0	0	0	0	0	0.002	0.001536	0	0	0	0.008	0.004388	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	130.6819	5898.082	2516.052	3382.03	540.3696	0.002799	0	0.11551	0.000332	0	0.001311	0.002	0.001397	0.000362	0	0.001426	0.008	0.003992	118.9473	0	69.43161	0.000375	0	0.041793	0.000489	0	0.020158	0.00121	0	0.173285	0.023415	0.020044	0.275174	0.001766	0	0.189725	0.023415	0.020044	0.275174	0.017917	0.183572	0	1.339893	0.001176	0	0.000686
Santa Clara	2026	LDT2	Aggregate	Aggregate	Gasoline	296178.9	10561285	10561285	0	1383934	0.057197	0	0.297788	0.00115	0	0.001868	0.002	0.003134	0.00125	0	0.002032	0.008	0.008953	332.1248	0	84.47809	0.002453	0	0.074444	0.005294	0	0.035027	0.009395	0	0.338458	0.076755	0.212879	1.330363	0.013709	0	0.370569	0.076755	0.212879	1.330363	0.037798	0.757265	0	3.299571	0.003283	0	0.000835
Santa Clara	2026	LDT2	Aggregate	Aggregate	Diesel	1079.589	39200.14	39200.14	0	5104.36	0.037108	0	0	0.004598	0	0	0.002	0.00313	0.004806	0	0	0.008	0.008943	302.0718	0	0	0.000595	0	0	0.047592	0	0	0.012807	0	0	0	0	0	0	0.01458	0	0	0	0	0	0.0031	0.12935	0	0	0.002862	0	0
Santa Clara	2026	LDT2	Aggregate	Aggregate	Electricity	2705.079	90693.22	0	90693.22	13682.37	0	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	2986.353	127896.3	57308.29	70587.98	12348.57	0.00294	0	0.11551	0.000411	0	0.00154	0.002	0.001392	0.000447	0	0.001675	0.008	0.003978	124.9411	0	76.35739	0.000394	0	0.041776	0.000513	0	0.020142	0.001271	0	0.173285	0.025698	0.023308	0.30414	0.001855	0	0.189725	0.025698	0.023308	0.30414	0.018799	0.192822	0	1.339893	0.001235	0	0.000755
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Gasoline	19567.35	734252.9	734252.9	0	291524.3	0.134825	0.034078	0.592259	0.00144	0	0.000258	0.002	0.0273	0.001567	0	0.00028	0.008	0.078	841.5517	116.9335	25.61185	0.00645	0.107779	0.030306	0.00767	0.002904	0.048837	0.03157	0.390607	0.14863	0.042429	0.244239	2.568634	0.046067	0.569973	0.162731	0.042429	0.244239	2.568634	0.044952	1.000325	3.761042	3.194844	0.00832	0.001156	0.000253
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Diesel	10635.31	416619.3	416619.3	0	133778.8	1.219281	1.732484	0	0.030022	0.026603	0	0.003	0.0273	0.031379	0.027806	0	0.012	0.078	625.228	128.0664	0	0.006994	0.005098	0	0.098505	0.020177	0	0.150578	0.10976	0	0	0	0	0	0.171423	0.124954	0	0	0	0	0.184377	0.40172	0.909745	0	0.005924	0.001213	0
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Electricity	378.0593	23974.57	0	23974.57	5290.738	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LHDT2	Aggregate	Aggregate	Gasoline	2513.651	91174.03	91174.03	0	37449.66	0.127191	0.033359	0.581518	0.001301	0	0.0002	0.002	0.03185	0.001415	0	0.000218	0.008	0.091	950.6797	135.3583	25.11699	0.00457	0.105616	0.029314	0.007823	0.002803	0.047205	0.020413	0.382638	0.142338	0.039798	0.221425	2.401547	0.029786	0.558345	0.155842	0.039798	0.221425	2.401547	0.04499	0.781956	3.768092	3.147796	0.009398	0.001338	0.000248
Santa Clara	2026	LHDT2	Aggregate	Aggregate	Diesel	4995.258	193100.7	193100.7	0	62834.06	1.030069	1.717944	0	0.028773	0.027014	0	0.003	0.03185	0.030074	0.028235	0	0.012	0.091	744.6842	205.1133	0	0.00672	0.005098	0	0.117325	0.032316	0	0.144681	0.10976	0	0	0	0	0	0.16471	0.124954	0	0	0	0	0.19232	0.367309	0.909745	0	0.007056	0.001944	0
Santa Clara	2026	LHDT2	Aggregate	Aggregate	Electricity	96.38373	5822.064	0	5822.064	1278.565	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	MCY	Aggregate	Aggregate	Gasoline	28797.04	167092.5	167092.5	0	57594.08	0.54585	0	0.123182	0.001818	0	0.003256	0.001	0.0042	0.001945	0	0.00347	0.004	0.012	186.8446	0	46.30646	0.154451	0	0.172746	0.038475	0	0.007381	0.991178	0	1.267526	3.558543	3.769688	3.854231	1.200425	0	1.378329	3.558543	3.769688	3.854231	0.008889	11.99329	0	7.931677	0.001847	0	0.000458
Santa Clara	2026	MDV	Aggregate	Aggregate	Gasoline	162557.9	5631323	5631323	0	753924.4	0.077249	0	0.361249	0.00113	0	0.001888	0.002	0.003182	0.001228	0	0.002053	0.008	0.00909	402.7076	0	102.7358	0.003084	0	0.087398	0.006351	0	0.037495	0.012544	0	0.424623	0.087977	0.255029	1.559913	0.018304	0	0.464909	0.087977	0.255029	1.559913	0.037518	0.838043	0	3.531694	0.003981	0	0.001016
Santa Clara	2026	MDV	Aggregate	Aggregate	Diesel	2430.299	84111.54	84111.54	0	11337.22	0.040802	0	0	0.004381	0	0	0.002	0.003241	0.004579	0	0	0.008	0.009261	399.673	0	0	0.000469	0	0	0.062969	0	0	0.010103	0	0	0	0	0	0	0.011502	0	0	0	0	0	0.0031	0.197458	0	0	0.003787	0	0
Santa Clara	2026	MDV	Aggregate	Aggregate	Electricity	2850.956	95858.35	0	95858.35	14435.41	0	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	1813.351	74577.72	33714.26	40863.46	7498.208	0.002966	0	0.11551	0.000463	0	0.001713	0.002	0.001392	0.000504	0	0.001863	0.008	0.003977	126.0521	0	93.79299	0.000396	0	0.041612	0.000513	0	0.019989	0.001283	0	0.173285	0.029908	0.026996	0.337381	0.001872	0	0.189725	0.029908	0.026996	0.337381	0.018987	0.194537	0	1.339893	0.001246	0	0.000927
Santa Clara	2026	MH	Aggregate	Aggregate	Gasoline	2263.186	21108.38	21108.38	0	226.4092	0.335195	0	0.432131	0.001549	0	0.000374	0.003	0.015756	0.001685	0	0.000406	0.012	0.045017	1946.632	0	31.26805	0.012049	0	0.036404	0.022132	0	0.046519	0.050974	0	0.149854	10.64717	0.254614	4.131655	0.074381	0	0.164071	10.64717	0.254614	4.131655	0.044921	1.181993	0	3.275797	0.019244	0	0.000309
Santa Clara	2026	MH	Aggregate	Aggregate	Diesel	1010.774	9718.417	9718.417	0	101.0774	3.846579	0	0	0.08072	0	0	0.004	0.015675	0.084369	0	0	0.016	0.044785	1082.849	0	0	0.005293	0	0	0.170603	0	0	0.11395	0	0	0	0	0	0	0.129725	0	0	0	0	0	0.16529	0.373655	0	0	0.010261	0	0
Santa Clara	2026	MHDT	Aggregate	Aggregate	Gasoline	1410.726	72468.64	72468.64	0	28225.8	0.333028	0.083566	0.407845	0.001339	0	0.000499	0.003	0.015756	0.001457	0	0.000542	0.012	0.045017	1727.179	521.8124	44.55752	0.010627	0.263675	0.044579	0.017598	0.007127	0.032029	0.051634	1.01721	0.242322	0.028744	0.236552	2.400687	0.075345	1.48431	0.265312	0.028744	0.236552	2.400687	0.044997	1.050142	15.1686	5.262786	0.017075	0.005159	0.00044
Santa Clara	2026	MHDT	Aggregate	Aggregate	Diesel	10675.11	435455.4	435455.4	0	127504.2	1.02886	12.38939	1.644141	0.010796	0.020382	0	0.003	0.015941	0.011284	0.021304	0	0.012	0.045545	1134.952	2210.329	0	0.001134	0.010419	0	0.178812	0.348238	0	0.024422	0.224312	0	0	0	0	0	0.027803	0.255363	0	0	0	0	0.213113	0.099563	7.520816	0	0.010747	0.02093	0
Santa Clara	2026	MHDT	Aggregate	Aggregate	Electricity	167.5841	8816.663	0	8816.663	2173.174	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022716	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	MHDT	Aggregate	Aggregate	Natural Ga	107.6314	4901.771	4901.771	0	1001.682	0.116472	6.407029	0	0.002266	0.018977	0	0.003	0.01601	0.001377	0.020639	0	0.012	0.045743	973.703	5277.958	0	0.755705	16.66564	0	0.198496	1.075946	0	0.010798	0.238119	0	0	0	0	0	0.771252	17.00851	0	0	0	0	1.06	2.995274	36.69576	0	0	0	0
Santa Clara	2026	OBUS	Aggregate	Aggregate	Gasoline	419.1997	18162.11	18162.11	0	8387.348	0.418185	0.062602	0.399155	0.00097	0	0.000258	0.003	0.01568	0.001055	0	0.000281	0.012	0.044799	1724.911	374.6239	31.08783	0.011431	0.195819	0.035179	0.020728	0.005108	0.030453	0.055331	0.746751	0.186435	0.035194	0.177337	3.200029	0.080739	1.089657	0.204123	0.035194	0.177337	3.200029	0.04499	1.215872	5.777453	3.882011	0.017053	0.003704	0.000307
Santa Clara	2026	OBUS	Aggregate	Aggregate	Diesel	949.0452	62674.48	62674.48	0	9750.025	1.092349	6.912226	1.518478	0.018173	0.007147	0	0.003	0.018049	0.018995	0.00747	0	0.012	0.05157	1245.043	1523.794	0	0.001766	0.020826	0	0.196157	0.240074	0	0.038011	0.448385	0	0	0	0	0	0.043273	0.510453	0	0	0	0	0.216379	0.139488	7.649271	0	0.01179	0.014429	0
Santa Clara	2026	OBUS	Aggregate	Aggregate	Electricity	4.484159	364.7881	0	364.7881	89.71906	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	OBUS	Aggregate	Aggregate	Natural Ga	9.101244	599.9791	599.9791	0	81.00107	0.145347	1.518344	0	0.001276	0.004354	0	0.003	0.016148	0.001388	0.004735	0	0.012	0.046137	975.0003	1187.914	0	0.81456	4.001439	0	0.19876	0.242164	0	0.011638	0.057173	0	0	0	0	0	0.831318	4.083762	0	0	0	0	1.06	3.321042	8.378673	0	0	0	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Gasoline	183.7933	9054.551	9054.551	0	735.1732	0.474165	0.887577	0.73371	0.000873	0	0.00058	0.002	0.015721	0.00095	0	0.000631	0.008	0.044917	802.4349	2565.528	57.27504	0.01005	2.4667	0.074539	0.025921	0.082658	0.067212	0.048718	10.63718	0.423572	0.1241	0.322638	1.96833	0.07109	15.52175	0.463758	0.1241	0.322638	1.96833	0.045	1.246814	82.21455	10.07789	0.007933	0.025363	0.000566
Santa Clara	2026	SBUS	Aggregate	Aggregate	Diesel	674.9981	15210.89	15210.89	0	9773.973	3.406071	20.83077	0.509343	0.017715	0.016839	0	0.003	0.015721	0.018516	0.017601	0	0.012	0.044917	1135.538	2209.663	0	0.002498	0.007888	0	0.178905	0.348133	0	0.053781	0.169828	0	0	0	0	0	0.061225	0.193336	0	0	0	0	0.155771	0.169257	4.880858	0	0.010753	0.020924	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Electricity	7.587222	244.2395	0	244.2395	87.39442	0	0	0	0	0	0	0.002	0.00786	0	0	0	0.01027	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Natural Ga	26.16468	642.5523	642.5523	0	378.8645	0.532059	5.249897	0	0.003378	0.011858	0	0.003	0.015721	0.003674	0.012897	0	0.012	0.044917	1243.421	4080.833	0	3.338467	14.99739	0	0.25348	0.831904	0	0.0477	0.214283	0	0	0	0	0	3.407151	15.30593	0	0	0	0	1.06	11.18687	21.87624	0	0	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Gasoline	46.35522	4840.865	4840.865	0	185.4209	0.026897	0	0.439741	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	925.6516	0	36.30949	0.001945	0	0.042807	0.004209	0	0.069602	0.005374	0	0.151507	0.043604	0.092107	0.471119	0.007841	0	0.165881	0.043604	0.092107	0.471119	0.045	0.590355	0	5.738214	0.009151	0	0.000359
Santa Clara	2026	UBUS	Aggregate	Aggregate	Diesel	396.77	44084.04	44084.04	0	1587.08	0.382074	0	0	0.006946	0	0	0.008221	0.0385	0.00726	0	0	0.032883	0.11	1110.339	0	0	0.004187	0	0	0.174934	0	0	0.068625	0	0	0	0	0	0	0.078125	0	0	0	0	0	0.22	0.078518	0	0	0.010521	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Electricity	28.65959	2995.558	0	2995.558	114.6384	0	0	0	0	0	0	0.008972	0.01925	0	0	0	0.035887	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Natural Ga	62.84535	7257.192	7257.192	0	251.3814	0.060787	0	0	0.000288	0	0	0.008445	0.0385	0.000301	0	0	0.033781	0.11	1320.935	0	0	4.332576	0	0	0.269281	0	0	0.061904	0	0	0	0	0	0	4.421712	0	0	0	0	0	0.97	50.5588	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PMP	PM2.5_PMT	PM10_PMP	PM10_PMT	PM10_RUN	PM10_IDL	PM10_STR	PM10_TOT	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
Santa Clara	2030	HHDT	Aggregate	Aggregate	Gasoline	1.487616	172.8499	172.8499	0	29.76421	2.911619	0	0.534862	0.001674	0	0.000674	0.005	0.032468	0.00182	0	0.000733	0.02	0.092765	1924.768	0	48.04273	0.102337	0	0.000224	0.119593	0	0.0192	0.501241	0	0.001214	0.064624	0.580293	4.097317	0.731409	0	0.00133	0.064624	0.580293	4.097317	0.0445	26.13927	0	4.442251	0.019028	0	0.000475
Santa Clara	2030	HHDT	Aggregate	Aggregate	Diesel	9231.234	1024357	1024357	0	136537.8	1.56454	61.29817	2.88955	0.024765	0.0244	0	0.008788	0.028144	0.025885	0.025504	0	0.035154	0.080413	1474.596	10772.22	0	0.000646	0.235119	0	0.232323	1.697167	0	0.013904	5.062058	0	0	0	0	0.015828	5.762768	0	0	0	0	0.217216	0.061916	74.26736	0	0.013964	0.102006	0
Santa Clara	2030	HHDT	Aggregate	Aggregate	Electricity	530.2501	54761.35	0	54761.35	6663.697	0	0	0	0	0	0	0.008533	0.015514	0	0	0	0.03413	0.044327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	HHDT	Aggregate	Aggregate	Natural Ga	938.2726	57937.93	57937.93	0	8287.795	0.731127	11.54643	0	0.001557	0.027291	0	0.009	0.05172	0.001694	0.029682	0	0.036	0.147772	1322.875	10241.21	0	1.710465	30.09558	0	0.269677	2.087739	0	0.033169	0.444488	0	0	0	0	1.755601	30.73125	0	0	0	0	0.811239	11.16082	76.40969	0	0	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Gasoline	602124.6	21985013	21985013	0	2796634	0.027128	0	0.204379	0.000885	0	0.001532	0.002	0.002653	0.000962	0	0.001666	0.008	0.00758	252.5101	0	62.99349	0.00146	0	0.051774	0.003674	0	0.028877	0.005055	0	0.223494	0.069299	0.197319	1.209286	0.007376	0	0.244698	0.069299	0.197319	1.209286	0.039301	0.56355	0	2.385556	0.002496	0	0.000623
Santa Clara	2030	LDA	Aggregate	Aggregate	Diesel	966.5715	27899.12	27899.12	0	4169.431	0.084622	0	0	0.00656	0	0	0.002	0.002722	0.006857	0	0	0.008	0.007776	216.2434	0	0	0.000652	0	0	0.034069	0	0	0.014035	0	0	0	0	0	0.015978	0	0	0	0	0	0.0031	0.244061	0	0	0.002049	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Electricity	74807.28	2981995	0	2981995	356618	0	0	0	0	0	0	0.002	0.001537	0	0	0	0.008	0.004391	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Plug-in Hyb	2466.152	986083.3	441285.3	544798	101975.4	0.002937	0	0.11551	0.000402	0	0.001538	0.002	0.001398	0.000437	0	0.001673	0.008	0.003994	124.7883	0	62.09864	0.00039	0	0.041401	0.000504	0	0.019792	0.00127	0	0.173285	0.041078	0.050398	0.518869	0.001853	0	0.189725	0.041078	0.050398	0.518869	0.018326	0.192609	0	1.339893	0.001234	0	0.000614
Santa Clara	2030	LDT1	Aggregate	Aggregate	Gasoline	47587.45	1511766	1511766	0	212019.3	0.06744	0	0.276451	0.001181	0	0.001933	0.002	0.003236	0.001284	0	0.002102	0.008	0.009245	301.4361	0	77.09479	0.003341	0	0.071607	0.005993	0	0.032827	0.01396	0	0.342108	0.122517	0.361736	2.125938	0.020371	0	0.374565	0.122517	0.361736	2.125938	0.038435	0.913385	0	3.462484	0.00208	0	0.000762
Santa Clara	2030	LDT1	Aggregate	Aggregate	Diesel	0.768467	17.0557	17.0557	0	2.625517	0.541325	0	0	0.080932	0	0	0.002	0.003285	0.084591	0	0	0.008	0.009386	366.951	0	0	0.006227	0	0	0.057813	0	0	0.134063	0	0	0	0	0	0.152622	0	0	0	0	0	0.0031	0.953187	0	0	0.003477	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Electricity	459.5988	19527.57	0	19527.57	2229.168	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004379	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Plug-in Hyb	311.9596	13308.96	5503.171	7805.787	1289.953	0.002713	0	0.11551	0.000237	0	0.000982	0.002	0.001404	0.000258	0	0.001068	0.008	0.004012	115.302	0	67.68965	0.00036	0	0.041331	0.000464	0	0.019726	0.001173	0	0.173285	0.023088	0.020052	0.277122	0.001712	0	0.189725	0.023088	0.020052	0.277122	0.017367	0.177967	0	1.339893	0.00114	0	0.000669
Santa Clara	2030	LDT2	Aggregate	Aggregate	Gasoline	315384	11011602	11011602	0	1467133	0.042522	0	0.254325	0.000923	0	0.001563	0.002	0.003147	0.001004	0	0.001699	0.008	0.008992	313.0844	0	78.91261	0.001939	0	0.061959	0.004491	0	0.03252	0.007052	0	0.272663	0.065379	0.191547	1.192189	0.010291	0	0.298532	0.065379	0.191547	1.192189	0.039832	0.659365	0	2.809133	0.003095	0	0.00078
Santa Clara	2030	LDT2	Aggregate	Aggregate	Diesel	1158.99	40906.35	40906.35	0	5439.347	0.030058	0	0	0.003988	0	0	0.002	0.003143	0.004169	0	0	0.008	0.008981	285.9943	0	0	0.000559	0	0	0.045059	0	0	0.012039	0	0	0	0	0	0.013706	0	0	0	0	0	0.0031	0.125642	0	0	0.00271	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Electricity	5453.194	171699	0	171699	27128.05	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Plug-in Hyb	4846.712	193738.5	82854.31	110884.1	20041.15	0.002806	0	0.11551	0.000301	0	0.001204	0.002	0.001402	0.000327	0	0.00131	0.008	0.004007	119.2524	0	74.25998	0.000371	0	0.041171	0.000476	0	0.019577	0.001214	0	0.173285	0.026751	0.026025	0.323076	0.001771	0	0.189725	0.026751	0.026025	0.323076	0.017953	0.184065	0	1.339893	0.001179	0	0.000734
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Gasoline	19753.02	727605.5	727605.5	0	294290.5	0.082552	0.030634	0.51718	0.001329	0	0.000195	0.002	0.0273	0.001446	0	0.000212	0.008	0.078	802.0575	113.4696	25.10498	0.003719	0.099174	0.025985	0.00491	0.002766	0.044981	0.016744	0.351327	0.123637	0.032922	0.194989	2.054962	0.024432	0.512656	0.135367	0.032922	0.194989	2.054962	0.045	0.768194	3.76818	3.242124	0.007929	0.001122	0.000248
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Diesel	11269.28	427352.8	427352.8	0	141753.3	0.789576	1.444738	0	0.023821	0.026284	0	0.003	0.0273	0.024898	0.027472	0	0.012	0.078	617.2105	123.3953	0	0.005662	0.005098	0	0.097242	0.019441	0	0.121909	0.10976	0	0	0	0	0.138785	0.124954	0	0	0	0	0.199336	0.314077	0.909745	0	0.005848	0.001169	0
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Electricity	2074.538	117461.4	0	117461.4	29061.96	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Gasoline	2461.018	87198.4	87198.4	0	36665.5	0.076883	0.029634	0.510604	0.001202	0	0.000149	0.002	0.03185	0.001308	0	0.000162	0.008	0.091	909.7177	131.684	24.47216	0.00272	0.095769	0.024975	0.005151	0.002617	0.043301	0.011255	0.340122	0.118021	0.031894	0.187158	2.069204	0.016423	0.496305	0.129219	0.031894	0.187158	2.069204	0.045	0.659048	3.775132	3.178541	0.008993	0.001302	0.000242
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Diesel	5433.248	199824.8	199824.8	0	68343.42	0.748874	1.460368	0	0.024929	0.026926	0	0.003	0.03185	0.026056	0.028143	0	0.012	0.091	728.4033	198.6254	0	0.005847	0.005098	0	0.11476	0.031294	0	0.125888	0.10976	0	0	0	0	0.143315	0.124954	0	0	0	0	0.202684	0.318068	0.909745	0	0.006902	0.001882	0
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Electricity	523.4249	28364.01	0	28364.01	6941.368	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MCY	Aggregate	Aggregate	Gasoline	29945.67	170059	170059	0	59891.34	0.509869	0	0.103081	0.001864	0	0.003197	0.001	0.0042	0.001997	0	0.003416	0.004	0.012	185.5769	0	42.83228	0.142987	0	0.157242	0.036967	0	0.006341	0.890508	0	1.134366	3.555147	3.783469	3.680755	1.091848	0	1.234067	3.555147	3.783469	3.680755	0.009004	11.04655	0	7.830862	0.001835	0	0.000423
Santa Clara	2030	MDV	Aggregate	Aggregate	Gasoline	174344	5962227	5962227	0	807535.9	0.050767	0	0.286849	0.000902	0	0.001551	0.002	0.003188	0.000981	0	0.001687	0.008	0.00911	378.9313	0	95.79397	0.002213	0	0.068559	0.004925	0	0.033878	0.008456	0	0.317272	0.072796	0.219895	1.355815	0.012339	0	0.347373	0.072796	0.219895	1.355815	0.03954	0.69525	0	2.93398	0.003746	0	0.000947
Santa Clara	2030	MDV	Aggregate	Aggregate	Diesel	2406.787	79682.09	79682.09	0	11072.82	0.026422	0	0	0.003049	0	0	0.002	0.00327	0.003187	0	0	0.008	0.009343	380.8057	0	0	0.000373	0	0	0.059996	0	0	0.008029	0	0	0	0	0	0.00914	0	0	0	0	0	0.0031	0.181562	0	0	0.003608	0	0
Santa Clara	2030	MDV	Aggregate	Aggregate	Electricity	5418.753	169876.9	0	169876.9	26922.58	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MDV	Aggregate	Aggregate	Plug-in Hyb	2963.422	115546.2	49482.19	66063.98	12253.75	0.00281	0	0.11551	0.000321	0	0.001277	0.002	0.001403	0.000349	0	0.001389	0.008	0.004008	119.4157	0	90.62083	0.00037	0	0.041054	0.000474	0	0.019467	0.001215	0	0.173285	0.028447	0.028695	0.345627	0.001773	0	0.189725	0.028447	0.028695	0.345627	0.017986	0.184317	0	1.339893	0.001181	0	0.000896
Santa Clara	2030	MH	Aggregate	Aggregate	Gasoline	2034.688	19970.26	19970.26	0	203.5502	0.205296	0	0.454071	0.001366	0	0.000326	0.003	0.015756	0.001486	0	0.000355	0.012	0.045017	1945.26	0	30.65867	0.006703	0	0.034694	0.016757	0	0.050507	0.023566	0	0.135475	7.46433	0.181652	3.092727	0.034387	0	0.148329	7.46433	0.181652	3.092727	0.045	0.391655	0	2.922173	0.019231	0	0.000303
Santa Clara	2030	MH	Aggregate	Aggregate	Diesel	1064.938	10092.31	10092.31	0	106.4938	3.402012	0	0	0.062183	0	0	0.004	0.015675	0.064995	0	0	0.016	0.044785	1084.369	0	0	0.00483	0	0	0.170843	0	0	0.103997	0	0	0	0	0	0.118394	0	0	0	0	0	0.181066	0.332398	0	0	0.010275	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Gasoline	1369.784	69786.55	69786.55	0	27406.63	0.182504	0.074436	0.34723	0.001338	0	0.000467	0.003	0.015756	0.001455	0	0.000508	0.012	0.045017	1664.876	504.5675	41.89188	0.006139	0.269683	0.040602	0.011558	0.006658	0.029379	0.027836	1.022884	0.21089	0.021107	0.176695	1.842352	0.040618	1.49259	0.230898	0.021107	0.176695	1.842352	0.045	0.52486	15.23455	4.434866	0.016459	0.004988	0.000414
Santa Clara	2030	MHDT	Aggregate	Aggregate	Diesel	10679.13	4158333.4	415833.4	0	127641.8	0.730884	11.4465	1.543564	0.006512	0.00966	0	0.003	0.015941	0.006806	0.010097	0	0.012	0.045547	1109.144	2139.822	0	0.000682	0.00913	0	0.174746	0.33713	0	0.014684	0.196569	0	0	0	0	0.016716	0.223779	0	0	0	0	0.21635	0.072794	7.506963	0	0.010503	0.020263	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Electricity	991.1386	51102.91	0	51102.91	12793.33	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022716	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Natural Ga	136.8437	5799.937	5799.937	0	1320.474	0.096762	6.249105	0	0.001362	0.019752	0	0.003	0.016004	0.001481	0.021482	0	0.012	0.045726	958.0225	5202.364	0	0.762569	15.80303	0	0.195299	1.060536	0	0.010896	0.225794	0	0	0	0	0.778258	16.12815	0	0	0	0	1.06	2.989146	38.55016	0	0	0	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Gasoline	373.8509	15017.96	15017.96	0	7480.008	0.303475	0.05759	0.379431	0.001075	0	0.000273	0.003	0.01568	0.001169	0	0.000296	0.012	0.044799	1659.483	366.2829	30.178	0.008294	0.194656	0.033726	0.01556	0.004647	0.028492	0.039512	0.74712	0.179242	0.035188	0.193999	3.485652	0.057656	1.090195	0.196247	0.035188	0.193999	3.485652	0.045	0.869951	5.779659	3.676722	0.016406	0.003621	0.000298
Santa Clara	2030	OBUS	Aggregate	Aggregate	Diesel	1041.415	64198.49	64198.49	0	10721.4	0.980356	5.976871	1.366725	0.015111	0.005302	0	0.003	0.018208	0.015794	0.005542	0	0.012	0.052023	1187.709	1474.191	0	0.001456	0.020843	0	0.187124	0.232259	0	0.031354	0.448735	0	0	0	0	0.035694	0.51085	0	0	0	0	0.217102	0.12266	7.728975	0	0.011247	0.01396	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Electricity	23.4704	1822.619	0	1822.619	468.5957	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Natural Ga	12.4197	789.0472	789.0472	0	110.5354	0.10256	1.499304	0	0.00148	0.004808	0	0.003	0.016148	0.001609	0.005229	0	0.012	0.046137	931.8762	1168.573	0	0.837982	3.766358	0	0.189969	0.238221	0	0.011973	0.053814	0	0	0	0	0.855222	3.843845	0	0	0	0	1.06	3.384146	9.402647	0	0	0	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Gasoline	198.1997	9649.073	9649.073	0	792.7989	0.406238	0.82859	0.759705	0.000888	0	0.000598	0.002	0.015721	0.000966	0	0.00065	0.008	0.044917	789.8243	2529.341	55.78331	0.007921	2.470848	0.074041	0.023184	0.077325	0.068817	0.038133	10.64152	0.418393	0.132523	0.393216	2.367471	0.055643	15.52808	0.458087	0.132523	0.393216	2.367471	0.045	0.979717	82.24088	9.529837	0.007808	0.025005	0.000551
Santa Clara	2030	SBUS	Aggregate	Aggregate	Diesel	659.3029	14502.39	14502.39	0	9546.705	2.539504	18.10728	0.550768	0.01404	0.011608	0	0.003	0.015721	0.014674	0.012133	0	0.012	0.044917	1118.5	2161.652	0	0.002094	0.007833	0	0.17622	0.340569	0	0.04508	0.168645	0	0	0	0	0.051321	0.19199	0	0	0	0	0.171795	0.148382	5.367405	0	0.010592	0.02047	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Electricity	42.27556	1362.719	0	1362.719	492.3385	0	0	0	0	0	0	0.002	0.00592	0.00786	0	0	0	0.010366	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Natural Ga	29.19835	683.5221	683.5221	0	422.7921	0.477489	5.21952	0	0.003378	0.012583	0	0.003	0.015721	0.003674	0.013685	0	0.012	0.044917	1216.036	4101.156	0	3.18823	14.62233	0	0.247897	0.836047	0	0.045554	0.208924	0	0	0	0	3.253822	14.92316	0	0	0	0	1.06	10.47986	23.50992	0	0	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Gasoline	46.8994	4897.693	4897.693	0	187.5976	0.01748	0	0.295043	0.001197	0	0.000134	0.002	0.03185	0.001302	0	0.000145	0.008	0.091	850.5412	0	34.89923	0.001406	0	0.028862	0.003131	0	0.052846	0.003661	0	0.096632	0.024197	0.090857	0.324693	0.005342	0	0.1058	0.024197	0.090857	0.324693	0.045	0.587543	0	6.131541	0.008408	0	0.000345
Santa Clara	2030	UBUS	Aggregate	Aggregate	Diesel	338.5092	37119.08	37119.08	0	1354.037	0.396482	0	0	0.007209	0	0	0.002	0.008494	0.0385	0.007535	0	0	0.033977	0.11	1140.779	0	0	0.003281	0	0	0.17973	0	0	0.070632	0	0	0	0	0.080409	0	0	0	0	0	0.22	0.081446	0	0	0.010809	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Electricity	78.67225	8935.028	0	8935.028	314.689	0	0	0	0	0	0	0.002	0.007594	0.01925	0	0	0	0.030375	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Natural Ga	76.82557	8920.557	8920.557	0	307.3023	0.058538	0	0	0.000282	0	0	0.00815	0.0385	0.000294	0	0	0	0.032599	0.11	1296.487	0	0	4.23523	0	0	0.264297	0	0	0.060513	0	0	0	0	4.322362	0	0	0	0	0	0.97	48.85872	0	0	0	0	0

Attachment 4: Project Construction and Operation Dispersion Modeling Inputs and Risk Calculations

Construction Health Risk Assessment and Calculations

Blossom Hill TOD, San Jose, California
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0327	0.0735	*	*	0.01	0.11
2023	0.0593	0.0073	10.59	0.17	0.01	0.07
2024	0.0525	0.0073	8.62	0.15	0.01	0.06
2025	0.0132	0.0030	0.34	0.04	0.003	0.02
Total	-	-	**19.55**	**0.36**	-	-
Maximum	0.0593	0.0735	**-**	**-**	**0.01**	**0.11**

* Maximum cancer risk occurs when exposure begins in 2023.

Maximum Impacts at Construction MEI Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0064	0.0194	*	*	0.001	0.03
2023	0.0149	0.0073	2.66	0.04	0.003	0.02
2024	0.0149	0.0073	2.45	0.04	0.003	0.02
2025	0.0046	0.0030	0.12	0.01	0.001	0.01
Total	-	-	**5.23**	**0.10**	-	-
Maximum	0.0149	0.0194	**-**	**-**	**0.003**	**0.03**

* Maximum cancer risk occurs when exposure begins in 2023.
- Tier 3 DPF3 Engine and BMPs Mitigation

Maximum Impacts at First Step Learning Center - Without Mitigation

Construction Year	Unmitigated Emissions: Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Unmitigated Emissions: Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Child Cancer Risk (per million)	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0055	0.0117	*	0.001	0.02
2023	0.0099	0.0012	3.74	0.002	0.01
2023	0.0088	0.0012	3.31	0.002	0.01
2024	0.0022	0.0005	0.11	0.000	0.002
Total	-	-	**7.15**	-	-
Maximum	0.0099	0.0117	**-**	**0.002**	**0.02**

* Maximum cancer risk occurs when exposure begins in 2023.

Blossom Hill TOD, San Jose, California

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.033	DPM	65.0	0.01737	2.19E-03	30,548	**7.16E-08**
2023	Construction	0.059	DPM	117.6	0.03141	3.96E-03	30,548	**1.30E-07**
2024	Construction	0.052	DPM	104.5	0.02791	3.52E-03	30,548	**1.15E-07**
2025	Construction	0.013	DPM	26.3	0.00703	8.86E-04	30,548	**2.90E-08**
Total		***0.157***		***313***	***0.084***	***0.011***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	312	
hours/year =	3744	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.006	DPM	12.8	0.00342	4.31E-04	30,548	**1.41E-08**
2023	Construction	0.015	DPM	29.7	0.00794	1.00E-03	30,548	**3.27E-08**
2024	Construction	0.015	DPM	29.7	0.00793	1.00E-03	30,548	**3.27E-08**
2025	Construction	0.005	DPM	9.2	0.00245	3.08E-04	30,548	**1.01E-08**
Total		***0.041***		***81***	***0.022***	***0.003***		

Construction Hours

hr/day =	12	7am - 7pm)
days/yr =	312	
hours/year =	3744	

Blossom Hill TOD, San Jose, California

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	FUG	0.063	125.3	0.03346	4.22E-03	30,548	**1.38E-07**
2023	Construction	FUG	0.006	12.4	0.00332	4.18E-04	30,548	**1.37E-08**
2024	Construction	FUG	0.006	12.5	0.00333	4.20E-04	30,548	**1.37E-08**
2025	Construction	FUG	0.003	5.1	0.00136	1.72E-04	30,548	**5.63E-09**
Total			***0.078***	***155***	***0.041***	***0.005***		

Construction Hours

hr/day =	12	(7am - 7pm)
days/yr =	312	
hours/year =	3744	

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	FUG	0.017	33.1	0.00883	1.11E-03	30,548	**3.64E-08**
2023	Construction	FUG	0.006	12.4	0.00332	4.18E-04	30,548	**1.37E-08**
2024	Construction	FUG	0.006	12.5	0.00333	4.20E-04	30,548	**1.37E-08**
2025	Construction	FUG	0.003	5.1	0.00136	1.72E-04	30,548	**5.63E-09**
Total			***0.032***	***63***	***0.017***	***0.002***		

Construction Hours

hr/day =	12	7am - 7pm)
days/yr =	312	
hours/year =	3744	

	DPM					
Year	Unmitigated DPM	DPM EMFAC2021	Unmitigated Emissions	Mitigated DPM	DPM EMFAC2021	Mitigated Emissions
2022	0.03	0.003	0.0325	0.00388	0.003	0.0064
2023	0.0539	0.005	0.0588	0.00996	0.005	0.0149
2024	0.0474	0.005	0.0523	0.01	0.005	0.0149
2025	0.0112	0.002	0.0132	0.00261	0.002	0.0046
	Fugitive PM2.5					
	Unmitgated Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions	Mitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Mitigated Emissions
2022	0.0595	0.003	0.0626	0.0134	0.003	0.0165
2023	0	0.006	0.0062	0	0.006	0.0062
2024	0	0.006	0.0062	0	0.006	0.0062
2025	0	0.003	0.0026	0	0.003	0.0026

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors - 5 feet

Cancer Risk (per million) CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
						Infant/Child		Modeled		Adult			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0	-	2022	0.0327	-	-	2022	0.0327	-	-	0.01	0.07	0.11
0	0.25	-0.25 - 0*	2023	0.0593	10	0.84	2023	0.0593	-	-			
1	1	0 - 1	2023	0.0593	10	9.74	2023	0.0593	1	0.17	0.01	0.01	0.07
2	1	1 - 2	2024	0.0525	10	8.62	2024	0.0525	1	0.15	0.01	0.01	0.06
3	1	2 - 3	2025	0.0132	3	0.34	2025	0.0132	1	0.04	0.003	0.003	0.02
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**19.55**				**0.36**			

* Third trimester of pregnancy

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From Construction - Mitigated Emissions
Impacts at Off-Site Receptors - 5 feet

Cancer Risk (per million) CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
						Infant/Child	Modeled			Adult			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0	-	2022	0.0064	-	-	2022	0.0064	-	-	0.001	0.02	0.03
0	0.25	-0.25 - 0*	2023	0.0149	10	0.21	2023	0.0149	-	-			
1	1	0 - 1	2023	0.0149	10	2.45	2023	0.0149	1	0.04	0.003	0.01	0.02
2	1	1 - 2	2024	0.0149	10	2.45	2024	0.0149	1	0.04	0.003	0.01	0.02
3	1	2 - 3	2025	0.0046	3	0.12	2025	0.0046	1	0.01	0.001	0.003	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**5.23**				**0.10**			

* Third trimester of pregnancy

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
First Step Learning Center - Infant/Child Exposure, 3 Feet Breathing Height

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/12 hrs) x (7 days/6 days) x (10/8) = 2.92
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	Child	Adult
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	230
A =	1	1	1
EF** =	250	250	250
AT =	70	70	70
SAF =	2.92	2.92	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Infant/Child Cancer Risk (per million)
0	0	-	2022	0.0055	-	-
1	1	1	2023	0.0099	10	3.74
2	1	2	2024	0.0088	10	3.31
3	1	3	2025	0.0022	3	0.11
					TOTAL	**7.15**

* Children assumed to be 3 months to 4.5 years old with 3 years of Construction Exposure

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.002	**0.01**	**0.02**
0.001	0.01	0.02
0.002	0.001	0.01
0.002	0.001	0.01
0.0004	0.0005	0.002

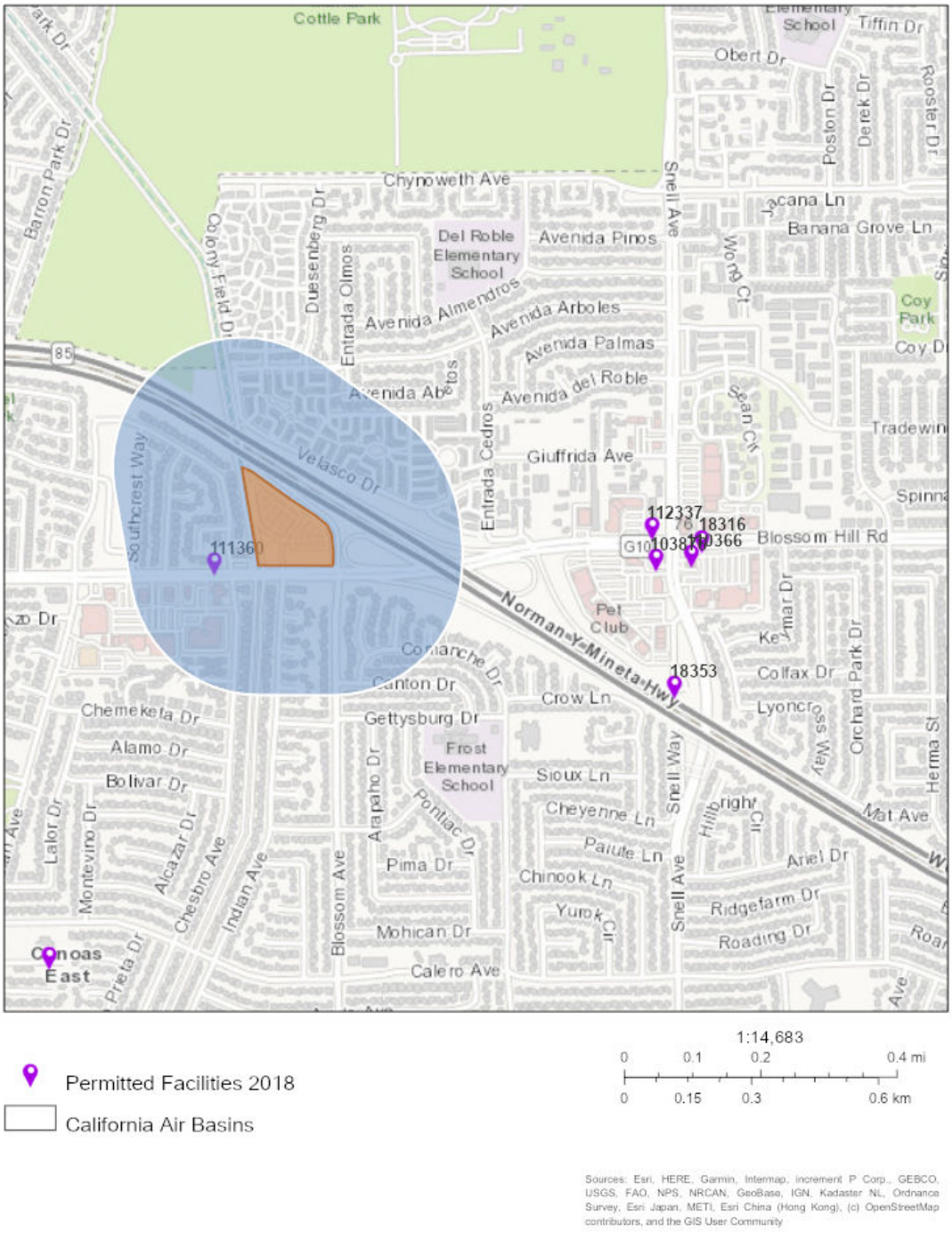
Attachment 5: Cumulative Community Risk from TAC Sources

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 5,935,676.74 ft²https://utility.arcgisonline.com/arcgis/rest/directories/arcgisoutput/Utilities/PrintingTools_GPSe

May 6 2020 15:47:11 Pacific Daylight Time



19-056 Blossom Hill Station Mixed Use

Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	1	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	111360	Gas N' Go	621 Blossom Hill Rd	San Jose	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95123	Santa Clara	11.700	0.050	0.000	Gas Dispensing Facility	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

FID	OBJECTID	FACID	Name	Address	City	St	Zip	County	Cancer	Hazard	PM_25	Type	Latitude	Longitude	x	y
8044	8,044	111360	Gas N' Go	621 Blossom Hill Rd	San Jose	CA	95123	Santa Clara	11.7	0.05	0	Gas Dispensing Facility	37.251	-121.843	-13563502.16	4474130.357

Screening Risk Adjusted for Distance					
Source Information			***Screening Risks***		
FACID	**Name**	**Type**	**Cancer Risk**	**Hazard Index**	**PM2.5**
111360	Gas N' Go	Gas Dispensing Facility	11.70	0.05	0.00
Offsite Existing MEI	***Distance***		***Adjusted***		
	Distance from MEI (feet)	**Distance Adjustment**	**Cancer Risk**	**Hazard Index**	**PM2.5**
	>1,000	0.015	0.18	0.001	0.00
Onsite Project Sensitive Receptors	***Distance***		***Adjusted***		
	Distance from MEI (feet)	**Distance Adjustment**	**Cancer Risk**	**Hazard Index**	**PM2.5**
	380	0.071	0.83	0.004	0.00

Gasoline Dispensing Facility (GDF) Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool for GDF's, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Gas Station

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard
0	0.0	1.000		0.0000
5	16.4	1.000		0.0000
10	32.8	1.000		0.0000
15	49.2	1.000		0.0000
20	65.6	1.000		0.0000
25	82.0	0.728		0.0000
30	98.4	0.559		0.0000
35	114.8	0.445		0.0000
40	131.2	0.365		0.0000
45	147.6	0.305		0.0000
50	164.0	0.260		0.0000
55	180.4	0.225		0.0000
60	196.9	0.197		0.0000
65	213.3	0.174		0.0000
70	229.7	0.155		0.0000
75	246.1	0.139		0.0000
80	262.5	0.126		0.0000
85	278.9	0.114		0.0000
90	295.3	0.104		0.0000
95	311.7	0.096		0.0000
100	328.1	0.088		0.0000
105	344.5	0.082		0.0000
110	360.9	0.076		0.0000
115	377.3	0.071		0.0000
120	393.7	0.066		0.0000
125	410.1	0.062		0.0000
130	426.5	0.058		0.0000
135	442.9	0.055		0.0000
140	459.3	0.052		0.0000
145	475.7	0.049		0.0000
150	492.1	0.046		0.0000
155	508.5	0.044		0.0000
160	524.9	0.042		0.0000
165	541.3	0.040		0.0000
170	557.7	0.038		0.0000
175	574.1	0.036		0.0000
180	590.6	0.034		0.0000
185	607.0	0.033		0.0000
190	623.4	0.031		0.0000
195	639.8	0.030		0.0000
200	656.2	0.029		0.0000
205	672.6	0.028		0.0000
210	689.0	0.027		0.0000
215	705.4	0.026		0.0000
220	721.8	0.025		0.0000
225	738.2	0.024		0.0000
230	754.6	0.023		0.0000
235	771.0	0.022		0.0000
240	787.4	0.022		0.0000
245	803.8	0.021		0.0000
250	820.2	0.020		0.0000
255	836.6	0.020		0.0000
260	853.0	0.019		0.0000
265	869.4	0.018		0.0000
270	885.8	0.018		0.0000
275	902.2	0.017		0.0000
280	918.6	0.017		0.0000
285	935.0	0.016		0.0000
290	951.4	0.016		0.0000
295	967.8	0.015		0.0000
300	984.3	0.015		0.0000

Diesel Internal Combustion (IC) Engine Distance Multiplier Tool: This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Diesel Backup Generator

Distance (meters)	Distance (feet)	Distance adjustment multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	1.000		0		0
15	49.2	1.000		0		0
20	65.6	1.000		0		0
25	82.0	0.85		0		0
30	98.4	0.73		0		0
35	114.8	0.64		0		0
40	131.2	0.58		0		0
50	164.0	0.5		0		0
60	196.9	0.41		0		0
70	229.7	0.31		0		0
80	262.5	0.28		0		0
90	295.3	0.25		0		0
100	328.1	0.22		0		0
110	360.9	0.18		0		0
120	393.7	0.16		0		0
130	426.5	0.15		0		0
140	459.3	0.14		0		0
150	492.1	0.12		0		0
160	524.9	0.1		0		0
180	590.6	0.09		0		0
200	656.2	0.08		0		0
220	721.8	0.07		0		0
240	787.4	0.06		0		0
260	853.0	0.05		0		0
280	918.6	0.04		0		0

Generic Distance Multiplier Tool: This distance multiplier tool refines the screening values to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

Generic Case

Distance (meters)	Distance (feet)	Multiplier	Enter Risk or Hazard	Adjusted Risk or Hazard	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
0	0.0	1.000		0		0
5	16.4	1.000		0		0
10	32.8	0.883		0		0
15	49.2	0.855		0		0
20	65.6	0.827		0		0
25	82.0	0.801		0		0
30	98.4	0.775		0		0
35	114.8	0.750		0		0
40	131.2	0.726		0		0
45	147.6	0.702		0		0
50	164.0	0.679		0		0
55	180.4	0.658		0		0
60	196.9	0.636		0		0
65	213.3	0.616		0		0
70	229.7	0.596		0		0
75	246.1	0.577		0		0
80	262.5	0.558		0		0
85	278.9	0.540		0		0
90	295.3	0.523		0		0
95	311.7	0.506		0		0
100	328.1	0.489		0		0
105	344.5	0.474		0		0
110	360.9	0.458		0		0
115	377.3	0.444		0		0
120	393.7	0.429		0		0
125	410.1	0.415		0		0
130	426.5	0.402		0		0
135	442.9	0.389		0		0
140	459.3	0.376		0		0
145	475.7	0.364		0		0
150	492.1	0.353		0		0
155	508.5	0.341		0		0
160	524.9	0.330		0		0
165	541.3	0.319		0		0
170	557.7	0.309		0		0
175	574.1	0.299		0		0
180	590.6	0.290		0		0
185	607.0	0.280		0		0
190	623.4	0.271		0		0
195	639.8	0.262		0		0
200	656.2	0.254		0		0
205	672.6	0.246		0		0
210	689.0	0.238		0		0
215	705.4	0.230		0		0
220	721.8	0.223		0		0
225	738.2	0.216		0		0
230	754.6	0.209		0		0
235	771.0	0.202		0		0
240	787.4	0.195		0		0
245	803.8	0.189		0		0
250	820.2	0.183		0		0
255	836.6	0.177		0		0
260	853.0	0.171		0		0
265	869.4	0.166		0		0
270	885.8	0.160		0		0
275	902.2	0.155		0		0
280	918.6	0.150		0		0
285	935.0	0.145		0		0
290	951.4	0.141		0		0
295	967.8	0.136		0		0
300	984.3	0.132		0		0

File Name: Santa Clara (SF) - 2026 - Annual.EF
CT-EMFAC2017 Version 1.0.2.27401
Run Date: 11/5/2020 15:39
Area: Santa Clara (SF)
Analysis Year: 2026
Season: Annual

==========

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.026	0.508	0.492
Truck 2	0.036	0.935	0.049
Non-Truck	0.938	0.015	0.949

==========

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 64 days N = 365 days

==========

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
PM2.5	0.008319	0.005459	0.003737	0.002697	0.00207	0.001697	0.00149	0.001401	0.001402	0.001481	0.001632	0.001857	0.002166	0.002259	0.002259
TOG	0.169566	0.11192	0.074569	0.052316	0.039565	0.031606	0.026484	0.023265	0.021429	0.020706	0.021001	0.02241	0.025139	0.027144	0.027299
Diesel PM	0.001108	0.00092	0.000722	0.000585	0.00051	0.000483	0.000494	0.00054	0.000618	0.000728	0.000869	0.001038	0.001231	0.001231	0.001231

Fleet Average Fuel Consumption (gallons/veh-mile)

Fuel Type	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
Gasoline	0.068437	0.055347	0.045288	0.037674	0.032206	0.028586	0.026476	0.025616	0.02572	0.026457	0.027565	0.028585	0.029441	0.029441	0.029441
Diesel	0.012226	0.010184	0.007889	0.006772	0.005924	0.005232	0.00475	0.004397	0.004188	0.004161	0.004283	0.004523	0.004907	0.004907	0.004907

==========

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.219975

==========

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.00219

==========

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.017337

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016794

==========END==========

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_BHR1	Blossom Hill Road Eastbound	EB	3	790.3	0.49	17.0	55.7	3.4	35	17,570	13,414	144,383	4.020E-09	2.964E-09	6.8	3.16
DPM_BHR2	Blossom Hill Road Westbound	WB	3	792.8	0.49	17.0	55.7	3.4	35	17,570	13,456	144,840	4.020E-09	2.964E-09	6.8	3.16
									Total	35,140						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00054			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and DPM Emissions - DPM_BHR1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.98%	699	5.15E-05	9	6.44%	1131	8.33E-05	17	5.53%	971	7.16E-05
2	2.67%	469	3.46E-05	10	7.40%	1299	9.57E-05	18	3.14%	552	4.07E-05
3	2.84%	499	3.68E-05	11	6.32%	1110	8.17E-05	19	2.35%	412	3.04E-05
4	3.30%	579	4.27E-05	12	6.88%	1209	8.91E-05	20	0.86%	151	1.11E-05
5	2.16%	379	2.79E-05	13	6.27%	1101	8.11E-05	21	3.08%	541	3.98E-05
6	3.30%	579	4.27E-05	14	6.21%	1091	8.04E-05	22	4.21%	740	5.45E-05
7	6.03%	1060	7.81E-05	15	5.13%	902	6.64E-05	23	2.62%	461	3.39E-05
8	4.56%	802	5.91E-05	16	3.88%	682	5.02E-05	24	0.85%	150	1.10E-05
								Total		17,570	

2026 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_BHR2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.98%	699	5.16E-05	9	6.44%	1131	8.36E-05	17	5.53%	971	7.18E-05
2	2.67%	469	3.47E-05	10	7.40%	1299	9.60E-05	18	3.14%	552	4.08E-05
3	2.84%	499	3.69E-05	11	6.32%	1110	8.20E-05	19	2.35%	412	3.05E-05
4	3.30%	579	4.28E-05	12	6.88%	1209	8.94E-05	20	0.86%	151	1.12E-05
5	2.16%	379	2.80E-05	13	6.27%	1101	8.14E-05	21	3.08%	541	3.99E-05
6	3.30%	579	4.28E-05	14	6.21%	1091	8.06E-05	22	4.21%	740	5.47E-05
7	6.03%	1060	7.83E-05	15	5.13%	902	6.66E-05	23	2.62%	461	3.40E-05
8	4.56%	802	5.92E-05	16	3.88%	682	5.04E-05	24	0.85%	150	1.11E-05
								Total		17,570	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_BHR1	Blossom Hill Road Eastbound	EB	3	790.3	0.49	17.0	56	1.3	35	17,570	13,414	144,383	1.043E-08	7.690E-09	2.6	1.21
PM25_BHR2	Blossom Hill Road Westbound	WB	3	792.8	0.49	17.0	56	1.3	35	17,570	13,456	144,840	1.043E-08	7.690E-09	2.6	1.21
									Total	35,140						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001401			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_BHR1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	202	3.86E-05	9	7.11%	1250	2.39E-04	17	7.38%	1297	2.48E-04
2	0.42%	74	1.41E-05	10	4.39%	771	1.47E-04	18	8.18%	1437	2.75E-04
3	0.41%	71	1.36E-05	11	4.66%	819	1.57E-04	19	5.70%	1001	1.91E-04
4	0.26%	46	8.76E-06	12	5.89%	1035	1.98E-04	20	4.27%	750	1.43E-04
5	0.50%	88	1.67E-05	13	6.15%	1081	2.07E-04	21	3.26%	572	1.09E-04
6	0.90%	159	3.04E-05	14	6.04%	1061	2.03E-04	22	3.30%	580	1.11E-04
7	3.79%	665	1.27E-04	15	7.01%	1232	2.35E-04	23	2.46%	433	8.27E-05
8	7.76%	1364	2.61E-04	16	7.14%	1254	2.40E-04	24	1.87%	328	6.27E-05
								Total		17,570	

2026 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_BHR2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	202	3.87E-05	9	7.11%	1250	2.40E-04	17	7.38%	1297	2.49E-04
2	0.42%	74	1.42E-05	10	4.39%	771	1.48E-04	18	8.18%	1437	2.75E-04
3	0.41%	71	1.37E-05	11	4.66%	819	1.57E-04	19	5.70%	1001	1.92E-04
4	0.26%	46	8.78E-06	12	5.89%	1035	1.98E-04	20	4.27%	750	1.44E-04
5	0.50%	88	1.68E-05	13	6.15%	1081	2.07E-04	21	3.26%	572	1.10E-04
6	0.90%	159	3.05E-05	14	6.04%	1061	2.03E-04	22	3.30%	580	1.11E-04
7	3.79%	665	1.28E-04	15	7.01%	1232	2.36E-04	23	2.46%	433	8.30E-05
8	7.76%	1364	2.61E-04	16	7.14%	1254	2.40E-04	24	1.87%	328	6.29E-05
								Total		17,570	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_BHR1	Blossom Hill Road Eastbound	EB	3	790.3	0.49	17.0	56	1.3	35	17,570	13,414	144,383	1.732E-07	1.277E-07	2.6	1.21
TEXH_BHR2	Blossom Hill Road Westbound	WB	3	792.8	0.49	17.0	56	1.3	35	17,570	13,456	144,840	1.732E-07	1.277E-07	2.6	1.21
									Total	35,140						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.02327			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_BHR1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	202	6.41E-04	9	7.11%	1250	3.97E-03	17	7.38%	1297	4.12E-03
2	0.42%	74	2.35E-04	10	4.39%	771	2.45E-03	18	8.18%	1437	4.56E-03
3	0.41%	71	2.26E-04	11	4.66%	819	2.60E-03	19	5.70%	1001	3.18E-03
4	0.26%	46	1.45E-04	12	5.89%	1035	3.28E-03	20	4.27%	750	2.38E-03
5	0.50%	88	2.78E-04	13	6.15%	1081	3.43E-03	21	3.26%	572	1.82E-03
6	0.90%	159	5.04E-04	14	6.04%	1061	3.37E-03	22	3.30%	580	1.84E-03
7	3.79%	665	2.11E-03	15	7.01%	1232	3.91E-03	23	2.46%	433	1.37E-03
8	7.76%	1364	4.33E-03	16	7.14%	1254	3.98E-03	24	1.87%	328	1.04E-03
								Total		17,570	

2026 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_BHR2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	202	6.43E-04	9	7.11%	1250	3.98E-03	17	7.38%	1297	4.13E-03
2	0.42%	74	2.35E-04	10	4.39%	771	2.45E-03	18	8.18%	1437	4.57E-03
3	0.41%	71	2.27E-04	11	4.66%	819	2.61E-03	19	5.70%	1001	3.19E-03
4	0.26%	46	1.46E-04	12	5.89%	1035	3.29E-03	20	4.27%	750	2.39E-03
5	0.50%	88	2.79E-04	13	6.15%	1081	3.44E-03	21	3.26%	572	1.82E-03
6	0.90%	159	5.06E-04	14	6.04%	1061	3.38E-03	22	3.30%	580	1.85E-03
7	3.79%	665	2.12E-03	15	7.01%	1232	3.92E-03	23	2.46%	433	1.38E-03
8	7.76%	1364	4.34E-03	16	7.14%	1254	3.99E-03	24	1.87%	328	1.04E-03
								Total		17,570	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension (m)
TEVAP_BHR1	Blossom Hill Road Eastbound	EB	3	790.3	0.49	17.0	56	1.3	35	17,570	13,414	144,383	2.271E-07	1.674E-07	2.6	1.21
TEVAP_BHR2	Blossom Hill Road Westbound	WB	3	792.8	0.49	17.0	56	1.3	35	17,570	13,456	144,840	2.271E-07	1.674E-07	2.6	1.21
									Total	35,140						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.21998			
Emissions per Vehicle per Mile (g/VMT)	0.03050			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_BHR1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	202	8.40E-04	9	7.11%	1250	5.20E-03	17	7.38%	1297	5.40E-03
2	0.42%	74	3.07E-04	10	4.39%	771	3.21E-03	18	8.18%	1437	5.98E-03
3	0.41%	71	2.96E-04	11	4.66%	819	3.41E-03	19	5.70%	1001	4.17E-03
4	0.26%	46	1.91E-04	12	5.89%	1035	4.30E-03	20	4.27%	750	3.12E-03
5	0.50%	88	3.64E-04	13	6.15%	1081	4.50E-03	21	3.26%	572	2.38E-03
6	0.90%	159	6.61E-04	14	6.04%	1061	4.41E-03	22	3.30%	580	2.41E-03
7	3.79%	665	2.77E-03	15	7.01%	1232	5.13E-03	23	2.46%	433	1.80E-03
8	7.76%	1364	5.67E-03	16	7.14%	1254	5.22E-03	24	1.87%	328	1.36E-03
								Total		17,570	

2026 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_BHR2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	202	8.43E-04	9	7.11%	1250	5.22E-03	17	7.38%	1297	5.41E-03
2	0.42%	74	3.08E-04	10	4.39%	771	3.22E-03	18	8.18%	1437	6.00E-03
3	0.41%	71	2.97E-04	11	4.66%	819	3.42E-03	19	5.70%	1001	4.18E-03
4	0.26%	46	1.91E-04	12	5.89%	1035	4.32E-03	20	4.27%	750	3.13E-03
5	0.50%	88	3.66E-04	13	6.15%	1081	4.51E-03	21	3.26%	572	2.39E-03
6	0.90%	159	6.63E-04	14	6.04%	1061	4.43E-03	22	3.30%	580	2.42E-03
7	3.79%	665	2.78E-03	15	7.01%	1232	5.14E-03	23	2.46%	433	1.81E-03
8	7.76%	1364	5.69E-03	16	7.14%	1254	5.23E-03	24	1.87%	328	1.37E-03
								Total		17,570	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
FUG_BHR1	Blossom Hill Road Eastbound	EB	3	790.3	0.49	17.0	56	1.3	35	17,570	13,414	144,383	3.832E-07	2.825E-07	2.6	1.21
FUG_BHR2	Blossom Hill Road Westbound	WB	3	792.8	0.49	17.0	56	1.3	35	17,570	13,456	144,840	3.832E-07	2.825E-07	2.6	1.21
									Total	35,140						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Tire Wear - Emissions per Vehicle (g/VMT)	0.01734			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01734			
Road Dust - Emissions per Vehicle (g/VMT)	0.01679			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.05147			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_BHR1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	202	1.42E-03	9	7.11%	1250	8.77E-03	17	7.38%	1297	9.11E-03
2	0.42%	74	5.19E-04	10	4.39%	771	5.41E-03	18	8.18%	1437	1.01E-02
3	0.41%	71	5.00E-04	11	4.66%	819	5.75E-03	19	5.70%	1001	7.03E-03
4	0.26%	46	3.22E-04	12	5.89%	1035	7.26E-03	20	4.27%	750	5.27E-03
5	0.50%	88	6.15E-04	13	6.15%	1081	7.59E-03	21	3.26%	572	4.02E-03
6	0.90%	159	1.12E-03	14	6.04%	1061	7.45E-03	22	3.30%	580	4.07E-03
7	3.79%	665	4.67E-03	15	7.01%	1232	8.65E-03	23	2.46%	433	3.04E-03
8	7.76%	1364	9.58E-03	16	7.14%	1254	8.81E-03	24	1.87%	328	2.30E-03
								Total		17,570	

2026 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_BHR2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	202	1.42E-03	9	7.11%	1250	8.80E-03	17	7.38%	1297	9.14E-03
2	0.42%	74	5.20E-04	10	4.39%	771	5.43E-03	18	8.18%	1437	1.01E-02
3	0.41%	71	5.02E-04	11	4.66%	819	5.77E-03	19	5.70%	1001	7.05E-03
4	0.26%	46	3.23E-04	12	5.89%	1035	7.29E-03	20	4.27%	750	5.28E-03
5	0.50%	88	6.17E-04	13	6.15%	1081	7.61E-03	21	3.26%	572	4.03E-03
6	0.90%	159	1.12E-03	14	6.04%	1061	7.47E-03	22	3.30%	580	4.08E-03
7	3.79%	665	4.69E-03	15	7.01%	1232	8.68E-03	23	2.46%	433	3.05E-03
8	7.76%	1364	9.61E-03	16	7.14%	1254	8.83E-03	24	1.87%	328	2.31E-03
								Total		17,570	

File Name: Santa Clara (SF) - 2026 - Annual.EF - Freeway.EF
CT-EMFAC2017 Version 1.0.2.27401
Run Date: 11/5/2020 18:26
Area: Santa Clara (SF)
Analysis Year: 2026
Season: Annual

==========

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Cate	Gas VMT Fraction Within Category
Truck 1	0.012	0.508	0.492
Truck 2	0.001	0.935	0.049
Non-Truck	0.987	0.015	0.949

==========

Road Type: Freeway
Silt Loading Factor: CARB 0.015 g/m2
Precipitation Correction: CARB P = 64 days N = 365 days

==========

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
PM2.5	0.008033	0.005154	0.003473	0.002464	0.001847	0.001462	0.001221	0.001074	0.000997	0.000973	0.000999	0.001076	0.001214	0.001307	0.001307
TOG	0.161243	0.105322	0.071098	0.050535	0.038345	0.030714	0.025848	0.022825	0.021131	0.020503	0.020856	0.022265	0.024965	0.026906	0.026915
Diesel PM	0.00049	0.000402	0.000314	0.000249	0.000209	0.000185	0.000171	0.000164	0.000164	0.00017	0.000182	0.000198	0.000215	0.000215	0.000215

Fleet Average Fuel Consumption (gallons/veh-mile)

Fuel Type	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
Gasoline	0.069652	0.056323	0.046087	0.03834	0.032775	0.029091	0.026943	0.026068	0.026173	0.026923	0.028051	0.029112	0.030004	0.030004	0.030004
Diesel	0.00233	0.001967	0.001505	0.001271	0.001108	0.000986	0.000919	0.000866	0.000833	0.000839	0.000866	0.000904	0.000964	0.000964	0.000964

==========

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.22356

==========

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002017

==========

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016339

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.006358

==========END==========

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - State Route 85
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_SR85_1	State Route 85 Westbound	WB	4	791.7	0.49	20.6	67.7	3.4	35	85,751	16,333	175,808	6.427E-09	4.739E-09	6.8	3.16
DPM_SR85_2	State Route 85 Eastbound	EB	4	819.8	0.51	20.6	67.7	3.4	35	85,751	16,913	182,048	6.427E-09	4.739E-09	6.8	3.16
									Total	171,503						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle (g/VMT)	0.00022			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and DPM Emissions - DPM_SR85_1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.98%	3411	1.00E-04	9	6.44%	5521	1.62E-04	17	5.53%	4741	1.39E-04
2	2.67%	2290	6.73E-05	10	7.40%	6341	1.86E-04	18	3.14%	2695	7.92E-05
3	2.84%	2436	7.16E-05	11	6.32%	5416	1.59E-04	19	2.35%	2013	5.91E-05
4	3.30%	2826	8.30E-05	12	6.88%	5903	1.73E-04	20	0.86%	738	2.17E-05
5	2.16%	1851	5.44E-05	13	6.27%	5374	1.58E-04	21	3.08%	2639	7.75E-05
6	3.30%	2826	8.30E-05	14	6.21%	5326	1.56E-04	22	4.21%	3613	1.06E-04
7	6.03%	5172	1.52E-04	15	5.13%	4400	1.29E-04	23	2.62%	2249	6.61E-05
8	4.56%	3913	1.15E-04	16	3.88%	3328	9.78E-05	24	0.85%	731	2.15E-05
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SR85_2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.98%	3411	1.04E-04	9	6.44%	5521	1.68E-04	17	5.53%	4741	1.44E-04
2	2.67%	2290	6.97E-05	10	7.40%	6341	1.93E-04	18	3.14%	2695	8.20E-05
3	2.84%	2436	7.41E-05	11	6.32%	5416	1.65E-04	19	2.35%	2013	6.12E-05
4	3.30%	2826	8.60E-05	12	6.88%	5903	1.80E-04	20	0.86%	738	2.25E-05
5	2.16%	1851	5.63E-05	13	6.27%	5374	1.64E-04	21	3.08%	2639	8.03E-05
6	3.30%	2826	8.60E-05	14	6.21%	5326	1.62E-04	22	4.21%	3613	1.10E-04
7	6.03%	5172	1.57E-04	15	5.13%	4400	1.34E-04	23	2.62%	2249	6.84E-05
8	4.56%	3913	1.19E-04	16	3.88%	3328	1.01E-04	24	0.85%	731	2.22E-05
								Total		85,751	

Analysis Year = ***2026***

Vehicle Type	2018 Caltrans Vehicles (veh/day)	2026 Vehicles (veh/day)
Truck 1 (MDT)	700	756
Truck 2 (HDT)	32	35
Non-Truck	158,067	170,712
Total	**158,799**	**171,503**

Increase From 2018	1.08
Vehicles/Direction	**85,751**
Avg Vehicles/Hour/Direction	3,573

Traffic Data Year = ***2018***

Caltrans AADT (2018) & Truck %s (2018)	AADT Total	Total Truck	Trucks by Axle: 2	3	4	5
State Route 85, Blossom Hill Junction	158,800	733	700	10	19	3
			95.54%	1.41%	2.58%	0.47%
Percent of Total Vehicles			0.44%	0.01%	0.01%	0.00%

Traffic Increase per Year (%) = *1.00%*

733	Trucks	100.00%
4.5%	HDT	
95.5%	MDT	
100.00%	Total	
0.0%	Other	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - State Route 85
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_SR85_1	State Route 85 Westbound	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	3.629E-08	2.676E-08	2.6	1.21
PM25_SR85_2	State Route 85 Eastbound	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	3.629E-08	2.676E-08	2.6	1.21
									Total	171,503						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle (g/VMT)	0.001214			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_SR85_1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	1.64E-04	9	7.11%	6099	1.01E-03	17	7.38%	6332	1.05E-03
2	0.42%	361	5.98E-05	10	4.39%	3762	6.24E-04	18	8.18%	7011	1.16E-03
3	0.41%	348	5.77E-05	11	4.66%	3998	6.63E-04	19	5.70%	4886	8.11E-04
4	0.26%	224	3.71E-05	12	5.89%	5049	8.38E-04	20	4.27%	3662	6.08E-04
5	0.50%	428	7.09E-05	13	6.15%	5276	8.75E-04	21	3.26%	2794	4.64E-04
6	0.90%	775	1.29E-04	14	6.04%	5177	8.59E-04	22	3.30%	2830	4.69E-04
7	3.79%	3248	5.39E-04	15	7.01%	6014	9.98E-04	23	2.46%	2112	3.50E-04
8	7.76%	6657	1.10E-03	16	7.14%	6122	1.02E-03	24	1.87%	1601	2.66E-04
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SR85_2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	1.69E-04	9	7.11%	6099	1.05E-03	17	7.38%	6332	1.09E-03
2	0.42%	361	6.20E-05	10	4.39%	3762	6.46E-04	18	8.18%	7011	1.20E-03
3	0.41%	348	5.97E-05	11	4.66%	3998	6.87E-04	19	5.70%	4886	8.39E-04
4	0.26%	224	3.84E-05	12	5.89%	5049	8.67E-04	20	4.27%	3662	6.29E-04
5	0.50%	428	7.35E-05	13	6.15%	5276	9.06E-04	21	3.26%	2794	4.80E-04
6	0.90%	775	1.33E-04	14	6.04%	5177	8.89E-04	22	3.30%	2830	4.86E-04
7	3.79%	3248	5.58E-04	15	7.01%	6014	1.03E-03	23	2.46%	2112	3.63E-04
8	7.76%	6657	1.14E-03	16	7.14%	6122	1.05E-03	24	1.87%	1601	2.75E-04
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - State Route 85
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_WB280	State Route 85 Westbound	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	7.463E-07	5.503E-07	2.6	1.21
TEXH_WB280	State Route 85 Eastbound	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	7.463E-07	5.503E-07	2.6	1.21
									Total	171,503						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle (g/VMT)	0.02497			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_WB280

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	3.36E-03	9	7.11%	6099	2.08E-02	17	7.38%	6332	2.16E-02
2	0.42%	361	1.23E-03	10	4.39%	3762	1.28E-02	18	8.18%	7011	2.39E-02
3	0.41%	348	1.19E-03	11	4.66%	3998	1.36E-02	19	5.70%	4886	1.67E-02
4	0.26%	224	7.63E-04	12	5.89%	5049	1.72E-02	20	4.27%	3662	1.25E-02
5	0.50%	428	1.46E-03	13	6.15%	5276	1.80E-02	21	3.26%	2794	9.53E-03
6	0.90%	775	2.64E-03	14	6.04%	5177	1.77E-02	22	3.30%	2830	9.65E-03
7	3.79%	3248	1.11E-02	15	7.01%	6014	2.05E-02	23	2.46%	2112	7.20E-03
8	7.76%	6657	2.27E-02	16	7.14%	6122	2.09E-02	24	1.87%	1601	5.46E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB280

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	3.48E-03	9	7.11%	6099	2.15E-02	17	7.38%	6332	2.24E-02
2	0.42%	361	1.27E-03	10	4.39%	3762	1.33E-02	18	8.18%	7011	2.48E-02
3	0.41%	348	1.23E-03	11	4.66%	3998	1.41E-02	19	5.70%	4886	1.73E-02
4	0.26%	224	7.90E-04	12	5.89%	5049	1.78E-02	20	4.27%	3662	1.29E-02
5	0.50%	428	1.51E-03	13	6.15%	5276	1.86E-02	21	3.26%	2794	9.87E-03
6	0.90%	775	2.74E-03	14	6.04%	5177	1.83E-02	22	3.30%	2830	1.00E-02
7	3.79%	3248	1.15E-02	15	7.01%	6014	2.12E-02	23	2.46%	2112	7.46E-03
8	7.76%	6657	2.35E-02	16	7.14%	6122	2.16E-02	24	1.87%	1601	5.66E-03
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - State Route 85
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_WSC1	State Route 85 Westbound	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	5.627E-07	4.149E-07	2.6	1.21
TEVAP_WSC2	State Route 85 Eastbound	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	5.627E-07	4.149E-07	2.6	1.21
									Total	171,503						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle per Hour (g/hour)	1.22356			
Emissions per Vehicle per Mile (g/VMT)	0.01882			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_WSC1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	2.54E-03	9	7.11%	6099	1.57E-02	17	7.38%	6332	1.63E-02
2	0.42%	361	9.28E-04	10	4.39%	3762	9.68E-03	18	8.18%	7011	1.80E-02
3	0.41%	348	8.94E-04	11	4.66%	3998	1.03E-02	19	5.70%	4886	1.26E-02
4	0.26%	224	5.75E-04	12	5.89%	5049	1.30E-02	20	4.27%	3662	9.42E-03
5	0.50%	428	1.10E-03	13	6.15%	5276	1.36E-02	21	3.26%	2794	7.19E-03
6	0.90%	775	1.99E-03	14	6.04%	5177	1.33E-02	22	3.30%	2830	7.28E-03
7	3.79%	3248	8.35E-03	15	7.01%	6014	1.55E-02	23	2.46%	2112	5.43E-03
8	7.76%	6657	1.71E-02	16	7.14%	6122	1.57E-02	24	1.87%	1601	4.12E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WSC2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	2.63E-03	9	7.11%	6099	1.62E-02	17	7.38%	6332	1.69E-02
2	0.42%	361	9.61E-04	10	4.39%	3762	1.00E-02	18	8.18%	7011	1.87E-02
3	0.41%	348	9.26E-04	11	4.66%	3998	1.07E-02	19	5.70%	4886	1.30E-02
4	0.26%	224	5.96E-04	12	5.89%	5049	1.34E-02	20	4.27%	3662	9.75E-03
5	0.50%	428	1.14E-03	13	6.15%	5276	1.41E-02	21	3.26%	2794	7.44E-03
6	0.90%	775	2.06E-03	14	6.04%	5177	1.38E-02	22	3.30%	2830	7.54E-03
7	3.79%	3248	8.65E-03	15	7.01%	6014	1.60E-02	23	2.46%	2112	5.63E-03
8	7.76%	6657	1.77E-02	16	7.14%	6122	1.63E-02	24	1.87%	1601	4.26E-03
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - State Route 85
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension (m)
FUG_EB280	State Route 85 Westbound	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	7.388E-07	5.447E-07	2.6	1.21
FUG_WB280	State Route 85 Eastbound	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	7.388E-07	5.447E-07	2.6	1.21
									Total	171,503						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00202			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01634			
Road Dust - Emissions per Vehicle (g/VMT)	0.00636			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02471			

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB280

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	3.33E-03	9	7.11%	6099	2.06E-02	17	7.38%	6332	2.14E-02
2	0.42%	361	1.22E-03	10	4.39%	3762	1.27E-02	18	8.18%	7011	2.37E-02
3	0.41%	348	1.17E-03	11	4.66%	3998	1.35E-02	19	5.70%	4886	1.65E-02
4	0.26%	224	7.55E-04	12	5.89%	5049	1.71E-02	20	4.27%	3662	1.24E-02
5	0.50%	428	1.44E-03	13	6.15%	5276	1.78E-02	21	3.26%	2794	9.44E-03
6	0.90%	775	2.62E-03	14	6.04%	5177	1.75E-02	22	3.30%	2830	9.56E-03
7	3.79%	3248	1.10E-02	15	7.01%	6014	2.03E-02	23	2.46%	2112	7.13E-03
8	7.76%	6657	2.25E-02	16	7.14%	6122	2.07E-02	24	1.87%	1601	5.41E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB280

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	3.45E-03	9	7.11%	6099	2.13E-02	17	7.38%	6332	2.21E-02
2	0.42%	361	1.26E-03	10	4.39%	3762	1.32E-02	18	8.18%	7011	2.45E-02
3	0.41%	348	1.22E-03	11	4.66%	3998	1.40E-02	19	5.70%	4886	1.71E-02
4	0.26%	224	7.82E-04	12	5.89%	5049	1.77E-02	20	4.27%	3662	1.28E-02
5	0.50%	428	1.50E-03	13	6.15%	5276	1.85E-02	21	3.26%	2794	9.77E-03
6	0.90%	775	2.71E-03	14	6.04%	5177	1.81E-02	22	3.30%	2830	9.90E-03
7	3.79%	3248	1.14E-02	15	7.01%	6014	2.10E-02	23	2.46%	2112	7.39E-03
8	7.76%	6657	2.33E-02	16	7.14%	6122	2.14E-02	24	1.87%	1601	5.60E-03
								Total		85,751	

File Name: Santa Clara (SF) - 2026 - Annual.EF - Freeway.EF
CT-EMFAC2017 Version 1.0.2.27401
Run Date: 11/5/2020 18:26
Area: Santa Clara (SF)
Analysis Year: 2026
Season: Annual

==========

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Cate	Gas VMT Fraction Within Category
Truck 1	0.012	0.508	0.492
Truck 2	0.001	0.935	0.049
Non-Truck	0.987	0.015	0.949

==========

Road Type: Freeway
Silt Loading Factor: CARB 0.015 g/m2
Precipitation Correction: CARB P = 64 days N = 365 days

==========

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
PM2.5	0.008033	0.005154	0.003473	0.002464	0.001847	0.001462	0.001221	0.001074	0.000997	0.000973	0.000999	0.001076	0.001214	0.001307	0.001307
TOG	0.161243	0.105322	0.071098	0.050535	0.038345	0.030714	0.025848	0.022825	0.021131	0.020503	0.020856	0.022265	0.024965	0.026906	0.026915
Diesel PM	0.00049	0.000402	0.000314	0.000249	0.000209	0.000185	0.000171	0.000164	0.000164	0.00017	0.000182	0.000198	0.000215	0.000215	0.000215

Fleet Average Fuel Consumption (gallons/veh-mile)

Fuel Type	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	75 mph
Gasoline	0.069652	0.056323	0.046087	0.03834	0.032775	0.029091	0.026943	0.026068	0.026173	0.026923	0.028051	0.029112	0.030004	0.030004	0.030004
Diesel	0.00233	0.001967	0.001505	0.001271	0.001108	0.000986	0.000919	0.000866	0.000833	0.000839	0.000866	0.000904	0.000964	0.000964	0.000964

==========

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.22356

==========

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002017

==========

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016339

==========

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.006358

==========END==========

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road (AM and PM Peak Segments)
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	Line Area: (Sigma z) Initial Vertical Dimension (m)
DPM_SR85_1	State Route 85 Westbound AM Peak	WB	4	791.7	0.49	20.6	67.7	3.4	35	85,751	16,333	175,808	5.530E-09	4.078E-09	6.8	3.16
DPM_SR85_2	State Route 85 Eastbound PM Peak	EB	4	819.8	0.51	20.6	67.7	3.4	35	85,751	16,913	182,048	5.112E-09	3.769E-09	6.8	3.16
									Total	171,503						

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	30	35		
Emissions per Vehicle (g/VMT)	0.00019	0.000171		

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and DPM Emissions - DPM_SR85_1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.98%	3411	8.62E-05	9	6.44%	5521	1.40E-04	17	5.53%	4741	1.20E-04
2	2.67%	2290	5.79E-05	10	7.40%	6341	1.60E-04	18	3.14%	2695	6.81E-05
3	2.84%	2436	6.16E-05	11	6.32%	5416	1.37E-04	19	2.35%	2013	5.09E-05
4	3.30%	2826	7.14E-05	12	6.88%	5903	1.49E-04	20	0.86%	738	1.87E-05
5	2.16%	1851	4.68E-05	13	6.27%	5374	1.36E-04	21	3.08%	2639	6.67E-05
6	3.30%	2826	7.14E-05	14	6.21%	5326	1.35E-04	22	4.21%	3613	9.13E-05
7	6.03%	5172	1.31E-04	15	5.13%	4400	1.11E-04	23	2.62%	2249	5.68E-05
8	4.56%	3913	9.89E-05	16	3.88%	3328	8.41E-05	24	0.85%	731	1.85E-05
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SR85_2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.98%	3411	8.93E-05	9	6.44%	5521	1.45E-04	17	5.53%	4741	1.24E-04
2	2.67%	2290	5.99E-05	10	7.40%	6341	1.66E-04	18	3.14%	2695	7.05E-05
3	2.84%	2436	6.38E-05	11	6.32%	5416	1.42E-04	19	2.35%	2013	5.27E-05
4	3.30%	2826	7.40E-05	12	6.88%	5903	1.55E-04	20	0.86%	738	1.93E-05
5	2.16%	1851	4.85E-05	13	6.27%	5374	1.41E-04	21	3.08%	2639	6.91E-05
6	3.30%	2826	7.40E-05	14	6.21%	5326	1.39E-04	22	4.21%	3613	9.46E-05
7	6.03%	5172	1.35E-04	15	5.13%	4400	1.15E-04	23	2.62%	2249	5.89E-05
8	4.56%	3913	1.02E-04	16	3.88%	3328	8.71E-05	24	0.85%	731	1.91E-05
								Total		85,751	

Analysis Year = ***2026***

Vehicle Type	2018 Caltrans Vehicles (veh/day)	2026 Vehicles (veh/day)
Truck 1 (MDT)	700	756
Truck 2 (HDT)	32	35
Non-Truck	158,067	170,712
Total	**158,799**	**171,503**
Increase From 2018		1.08
Vehicles/Direction		**85,751**
Avg Vehicles/Hour/Direction		3,573

Traffic Data Year ***2018***

Caltrans AADT (2018) & Truck %s (2018)	AADT Total	Total Truck	Trucks by Axle: 2	3	4	5
State Route 85, Blossom Hill Junction	158,800	733	700	10	19	3
			95.54%	1.41%	2.58%	0.47%
Percent of Total Vehicles			0.44%	0.01%	0.01%	0.00%

Traffic Increase per Year (%) = *1.00%*

733	Trucks	100.00%
4.5%	HDT	
95.5%	MDT	
100.00%	Total	
0.0%	Other	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road (AM and PM Peak Segments)
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_WB280	State Route 85 Westbound AM Peak	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	4.370E-08	3.222E-08	2.6	1.21
PM25_EB280	State Route 85 Eastbound PM Peak	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	3.650E-08	2.691E-08	2.6	1.21
									Total	171,503						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30	35		
Emissions per Vehicle (g/VMT)	0.001462	0.00122		

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_WB280

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	1.97E-04	9	7.11%	6099	1.22E-03	17	7.38%	6332	1.27E-03
2	0.42%	361	7.21E-05	10	4.39%	3762	7.52E-04	18	8.18%	7011	1.40E-03
3	0.41%	348	6.94E-05	11	4.66%	3998	7.99E-04	19	5.70%	4886	9.76E-04
4	0.26%	224	4.47E-05	12	5.89%	5049	1.01E-03	20	4.27%	3662	7.32E-04
5	0.50%	428	8.54E-05	13	6.15%	5276	1.05E-03	21	3.26%	2794	5.58E-04
6	0.90%	775	1.55E-04	14	6.04%	5177	1.03E-03	22	3.30%	2830	5.65E-04
7	3.79%	3248	6.49E-04	15	7.01%	6014	1.20E-03	23	2.46%	2112	4.22E-04
8	7.76%	6657	1.33E-03	16	7.14%	6122	1.22E-03	24	1.87%	1601	3.20E-04
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_EB280

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	2.04E-04	9	7.11%	6099	1.26E-03	17	7.38%	6332	1.31E-03
2	0.42%	361	7.46E-05	10	4.39%	3762	7.78E-04	18	8.18%	7011	1.45E-03
3	0.41%	348	7.19E-05	11	4.66%	3998	8.27E-04	19	5.70%	4886	1.01E-03
4	0.26%	224	4.63E-05	12	5.89%	5049	1.04E-03	20	4.27%	3662	7.58E-04
5	0.50%	428	8.85E-05	13	6.15%	5276	1.09E-03	21	3.26%	2794	5.78E-04
6	0.90%	775	1.60E-04	14	6.04%	5177	1.07E-03	22	3.30%	2830	5.85E-04
7	3.79%	3248	6.72E-04	15	7.01%	6014	1.24E-03	23	2.46%	2112	4.37E-04
8	7.76%	6657	1.38E-03	16	7.14%	6122	1.27E-03	24	1.87%	1601	3.31E-04
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road (AM and PM Peak Segments)
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_WB280	State Route 85 Westbound AM Peak	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	9.181E-07	6.770E-07	2.6	1.21
TEXH_WB280	State Route 85 Eastbound PM Peak	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	7.727E-07	5.697E-07	2.6	1.21
									Total	171,503						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30	35		
Emissions per Vehicle (g/VMT)	0.03071	0.02585		

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_WB280

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	4.14E-03	9	7.11%	6099	2.56E-02	17	7.38%	6332	2.66E-02
2	0.42%	361	1.51E-03	10	4.39%	3762	1.58E-02	18	8.18%	7011	2.94E-02
3	0.41%	348	1.46E-03	11	4.66%	3998	1.68E-02	19	5.70%	4886	2.05E-02
4	0.26%	224	9.38E-04	12	5.89%	5049	2.12E-02	20	4.27%	3662	1.54E-02
5	0.50%	428	1.79E-03	13	6.15%	5276	2.21E-02	21	3.26%	2794	1.17E-02
6	0.90%	775	3.25E-03	14	6.04%	5177	2.17E-02	22	3.30%	2830	1.19E-02
7	3.79%	3248	1.36E-02	15	7.01%	6014	2.52E-02	23	2.46%	2112	8.86E-03
8	7.76%	6657	2.79E-02	16	7.14%	6122	2.57E-02	24	1.87%	1601	6.72E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB280

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	4.28E-03	9	7.11%	6099	2.65E-02	17	7.38%	6332	2.75E-02
2	0.42%	361	1.57E-03	10	4.39%	3762	1.63E-02	18	8.18%	7011	3.05E-02
3	0.41%	348	1.51E-03	11	4.66%	3998	1.74E-02	19	5.70%	4886	2.12E-02
4	0.26%	224	9.72E-04	12	5.89%	5049	2.19E-02	20	4.27%	3662	1.59E-02
5	0.50%	428	1.86E-03	13	6.15%	5276	2.29E-02	21	3.26%	2794	1.21E-02
6	0.90%	775	3.37E-03	14	6.04%	5177	2.25E-02	22	3.30%	2830	1.23E-02
7	3.79%	3248	1.41E-02	15	7.01%	6014	2.61E-02	23	2.46%	2112	9.18E-03
8	7.76%	6657	2.89E-02	16	7.14%	6122	2.66E-02	24	1.87%	1601	6.96E-03
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road (AM and PM Peak Segments)
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_WSC1	State Route 85 Westbound AM Peak	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	1.219E-06	8.989E-07	2.6	1.21
TEVAP_WSC2	State Route 85 Eastbound PM Peak	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	1.045E-06	7.705E-07	2.6	1.21
									Total	171,503						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30	35		
Emissions per Vehicle per Hour (g/hour)	1.22356	1.22356		
Emissions per Vehicle per Mile (g/VMT)	0.04079	0.03496		

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_WSC1

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	5.49E-03	9	7.11%	6099	3.40E-02	17	7.38%	6332	3.53E-02
2	0.42%	361	2.01E-03	10	4.39%	3762	2.10E-02	18	8.18%	7011	3.91E-02
3	0.41%	348	1.94E-03	11	4.66%	3998	2.23E-02	19	5.70%	4886	2.72E-02
4	0.26%	224	1.25E-03	12	5.89%	5049	2.81E-02	20	4.27%	3662	2.04E-02
5	0.50%	428	2.38E-03	13	6.15%	5276	2.94E-02	21	3.26%	2794	1.56E-02
6	0.90%	775	4.32E-03	14	6.04%	5177	2.89E-02	22	3.30%	2830	1.58E-02
7	3.79%	3248	1.81E-02	15	7.01%	6014	3.35E-02	23	2.46%	2112	1.18E-02
8	7.76%	6657	3.71E-02	16	7.14%	6122	3.41E-02	24	1.87%	1601	8.92E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WSC2

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	5.69E-03	9	7.11%	6099	3.52E-02	17	7.38%	6332	3.65E-02
2	0.42%	361	2.08E-03	10	4.39%	3762	2.17E-02	18	8.18%	7011	4.05E-02
3	0.41%	348	2.01E-03	11	4.66%	3998	2.31E-02	19	5.70%	4886	2.82E-02
4	0.26%	224	1.29E-03	12	5.89%	5049	2.91E-02	20	4.27%	3662	2.11E-02
5	0.50%	428	2.47E-03	13	6.15%	5276	3.05E-02	21	3.26%	2794	1.61E-02
6	0.90%	775	4.47E-03	14	6.04%	5177	2.99E-02	22	3.30%	2830	1.63E-02
7	3.79%	3248	1.87E-02	15	7.01%	6014	3.47E-02	23	2.46%	2112	1.22E-02
8	7.76%	6657	3.84E-02	16	7.14%	6122	3.53E-02	24	1.87%	1601	9.24E-03
								Total		85,751	

Blossom Hill TOD, San Jose - Offsite Residential Roadway Modeling
Cumulative Operation - Blossom Hill Road (AM and PM Peak Segments)
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2026

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_EB280	State Route 85 Westbound AM Peak	WB	4	791.7	0.49	20.6	68	1.3	35	85,751	16,333	175,808	7.388E-07	5.447E-07	2.6	1.21
FUG_WB280	State Route 85 Eastbound PM Peak	EB	4	819.8	0.51	20.6	68	1.3	35	85,751	16,913	182,048	7.388E-07	5.447E-07	2.6	1.21
									Total	171,503						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30	35		
Tire Wear - Emissions per Vehicle (g/VMT)	0.00202	0.00202		
Brake Wear - Emissions per Vehicle (g/VMT)	0.01634	0.01634		
Road Dust - Emissions per Vehicle (g/VMT)	0.00636	0.00636		
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02471	0.02471		

Emisson Factors from CT-EMFAC2017

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB280

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	986	3.33E-03	9	7.11%	6099	2.06E-02	17	7.38%	6332	2.14E-02
2	0.42%	361	1.22E-03	10	4.39%	3762	1.27E-02	18	8.18%	7011	2.37E-02
3	0.41%	348	1.17E-03	11	4.66%	3998	1.35E-02	19	5.70%	4886	1.65E-02
4	0.26%	224	7.55E-04	12	5.89%	5049	1.71E-02	20	4.27%	3662	1.24E-02
5	0.50%	428	1.44E-03	13	6.15%	5276	1.78E-02	21	3.26%	2794	9.44E-03
6	0.90%	775	2.62E-03	14	6.04%	5177	1.75E-02	22	3.30%	2830	9.56E-03
7	3.79%	3248	1.10E-02	15	7.01%	6014	2.03E-02	23	2.46%	2112	7.13E-03
8	7.76%	6657	2.25E-02	16	7.14%	6122	2.07E-02	24	1.87%	1601	5.41E-03
								Total		85,751	

2026 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB280

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	986	3.45E-03	9	7.11%	6099	2.13E-02	17	7.38%	6332	2.21E-02
2	0.42%	361	1.26E-03	10	4.39%	3762	1.32E-02	18	8.18%	7011	2.45E-02
3	0.41%	348	1.22E-03	11	4.66%	3998	1.40E-02	19	5.70%	4886	1.71E-02
4	0.26%	224	7.82E-04	12	5.89%	5049	1.77E-02	20	4.27%	3662	1.28E-02
5	0.50%	428	1.50E-03	13	6.15%	5276	1.85E-02	21	3.26%	2794	9.77E-03
6	0.90%	775	2.71E-03	14	6.04%	5177	1.81E-02	22	3.30%	2830	9.90E-03
7	3.79%	3248	1.14E-02	15	7.01%	6014	2.10E-02	23	2.46%	2112	7.39E-03
8	7.76%	6657	2.33E-02	16	7.14%	6122	2.14E-02	24	1.87%	1601	5.60E-03
								Total		85,751	

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From State Route 85
Impacts at Offsite Project MEI (30-Years Exposure), 5 Feet

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2026	10	0.0051	0.4515	0.3902	0.059	0.030	0.0015	0.091
1	1	0 - 1	2026	10	0.0051	0.4515	0.3902	0.716	0.360	0.0183	1.094
2	1	1 - 2	2027	10	0.0051	0.4515	0.3902	0.716	0.360	0.0183	1.094
3	1	2 - 3	2028	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
4	1	3 - 4	2029	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
5	1	4 - 5	2030	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
6	1	5 - 6	2031	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
7	1	6 - 7	2032	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
8	1	7 - 8	2033	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
9	1	8 - 9	2034	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
10	1	9 - 10	2035	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
11	1	10 - 11	2036	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
12	1	11 - 12	2037	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
13	1	12 - 13	2038	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
14	1	13 - 14	2039	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
15	1	14 - 15	2040	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
16	1	15 - 16	2041	3	0.0051	0.4515	0.3902	0.096	0.048	0.0024	0.146
17	1	16-17	2042	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
18	1	17-18	2043	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
19	1	18-19	2044	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
20	1	19-20	2045	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
21	1	20-21	2046	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
22	1	21-22	2047	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
23	1	22-23	2048	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
24	1	23-24	2049	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
25	1	24-25	2050	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
26	1	25-26	2051	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
27	1	26-27	2052	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
28	1	27-28	2053	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
29	1	28-29	2054	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
30	1	29-30	2051	1	0.0051	0.4515	0.3902	0.015	0.007	0.0004	0.023
Total Increased Cancer Risk								3.03	1.525	0.078	**4.64**

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.00	0.34	0.36

* Third trimester of pregnancy

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From State Route 85
Impacts at Onsite Sensitive Receptors (30-Years Exposure), 15 Feet

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)						
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL	Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0	0.25	-0.25 - 0*	2026	10	0.0038	0.3386	0.2913	0.044	0.022	0.0011	0.067			
1	1	0 - 1	2026	10	0.0038	0.3386	0.2913	0.526	0.270	0.0137	0.810	0.00	0.26	0.27
2	1	1 - 2	2027	10	0.0038	0.3386	0.2913	0.526	0.270	0.0137	0.810			
3	1	2 - 3	2028	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
4	1	3 - 4	2029	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
5	1	4 - 5	2030	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
6	1	5 - 6	2031	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
7	1	6 - 7	2032	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
8	1	7 - 8	2033	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
9	1	8 - 9	2034	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
10	1	9 - 10	2035	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
11	1	10 - 11	2036	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
12	1	11 - 12	2037	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
13	1	12 - 13	2038	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
14	1	13 - 14	2039	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
15	1	14 - 15	2040	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
16	1	15 - 16	2041	3	0.0038	0.3386	0.2913	0.070	0.036	0.0018	0.108			
17	1	16-17	2042	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
18	1	17-18	2043	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
19	1	18-19	2044	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
20	1	19-20	2045	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
21	1	20-21	2046	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
22	1	21-22	2047	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
23	1	22-23	2048	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
24	1	23-24	2049	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
25	1	24-25	2050	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
26	1	25-26	2051	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
27	1	26-27	2052	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
28	1	27-28	2053	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
29	1	28-29	2054	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
30	1	29-30	2051	1	0.0038	0.3386	0.2913	0.011	0.006	0.0003	0.017			
Total Increased Cancer Risk								2.23	1.144	0.058	**3.43**			

* Third trimester of pregnancy

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From Blossom Hill Road
Impacts at Offsite Project MEI (30-Years Exposure), 5 Feet

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)				
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL	Maximum
												Hazard Index
0	0.25	-0.25 - 0*	2026	10	0.0050	0.2766	0.3627	0.058	0.018	0.0014	0.078	
1	1	0 - 1	2026	10	0.0050	0.2766	0.3627	0.701	0.220	0.0170	0.938	0.00
2	1	1 - 2	2027	10	0.0050	0.2766	0.3627	0.701	0.220	0.0170	0.938	
3	1	2 - 3	2028	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
4	1	3 - 4	2029	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
5	1	4 - 5	2030	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
6	1	5 - 6	2031	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
7	1	6 - 7	2032	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
8	1	7 - 8	2033	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
9	1	8 - 9	2034	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
10	1	9 - 10	2035	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
11	1	10 - 11	2036	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
12	1	11 - 12	2037	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
13	1	12 - 13	2038	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
14	1	13 - 14	2039	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
15	1	14 - 15	2040	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
16	1	15 - 16	2041	3	0.0050	0.2766	0.3627	0.093	0.029	0.0023	0.125	
17	1	16-17	2042	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
18	1	17-18	2043	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
19	1	18-19	2044	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
20	1	19-20	2045	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
21	1	20-21	2046	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
22	1	21-22	2047	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
23	1	22-23	2048	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
24	1	23-24	2049	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
25	1	24-25	2050	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
26	1	25-26	2051	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
27	1	26-27	2052	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
28	1	27-28	2053	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
29	1	28-29	2054	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
30	1	29-30	2055	1	0.0050	0.2766	0.3627	0.014	0.005	0.0004	0.019	
Total Increased Cancer Risk								2.97	0.934	0.072	**3.98**	

Maximum	
Fugitive PM2.5	Total PM2.5
0.61	0.63

* Third trimester of pregnancy

Blossom Hill TOD, San Jose, California
Maximum DPM Cancer Risk Calculations From Blossom Hill Road
Impacts at Onsite Sensitive Receptors (30-Years Exposure), 15 Feet

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL	Maximum		
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2026	10	0.0058	0.1873	0.2456	0.067	0.012	0.0010	0.080			
1	1	0 - 1	2026	10	0.0058	0.1873	0.2456	0.806	0.149	0.0115	0.966	0.00	0.41	0.43
2	1	1 - 2	2027	10	0.0058	0.1873	0.2456	0.806	0.149	0.0115	0.966			
3	1	2 - 3	2028	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
4	1	3 - 4	2029	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
5	1	4 - 5	2030	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
6	1	5 - 6	2031	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
7	1	6 - 7	2032	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
8	1	7 - 8	2033	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
9	1	8 - 9	2034	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
10	1	9 - 10	2035	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
11	1	10 - 11	2036	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
12	1	11 - 12	2037	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
13	1	12 - 13	2038	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
14	1	13 - 14	2039	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
15	1	14 - 15	2040	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
16	1	15 - 16	2041	3	0.0058	0.1873	0.2456	0.107	0.020	0.0015	0.129			
17	1	16-17	2042	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
18	1	17-18	2043	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
19	1	18-19	2044	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
20	1	19-20	2045	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
21	1	20-21	2046	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
22	1	21-22	2047	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
23	1	22-23	2048	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
24	1	23-24	2049	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
25	1	24-25	2050	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
26	1	25-26	2051	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
27	1	26-27	2052	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
28	1	27-28	2053	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
29	1	28-29	2054	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
30	1	29-30	2055	1	0.0058	0.1873	0.2456	0.017	0.003	0.0002	0.020			
Total Increased Cancer Risk								3.41	0.633	0.049	**4.10**			

* Third trimester of pregnancy

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

429 East Cotati Avenue
Cotati, California 94931

Tel: 707-794-0400 *Fax: 707-794-0405*
www.illingworthrodkin.com *illro@illingworthrodkin.com*

August 4, 2021

Carolyn Neer, AICP
Project Manager
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, CA 95126

Via email: cneer@davidjpowers.com

Subject: **Blossom Hill Station TOD Trail Construction, San Jose, CA**
Addendum to the Air Quality and Greenhouse Gas Assessment

Dear Carolyn:

In August 2021, *Illingworth & Rodkin, Inc*. drafted an air quality and greenhouse gas (GHG) assessment reflecting the most conservative scenario for the Blossom Hill Station TOD mixed use project in San Jose, California.[1] The applicant is considering constructing a 0.6 mile, 10 – 12-foot-wide paved asphalt concrete pedestrian/bicycle trail between Blossom Hill Road and Martial Cottle Park, adjacent to Canoas Creek. This pedestrian/bicycle trail was not part of the scope of the original project.

This addendum letter discusses the potential air quality impacts generated by the construction of the pedestrian/bicycle trail. These impacts were also combined with impacts from the Blossom Hill Station TOD project.

Blossom Hill Station TOD Pedestrian/Bicycle Trail

The 0.6 mile pedestrian/bicycle trail would be located on the east side of Canoas Creek, as shown in Figure 1. Alongside of the trail, two trailhead plazas would be constructed on-site to mark the entrance of the trail at Blossom Hill Road and another in the northwest corner of the Blossom Hill Station TOD mixed use project site, marking the direction to the Blossom Hill light rail station.

Construction of the trail would include demolition of a portion of the freestanding wall and fence under SR 85, cheek wall and staircase at the Blossom Hill light rail station, and construction of a

[1] Illingworth & Rodkin, Inc., "Blossom Hill Station TOD Air Quality and Greenhouse Gas Emissions Assessment," August 4, 2020.

new staircase and landing separate from the trail. The trail will have a longitudinal slope of less than five percent and a cross-slope of less than two percent.

Figure 1. Proposed Trail Construction Length and Location

Construction Criteria Air Pollutants

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The trail land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[2] The CalEEMod model output along with construction inputs are included in *Attachment 1* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 2*.

CalEEMod Inputs

Land Use Inputs

The proposed trail land uses were entered into CalEEMod as described in Table 1.

Table 1. Summary of Trail Construction Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
City Park	1.15	Acre	49,969	1.15

Construction Inputs

The 0.6-mile trail would be constructed of asphalt concrete with a less than five percent longitudinal slope and a less than two percent cross-slope. Approximately 200 cubic yards of soil would be imported during construction of the trail.

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on information provided by the project applicant.

The pedestrian/bicycle trail construction equipment worksheet included the CalEEMod phases the applicant expects to utilize. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was also provided by the applicant. The construction schedule assumed that the earliest possible start date would be March 2022 and the trail would be built out over a period of approximately 2 months, or approximately 35 construction workdays.

[2] See CARB's EMFAC2021 Emissions Inventory at https://arb.ca.gov/emfac/emissions-inventory

Construction Truck Traffic Emissions

The construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes by assuming each truck could carry 10 tons per load. The number of concrete and asphalt total round haul trips were provided for the project and converted to total one-way trips, assuming two trips per delivery. On-road emission rates from the years 2022 for Santa Clara County were used. Table 2 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 2. Construction Traffic Data Used for EMFAC2017 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker[1]	Total Vendor[1]	Total Haul[2]	
Vehicle mix[1]	67.0% LDA 6.4% LDT1 26.6% LDT2	7.1% MHDT 92.9% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Cement/Asphalt)	CalEEMod default distance with 5-min truck idle time.
Demolition	40	-	12	125 tons of demolition volume. CalEEMod default worker trips.
Site Preparation	40	-	-	CalEEMod default worker trips.
Grading	80	-	25	200-cy of import volume. CalEEMod default worker trips.
Trenching	50	-	-	CalEEMod default worker trips.
Paving	65	-	98	49 asphalt round trips. CalEEMod default worker trips.

Notes: [1] Based on 2022 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes grading trips estimated by CalEEMod based on amount of material to be imported.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 3 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ fugitive during construction of the project. As indicated in Table 3, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

Table 3. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Fugitive
Construction Emissions Per Year (Tons)				
2022	0.02	0.17	0.01	0.01
Average Daily Construction Emissions Per Year (pounds/day)				
2022 (35 construction workdays)	0.91	9.69	0.45	0.40
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. The applicant of Mitigation Measure AQ-1 from the original project report would implement BAAQMD-recommended best management practices.

Community Health Risk from Trail Construction

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.01 tons (15 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.03 tons (52 pounds) for the overall construction period.

Dispersion Modeling

Dispersion modeling for the pedestrian/bicycle trail construction was conducted using the same methods in the original air quality analysis. These methods included using the U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at nearby sensitive receptors (residences), using San Jose International Airport meteorological data, and using the same sensitive receptor locations. However, a line area source was used to represent the trail construction as this source type is better suited for estimating emissions concentrations from trail construction than an area source.

Summary of Construction Community Risk Impacts

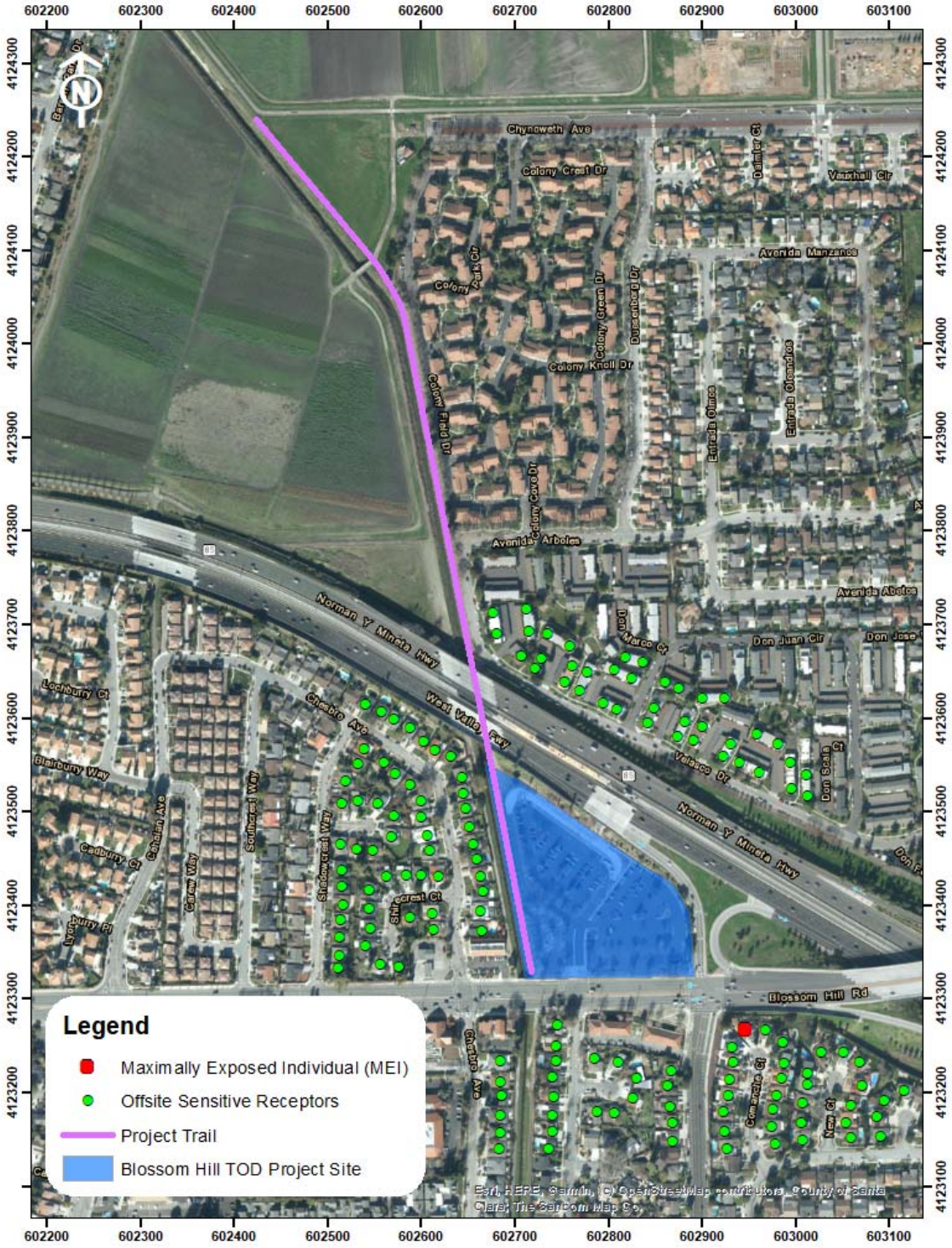
The maximum modeled annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the MEI most affected by trail construction was located at a different MEI as was found for the original project construction (i.e., a single-family residence to the southeast of the project site along Blossom Hill Road). However, given the short duration of, and low emissions associated with, the trail construction when compared to the main Blossom Hill Station TOD mixed-use project, the overall project MEI remains at the same single-family home, southeast of the project site. Community risk impacts at the First Step Learning Center were also assessed. The location of the MEI and nearby sensitive receptors are shown in Figure 2. Table 4 lists the community risks from construction at the location of the residential MEI. *Attachment 3* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Table 4. Construction Risk Impacts at the Offsite Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Trail Construction	Unmitigated	0.12 (infant)	<0.01	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
First Step Learning Center[1]				
Trail Construction	Unmitigated	0.09 (infant)	<0.01	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?		*No*	*No*	*No*

Notes: [1]Infants and child exposure assumed with children assumed to be 3 months to 4.5 years old

Figure 2. Trail Construction Site, Locations of Off-Site Sensitive Receptors, and TAC Impacts



Combined Health Risk from Trail and Blossom Hill Station TOD Project

The community health risk from the pedestrian/bicycle trail construction and the original mixed-use project construction at the MEI was combined to present to total project construction health risk impacts. As shown in Table 5, the unmitigated maximum increased cancer risks, maximum $PM_{2.5}$ concentration, and health hazard indexes from construction activities of the total project at the project MEI do not exceed their respective BAAQMD single-source thresholds. In addition, community risk impacts at the First Step Learning Center would also be below the BAAQMD single-source thresholds.

Table 5. Community Risk Impacts at the Off-Site Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Trail Construction	Unmitigated	0.12 (infant)	<0.01	<0.01
Mixed-Use Project Construction	Unmitigated	8.05 (infant)	0.06	0.01
Total Project	Unmitigated	8.17 (infant)	<0.07	<0.02
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?		*No*	*No*	*No*
First Step Learning Center				
Trail Construction	Unmitigated	0.09 (infant)	<0.01	<0.01
Mixed Use Project Construction	Unmitigated	4.39 (infant)	0.01	<0.01
Total Project	Unmitigated	4.48 (infant)	<0.02	<0.02
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?		*No*	*No*	*No*

Table 6 reports both the total project and cumulative community risk impacts at the sensitive receptors most affected by the mixed-use project with trail construction (i.e., the MEI). Without mitigation, the total project's community risk from project activities would not exceed the single-source maximum increased cancer risk, $PM_{2.5}$ concentration, or HI thresholds. In addition, the combined unmitigated cancer risk, $PM_{2.5}$ concentration, and HI values would not exceed their respective cumulative thresholds.

Table 6. Cumulative Community Risk Impacts from Combined TAC Sources at MEI

Source		Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Total Project Impacts				
Total Project	Unmitigated	8.17 (infant)	<0.07	<0.02
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?		*No*	*No*	*No*
Cumulative Impacts				
State Route 85		4.64	0.36	<0.01
Blossom Hill Road		3.98	0.63	<0.01
Gas N' Go (Facility ID #111360, Gas Dispensing Facility) MEI Distance at >1,000 feet		0.18	-	<0.01
Combined Sources	Unmitigated	16.97 (infant)	**<1.06**	<0.05
BAAQMD Cumulative-Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?		*No*	***Yes***	*No*

Operational Criteria Air Pollutant and GHG Emissions

The operational criteria air pollutant and GHG emissions for the trail construction would be negligible compared to the main mixed-use project. The trail would not have any combustion sources that would emit criteria pollutant or GHG emissions, and any potential volatile organic compounds (VOCs) associated with the trail would be minimal compared to the main mixed-use project. In addition, the trail would not produce vehicle trips or mobile GHG emissions separately from the main mixed-use project and the other GHG emissions (i.e., waste, area) would already be accounted for in the main mixed use project's emissions.

♦ ♦ ♦

This concludes the assessment for air quality and health risk impacts due to the construction of a pedestrian/bicycle trail for the Blossom Hill Station TOD project. Please feel free to contact us with any questions on the analysis or if we can be of further assistance.

Sincerely,

Casey Divine
Consultant
Illingworth & Rodkin, Inc.

(I&R Job #19-162)

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction criteria air pollutant emissions. Also included are any modeling assumptions.

Attachment 2 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 3 includes the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: Canoas Creek Trail

See Equipment Type TAB for type, horsepower and load factor

Complete ALL Portions in Yellow

Project Size
- 0 Dwelling Units
- 1.15 total project acres disturbed
- 0 s.f. residential
- 0 s.f. retail
- 0 s.f. office/commercial
- 49,969 s.f. other, specify:
- 0 s.f. parking garage ____ spaces
- 0 s.f. parking lot ____ spaces

Construction Hours 7 am to 5 pm

Pile Driving? No

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION? Y/N? __N__

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**	**1/3/2022**	**Total phase:**	**5**			**Overall Import/Export Volumes**
		End Date:	**1/7/2022**					
1	Concrete/Industrial Saws	81	0.73	2	5	2	591	**Demolition Volume**
1	Excavators	158	0.38	8	5	8	2402	Square footage of buildings to be demolished
	Rubber-Tired Dozers	247	0.4			0	0	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	**?** square feet *or*
1	Rubber Tired Loaders	203	0.36	8	5	8	2923	**125** Hauling volume (tons)
								Any pavement demolished and hauled? **0 tons**
	Site Preparation	**Start Date:**	**1/10/2022**	**Total phase:**	**5**			
		End Date:	**1/14/2022**					
1	Graders	187	0.41	4	5	4	1533	
	Rubber Tired Dozers	247	0.4			0	0	
1	Tractors/Loaders/Backhoes	97	0.37	8	5	8	1436	
1	Rubber Tired Loaders	203	0.36	8	5	8	2923	
	Grading / Excavation	**Start Date:**	**1/17/2022**	**Total phase:**	**10**			
		End Date:	**1/28/2022**					**Soil Hauling Volume**
	Excavators	158	0.38			0	0	Export volume = 0 CY
1	Graders	187	0.41	8	10	8	6134	Import volume = **200 CY**
	Rubber Tired Dozers	247	0.4			0	0	
	Concrete/Industrial Saws	81	0.73			0	0	
1	Tractors/Loaders/Backhoes	97	0.37	8	10	8	2871	
1	Rubber Tired Loaders	203	0.36	8	10	8	5846	
	Trenching/Foundation/Utilities	**Start Date:**	**1/31/2022**	**Total phase:**	**10**			
		End Date:	**2/11/2022**					
1	Tractor/Loader/Backhoe	97	0.37	8	10	8	2871	
1	Excavators	158	0.38	8	10	8	4803	
	Other Equipment?							
	Paving	**Start Date:**	**2/14/2022**	**Total phase:**	**5**			
		Start Date:	**2/18/2022**					
1	Cement and Mortar Mixers	9	0.56	8	1	1.6	40	
1	Pavers	130	0.42	8	2	3.2	874	**Asphalt? 407 cubic yards or ____ round trips?**
	Paving Equipment	132	0.36			0	0	
2	Rollers	80	0.38	8	2	3.2	973	
1	Tractors/Loaders/Backhoes	97	0.37	8	2	3.2	574	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.02	0.16	0.01	0.01	19.62	
EMFAC						
2022	0.0004	0.01	0.0003	0.0002	3.15	
Total Construction Emissions by Year						
2022	0.02	0.17	0.01	0.01	22.78	
	Total Construction Emissions					
Tons	0.02	0.17	0.01	0.01	22.78	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	0.91	9.69	0.45	0.40		**35**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

19-162 Blossom Hill Trail

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.15	Acre	1.15	49,969.00	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					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage provided by applicant

Construction Phase - Phase durations provided by applicant

Off-road Equipment - Construction equipment and durations provided by applicant

Off-road Equipment - Construction equipment and durations provided by applicant

Off-road Equipment - Construction equipment and durations provided by applicant

Off-road Equipment - Construction equipment and durations provided by applicant

Off-road Equipment - Construction equipment and durations provided by applicant

Grading -

Demolition -

Trips and VMT - All trips entered into EMFAC2021

Construction Off-road Equipment Mitigation - All equipment t4i

Date: 6/17/2021 11:58 AM

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	1/28/2022	1/7/2022
tblConstructionPhase	PhaseEndDate	2/7/2022	1/28/2022
tblConstructionPhase	PhaseEndDate	11/28/2022	2/18/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	1/14/2022
tblConstructionPhase	PhaseStartDate	2/2/2022	1/17/2022
tblConstructionPhase	PhaseStartDate	11/15/2022	2/14/2022

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

tblConstructionPhase	PhaseStartDate	1/29/2022	1/10/2022
tblGrading	MaterialImported	0.00	200.00
tblLandUse	LandUseSquareFeet	49,968.98	49,969.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.60
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	3.20
tblOffRoadEquipment	UsageHours	7.00	3.20
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	3.20
tblTripsAndVMT	HaulingTripNumber	12.00	0.00
tblTripsAndVMT	HaulingTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Date: 6/17/2021 11:58 AM

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0155	0.1642	0.1103	2.2000e-004	0.0538	7.4800e-003	0.0613	0.0258	6.8900e-003	0.0327	0.0000	19.4688	19.4688	6.2000e-003	0.0000	19.6239
Maximum	**0.0155**	**0.1642**	**0.1103**	**2.2000e-004**	**0.0538**	**7.4800e-003**	**0.0613**	**0.0258**	**6.8900e-003**	**0.0327**	**0.0000**	**19.4688**	**19.4688**	**6.2000e-003**	**0.0000**	**19.6239**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	3.7300e-003	0.0745	0.1383	2.2000e-004	0.0242	3.6000e-004	0.0246	0.0116	3.6000e-004	0.0120	0.0000	19.4688	19.4688	6.2000e-003	0.0000	19.6239
Maximum	**3.7300e-003**	**0.0745**	**0.1383**	**2.2000e-004**	**0.0242**	**3.6000e-004**	**0.0246**	**0.0116**	**3.6000e-004**	**0.0120**	**0.0000**	**19.4688**	**19.4688**	**6.2000e-003**	**0.0000**	**19.6239**

	ROG	NOx	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	**75.94**	**54.62**	**-25.38**	**0.00**	**55.01**	**95.19**	**59.91**	**55.00**	**94.78**	**63.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	0.1434	0.0626
		Highest	0.1434	0.0626

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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	0.0000
Mobile	5.2000e-004	5.6000e-004	4.8000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8956	0.8956	6.0000e-005	4.0000e-005	0.9101
Waste						0.0000	0.0000		0.0000	0.0000	0.0203	0.0000	0.0203	1.2000e-003	0.0000	0.0503
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.9000e-004**	**5.6000e-004**	**4.8100e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0500e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0203**	**0.8956**	**0.9159**	**1.2600e-003**	**4.0000e-005**	**0.9604**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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	0.0000

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mobile	5.2000e-004	5.6000e-004	4.8000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8956	0.8956	6.0000e-005	4.0000e-005	0.9101
Waste						0.0000	0.0000		0.0000	0.0000	0.0203	0.0000	0.0203	1.2000e-003	0.0000	0.0503
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.9000e-004**	**5.6000e-004**	**4.8100e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0500e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0203**	**0.8956**	**0.9159**	**1.2600e-003**	**4.0000e-005**	**0.9604**

	ROG	NOx	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	1/3/2022	1/7/2022	5	5	
2	Site Preparation	Site Preparation	1/10/2022	1/14/2022	5	5	
3	Grading	Grading	1/17/2022	1/28/2022	5	10	
4	Paving	Paving	2/14/2022	2/18/2022	5	5	
5	Trenching	Trenching	1/31/2022	2/11/2022	5	10	

Acres of Grading (Site Preparation Phase): 3.75

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Trenching	Excavators	1	8.00	158	0.38
Paving	Cement and Mortar Mixers	1	1.60	9	0.56
Demolition	Concrete/Industrial Saws	1	2.00	81	0.73
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	4.00	187	0.41
Paving	Pavers	1	3.20	130	0.42
Paving	Rollers	2	3.20	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Excavators	1	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	3.20	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Reduce Vehicle Speed on Unpaved 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	tons/yr										MT/yr					
Fugitive Dust					1.3400e-003	0.0000	1.3400e-003	2.0000e-004	0.0000	2.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8200e-003	0.0282	0.0194	4.0000e-005		1.3500e-003	1.3500e-003		1.2500e-003	1.2500e-003	0.0000	3.3457	3.3457	9.9000e-004	0.0000	3.3705
Total	**2.8200e-003**	**0.0282**	**0.0194**	**4.0000e-005**	**1.3400e-003**	**1.3500e-003**	**2.6900e-003**	**2.0000e-004**	**1.2500e-003**	**1.4500e-003**	**0.0000**	**3.3457**	**3.3457**	**9.9000e-004**	**0.0000**	**3.3705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0000e-004	0.0000	6.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8000e-004	0.0127	0.0235	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.3457	3.3457	9.9000e-004	0.0000	3.3705
Total	**5.8000e-004**	**0.0127**	**0.0235**	**4.0000e-005**	**6.0000e-004**	**6.0000e-005**	**6.6000e-004**	**9.0000e-005**	**6.0000e-005**	**1.5000e-004**	**0.0000**	**3.3457**	**3.3457**	**9.9000e-004**	**0.0000**	**3.3705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

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	tons/yr										MT/yr					
Fugitive Dust					0.0170	0.0000	0.0170	8.4900e-003	0.0000	8.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0200e-003	0.0328	0.0167	4.0000e-005		1.4800e-003	1.4800e-003		1.3600e-003	1.3600e-003	0.0000	3.2861	3.2861	1.0600e-003	0.0000	3.3127
Total	**3.0200e-003**	**0.0328**	**0.0167**	**4.0000e-005**	**0.0170**	**1.4800e-003**	**0.0185**	**8.4900e-003**	**1.3600e-003**	**9.8500e-003**	**0.0000**	**3.2861**	**3.2861**	**1.0600e-003**	**0.0000**	**3.3127**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Date: 6/17/2021 11:58 AM

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	3.8200e-003	0.0000	3.8200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	0.0112	0.0216	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2861	3.2861	1.0600e-003	0.0000	3.3127
Total	**6.6000e-004**	**0.0112**	**0.0216**	**4.0000e-005**	**7.6700e-003**	**6.0000e-005**	**7.7300e-003**	**3.8200e-003**	**6.0000e-005**	**3.8800e-003**	**0.0000**	**3.2861**	**3.2861**	**1.0600e-003**	**0.0000**	**3.3127**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0800e-003	0.0786	0.0377	9.0000e-005		3.3700e-003	3.3700e-003		3.1000e-003	3.1000e-003	0.0000	8.0266	8.0266	2.6000e-003	0.0000	8.0915
Total	**7.0800e-003**	**0.0786**	**0.0377**	**9.0000e-005**	**0.0354**	**3.3700e-003**	**0.0388**	**0.0171**	**3.1000e-003**	**0.0202**	**0.0000**	**8.0266**	**8.0266**	**2.6000e-003**	**0.0000**	**8.0915**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Date: 6/17/2021 11:58 AM

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0159	0.0000	0.0159	7.7100e-003	0.0000	7.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0267	0.0519	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	8.0266	8.0266	2.6000e-003	0.0000	8.0915
Total	**1.5900e-003**	**0.0267**	**0.0519**	**9.0000e-005**	**0.0159**	**1.5000e-004**	**0.0161**	**7.7100e-003**	**1.5000e-004**	**7.8600e-003**	**0.0000**	**8.0266**	**8.0266**	**2.6000e-003**	**0.0000**	**8.0915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

3.5 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	tons/yr										MT/yr					
Off-Road	7.3000e-004	7.4100e-003	9.0000e-003	1.0000e-005		4.0000e-004	4.0000e-004		3.6000e-004	3.6000e-004	0.0000	1.1702	1.1702	3.7000e-004	0.0000	1.1796
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.3000e-004**	**7.4100e-003**	**9.0000e-003**	**1.0000e-005**		**4.0000e-004**	**4.0000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**1.1702**	**1.1702**	**3.7000e-004**	**0.0000**	**1.1796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

Date: 6/17/2021 11:58 AM

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5000e-004	5.7200e-003	9.8700e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.1702	1.1702	3.7000e-004	0.0000	1.1796
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.5000e-004**	**5.7200e-003**	**9.8700e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.1702**	**1.1702**	**3.7000e-004**	**0.0000**	**1.1796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

3.6 Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8400e-003	0.0173	0.0275	4.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	3.6402	3.6402	1.1800e-003	0.0000	3.6697
Total	**1.8400e-003**	**0.0173**	**0.0275**	**4.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**3.6402**	**3.6402**	**1.1800e-003**	**0.0000**	**3.6697**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7000e-004	0.0182	0.0314	4.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	3.6402	3.6402	1.1800e-003	0.0000	3.6697
Total	**6.7000e-004**	**0.0182**	**0.0314**	**4.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**3.6402**	**3.6402**	**1.1800e-003**	**0.0000**	**3.6697**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.2000e-004	5.6000e-004	4.8000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8956	0.8956	6.0000e-005	4.0000e-005	0.9101
Unmitigated	5.2000e-004	5.6000e-004	4.8000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.8956	0.8956	6.0000e-005	4.0000e-005	0.9101

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.89	2.25	2.51	2,816	2,816
Total	0.89	2.25	2.51	2,816	2,816

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	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

5.0 Energy Detail

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	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	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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**	**0.0000**

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.7000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	4.7000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.7000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**4.7000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.3702	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.3702	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0203	1.2000e-003	0.0000	0.0503
Unmitigated	0.0203	1.2000e-003	0.0000	0.0503

8.2 Waste by Land Use

Unmitigated

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.1	0.0203	1.2000e-003	0.0000	0.0503
Total		**0.0203**	**1.2000e-003**	**0.0000**	**0.0503**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.1	0.0203	1.2000e-003	0.0000	0.0503
Total		**0.0203**	**1.2000e-003**	**0.0000**	**0.0503**

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

19-162 Blossom Hill Trail - Santa Clara County, Annual

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

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 2: EMFAC2021 Calculations

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	8	0	40	0	12	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	432	0	240
Site Preparation	8	0	40	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	432	0	0
Grading	8	0	80	0	25	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	864	0	500
Trenching/Foundation	5	0	50	0	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	540	0	0
Paving	13	0	65	0	98	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	702	0	715.4

Number of Days Per Year					
2022	1/3/22	2/18/22	47	35	
			47	**35**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/3/2022	1/7/2022	5	5
Site Preparation	1/10/2022	1/14/2022	5	5
Grading	1/17/2022	1/28/2022	5	10
Trenching/Foundation	1/31/2022	2/11/2022	5	10
Paving	2/14/2022	2/18/2022	5	5

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Tons						*Metric Tons*
Criteria Pollutants											
2022	0.0004	0.0053	0.0047	0.0000	0.0015	0.0003	0.0018	0.0002	0.0002	0.0004	3.1537
Toxic Air Contaminants (1 Mile Trip Length)											
2022	0.0003	0.0015	0.0017	0.0000	0.0001	0.00003	0.0002	0.00002	0.00002	0.00004	0.4118

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2022	HHDT	Aggregate	Aggregate	Gasoline	3.827367	105.1913	105.1913	0	76.57795	0	9.246272	0	1.235102	0.00578	0	0.001696	0.005	0.036521	0.006286	0	0.001845	0.02	0.104346	2407.176	0	49.64979	0.419155	0	0.000162	0.231899	0	0.038678	2.628217	0	0.000881	0.16301	1.46846	10.96573	3.835087	0	0.000965	0.16301	1.46846	10.96573	0.039703	94.77398	0	0.712144	0.023797	0	0.000491
Santa Clara	2022	HHDT	Aggregate	Aggregate	Diesel	8126.63	984491.3	984491.3	0	118998.6	0	2.444518	67.79787	2.544846	0.027272	0.034513	0	0.008769	0.027987	0.028505	0.036074	0	0.035077	0.079962	1677.544	12677.87	0	0.001458	0.236832	0	0.264298	1.997403	0	0.031398	5.098937	0	0	0	0	0.035744	5.804752	0	0	0	0	0	0.203666	0.125232	70.47019	0	0.015885	0.120052	0
Santa Clara	2022	HHDT	Aggregate	Natural Ga	Aggregate	660.7756	47681.36	47681.36	0	5809.397	0	1.356717	13.62116	0	0.001899	0.022358	0	0.009	0.047596	0.002065	0.024316	0	0.036	0.135989	1429.3	10316.77	0	2.688526	36.13158	0	0.291372	2.10314	0	0.062535	0.56302	0	0	0	0	2.77132	36.92822	0	0	0	0	0	0.851705	14.53027	73.87982	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Gasoline	604047.8	22374250	22374250	0	2805661	0	0.053791	0	0.287921	0.00126	0	0.002062	0.002	0.002656	0.00137	0	0.002242	0.008	0.007588	287.1374	0	73.33113	0.002925	0	0.081262	0.005394	0	0.035089	0.011654	0	0.381731	0.098272	0.249754	1.530333	0.017001	0	0.417946	0.098272	0.249754	1.530333	0.032827	0.847106	0	3.666246	0.002839	0	0.000725
Santa Clara	2022	LDA	Aggregate	Aggregate	Diesel	1988.847	60930.09	60930.09	0	8564.495	0	0.263546	0	0	0.019976	0	0	0.002	0.00269	0.020879	0	0	0.008	0.007686	236.272	0	0	0.00151	0	0	0.037225	0	0	0.032513	0	0	0	0	0	0.037014	0	0	0	0	0	0	0.0031	0.352928	0	0	0.002239	0	0
Santa Clara	2022	LDA	Aggregate	Electricity	Aggregate	49768.56	2058456	0	2058456	294733.9	794733.9	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	14080.33	626833.5	326494.8	300338.7	58222.18	90711.24	0.003418	0	0.11551	0.000718	0	0.002292	0.002	0.001368	0.000781	0	0.002492	0.008	0.003908	145.2228	0	67.22203	0.000469	0	0.042745	0.000623	0	0.021047	0.001478	0	0.173285	0.039673	0.035067	0.451466	0.002157	0	0.189725	0.039673	0.035067	0.451466	0.019838	0.224082	0	1.339893	0.001436	0	0.000665
Santa Clara	2022	LDT1	Aggregate	Aggregate	Gasoline	54974.08	1779154	1779154	0	245182.1	0	0.160037	0	0.042895	0.001971	0	0.003006	0.002	0.003236	0.002144	0	0.003269	0.008	0.009246	338.1243	0	90.32061	0.007798	0	0.120165	0.011179	0	0.040992	0.03517	0	0.630523	0.182138	0.532387	2.932213	0.035502	1.699209	0	6.111696	0.003343	0	0.000893
Santa Clara	2022	LDT1	Aggregate	Diesel	Aggregate	28.88602	444.5778	444.5778	0	84.95747	0	1.664076	0	0	0.241157	0	0	0.002	0.003731	0.252061	0	0	0.008	0.01066	415.6618	0	0	0.013984	0	0	0.065488	0	0	0.301058	0	0	0	0	0	0.342735	0	0	0	0	0	0	0.0031	1.609282	0	0	0.003939	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Electricity	182.9928	6367.047	0	6367.047	860.9347	2458.206	0	0	0	0	0	0	0.002	0.001541	0	0	0	0.008	0.004403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	24.31577	1158.953	555.2268	603.7259	100.5457	182.3432	0.003144	0	0.11551	0.00042	0	0.001472	0.002	0.001376	0.000457	0	0.001601	0.008	0.003931	133.572	0	73.48077	0.00043	0	0.042675	0.000571	0	0.020981	0.001359	0	0.173285	0.025111	0.023155	0.300675	0.020121	0.206104	0	1.339893	0.00132	0	0.000726
Santa Clara	2022	LDT2	Aggregate	Aggregate	Gasoline	274728.5	9911730	9911730	0	1286654	0	0.087216	0	0.387125	0.001308	0	0.002055	0.002	0.003124	0.001422	0	0.002235	0.008	0.008926	357.8859	0	92.09899	0.003418	0	0.092802	0.006919	0	0.046202	0.013801	0	0.439671	0.088088	0.231141	1.442564	0.020134	0	0.481384	0.088088	0.231141	1.442564	0.034673	0.960886	0	4.129331	0.003538	0	0.00091
Santa Clara	2022	LDT2	Aggregate	Aggregate	Diesel	933.788	35569.23	35569.23	0	4479.453	0	0.049482	0	0	0.005617	0	0	0.002	0.003089	0.005871	0	0	0.008	0.008825	319.8313	0	0	0.000662	0	0	0.05039	0	0	0.01425	0	0	0	0	0	0.016223	0	0	0	0	0	0	0.0031	0.132603	0	0	0.003031	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Electricity	669.3585	23693.95	0	23693.95	3436.204	9147.819	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	1256.28	57825.99	28723.51	29102.47	5194.718	8789.814	0.003259	0	0.11551	0.000565	0	0.001911	0.002	0.001372	0.000614	0	0.002078	0.008	0.00392	138.4921	0	79.93529	0.000446	0	0.042681	0.000592	0	0.020988	0.00141	0	0.173285	0.026873	0.02547	0.333582	0.020057	0	0.189725	0.026873	0.02547	0.333582	0.020799	0.213696	0	1.339893	0.001369	0	0.00079
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Gasoline	19023.54	692949.2	692949.2	0	283422.4	0	0.22563	0.03858	0.680855	0.001666	0	0.000355	0.002	0.0273	0.001812	0	0.000386	0.008	0.078	910.666	121.4496	25.8752	0.010696	0.11838	0.036173	0.012587	0.003045	0.052713	0.053941	0.441903	0.181796	0.053097	0.287419	3.005479	0.078711	0.644824	0.189044	0.053097	0.287419	3.005479	0.044851	1.310703	3.750518	3.032062	0.009003	0.001201	0.000256
Santa Clara	2022	LHDT1	Aggregate	Diesel	Aggregate	9466.897	364941.3	364941.3	0	119081.7	0	2.046185	2.148991	0	0.042212	0.027161	0	0.003	0.0273	0.044121	0.028389	0	0.012	0.078	640.1321	134.8074	0	0.009365	0.005098	0	0.100853	0.021239	0	0.201618	0.10976	0	0	0	0	0.229529	0.124954	0	0	0	0	0	0.156672	0.574472	0.909745	0	0.006066	0.001277	0
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Gasoline	2479.119	89333.8	89333.8	0	36935.18	0	0.214022	0.038116	0.662237	0.001522	0	0.000288	0.002	0.03185	0.001655	0	0.000313	0.008	0.091	1017.016	140.0339	25.93331	0.008303	0.117781	0.035049	0.012366	0.003023	0.05141	0.03933	0.436803	0.174741	0.049582	0.263161	2.773988	0.057391	0.637382	0.19132	0.049582	0.263161	2.773988	0.044954	1.055116	3.755463	3.106689	0.010054	0.001384	0.000256
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Diesel	4276.175	167672	167672	0	53788.9	0	1.602621	2.114348	0	0.036809	0.027077	0	0.003	0.03185	0.038473	0.028302	0	0.012	0.091	773.4619	214.911	0	0.00832	0.005098	0	0.121859	0.033859	0	0.179126	0.10976	0	0	0	0	0.203923	0.124954	0	0	0	0	0	0.1727	0.476085	0.909745	0	0.007329	0.002036	0
Santa Clara	2022	MCY	Aggregate	Aggregate	Gasoline	27595.09	162924	162924	0	55190.18	0	0.60517	0	0.149724	0.001772	0	0.003556	0.001	0.0042	0.001891	0	0.003773	0.004	0.012	188.9834	0	50.90901	0.173457	0	0.19335	0.041009	0	0.008761	1.156556	0	1.442993	3.560376	3.734124	3.980024	1.378949	0	1.568432	3.560376	3.734124	3.980024	0.008705	13.58248	0	8.107621	0.001868	0	0.000503
Santa Clara	2022	MDV	Aggregate	Aggregate	Gasoline	150747.3	5216512	5216512	0	697659.3	0	0.136769	0	0.517519	0.001357	0	0.002255	0.002	0.003193	0.001475	0	0.002452	0.008	0.009123	434.2294	0	112.1929	0.005018	0	0.119363	0.009481	0	0.045397	0.021781	0	0.614579	0.106179	0.293735	1.762049	0.031733	0	0.672881	0.106179	0.293735	1.762049	0.034617	1.174347	0	4.66825	0.004293	0	0.001109
Santa Clara	2022	MDV	Aggregate	Aggregate	Diesel	2337.328	86668.85	86668.85	0	11158.46	0	0.05815	0	0	0.005454	0	0	0.002	0.003153	0.0057	0	0	0.008	0.009009	417.1884	0	0	0.000553	0	0	0.065728	0	0	0.011906	0	0	0	0	0	0.013554	0	0	0	0	0	0	0.0031	0.20344	0	0	0.003953	0	0
Santa Clara	2022	MDV	Aggregate	Electricity	Aggregate	623.6975	22215.8	0	22215.8	3205.616	8577.131	0	0	0	0	0	0	0.002	0.001523	0	0	0	0.008	0.004351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	MDV	Aggregate	Plug-in Hyb	Aggregate	789.5612	33722.81	17285.18	16437.63	3264.836	4964.654	0.003363	0	0.11551	0.000723	0	0.002366	0.002	0.001369	0.000786	0	0.002574	0.008	0.003913	142.9094	0	99.86367	0.000458	0	0.042456	0.000605	0	0.020778	0.001454	0	0.173285	0.030414	0.029758	0.381921	0.002122	0	0.189725	0.030414	0.029758	0.381921	0.021528	0.220512	0	1.339893	0.001413	0	0.000987
Santa Clara	2022	MH	Aggregate	Aggregate	Gasoline	2642.084	23105.28	23105.28	0	264.3141	0	0.551445	0	0.40416	0.001917	0	0.000461	0.003	0.015756	0.002085	0	0.000502	0.012	0.045017	1949.266	0	32.13484	0.02167	0	0.038467	0.030967	0	0.041056	0.101032	0	0.168576	13.95792	0.32254	4.985527	0.147425	0	0.184569	13.95792	0.32254	4.985527	0.044583	2.705832	0	3.782453	0.01927	0	0.000318
Santa Clara	2022	MH	Aggregate	Aggregate	Diesel	940.8008	9155.21	9155.21	0	94.08008	0	4.438358	0	0	0.104654	0	0	0.004	0.015675	0.109386	0	0	0.016	0.044785	1080.89	0	0	0.005865	0	0	0.170295	0	0	0	0	0	0	0.126278	0	0	0	0.143759	0	0	0	0	0	0.143863	0.424501	0	0	0.010242	0	0
Santa Clara	2022	MHDT	Aggregate	Aggregate	Gasoline	1426.535	69284.18	69284.18	0	28542.11	0	0.686176	0.088062	0.462297	0.001432	0	0.000593	0.003	0.015756	0.001558	0	0.000645	0.012	0.045017	1819.358	542.4673	48.22005	0.022377	0.249961	0.051086	0.030967	0.006806	0.032093	0.113907	1.006391	0.293642	0.041091	0.336192	3.327263	0.166213	1.468523	0.321501	0.041091	0.336192	3.327263	0.044929	2.41434	15.04306	6.517433	0.017986	0.005363	0.000477
Santa Clara	2022	MHDT	Aggregate	Diesel	Aggregate	10189.55	428042.3	428042.3	0	121266.8	0	1.73167	15.28688	1.483339	0.020297	0.042841	0	0.003	0.015941	0.021215	0.044778	0	0.012	0.045546	1158.231	2324.123	0	0.002426	0.013407	0	0.18248	0.366167	0	0.052238	0.288656	0	0	0	0	0.05947	0.328613	0	0	0	0	0	0.196531	0.168917	7.277505	0	0.010968	0.022008	0
Santa Clara	2022	MHDT	Aggregate	Natural Ga	Aggregate	84.48052	3914.205	3914.205	0	796.8889	0	0.162027	6.474875	0	0.001029	0.016219	0	0.003	0.016011	0.001119	0.01764	0	0.012	0.045746	1002.329	5210.514	0	0.725882	17.91735	0	0.204331	1.062197	0	0.010371	0.256004	0	0	0	0	0.740815	18.28597	0	0	0	0	0	1.06	2.991509	30.51881	0	0	0	0
Santa Clara	2022	OBUS	Aggregate	Aggregate	Gasoline	470.9234	21653.3	21653.3	0	9422.235	0	0.596343	0.064966	0.407047	0.000863	0	0.000262	0.003	0.01568	0.000939	0	0.000285	0.012	0.044799	1804.41	384.2235	32.13915	0.017165	0.194553	0.036748	0.027969	0.005221	0.030733	0.084851	0.744858	0.194941	0.033671	0.142865	2.559429	0.123815	1.086895	0.213436	0.033671	0.142865	2.559429	0.044907	1.918016	5.766114	4.119591	0.017838	0.003798	0.000318
Santa Clara	2022	OBUS	Aggregate	Aggregate	Diesel	852.1679	61336.68	61336.68	0	8739.295	0	1.430263	8.186956	1.463102	0.021712	0.009363	0	0.003	0.01808	0.022694	0.009786	0	0.012	0.051656	1287.997	1601.524	0	0.002446	0.020931	0	0.202924	0.252321	0	0.052654	0.450629	0	0	0	0	0.059942	0.513007	0	0	0	0	0	0.209454	0.176751	7.212161	0	0.012197	0.015165	0
Santa Clara	2022	OBUS	Aggregate	Natural Ga	Aggregate	6.12419	392.3999	392.3599	0	54.50529	0	0.261572	1.567279	0	0.000722	0.003187	0	0.003	0.016148	0.000785	0.003466	0	0.012	0.046137	1035.05	1183.472	0	0.750937	4.605624	0	0.211002	0.241259	0	0.010729	0.065805	0	0	0	0	0.766387	4.700378	0	0	0	0	0	1.06	3.149633	5.746939	0	0	0	0
Santa Clara	2022	SBUS	Aggregate	Aggregate	Gasoline	160.4139	7959.43	7959.43	0	641.6556	0	0.527271	0.925562	0.689048	0.000853	0	0.000055	0.002	0.015721	0.000928	0	0.000599	0.008	0.044917	820.0467	2616.389	59.14656	0.01243	2.458676	0.074784	0.027982	0.086242	0.063619	0.060464	10.62737	0.42659	0.108472	0.246255	1.510943	0.088229	15.50744	0.467063	0.108472	0.246255	1.510943	0.045	1.548936	82.15497	10.71476	0.008107	0.025866	0.000585
Santa Clara	2022	SBUS	Aggregate	Diesel	Aggregate	662.5162	15413.71	15413.71	0	9593.235	0	4.235498	22.873	0.450634	0.022112	0.02288	0	0.003	0.015721	0.023112	0.023915	0	0.012	0.044917	1152.917	2246.353	0	0.002834	0.008182	0	0.181642	0.353914	0	0.061017	0.17615	0	0	0	0	0.069464	0.200533	0	0	0	0	0	0.140239	0.185604	4.488491	0	0.010917	0.021272	0
Santa Clara	2022	SBUS	Aggregate	Natural Ga	Aggregate	22.59677	578.3532	578.3532	0	327.2012	0	0.608852	5.295722	0	0.003378	0.010766	0	0.003	0.015721	0.003674	0.011708	0	0.012	0.044917	1281.922	4050.07	0	3.549889	15.56318	0	0.261328	0.825633	0	0.050721	0.222367	0	0	0	0	3.622922	15.88337	0	0	0	0	0	1.06	12.18179	19.41173	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Gasoline	45.81104	4784.037	4784.037	0	183.2442	0	0.03147	0	0.560776	0.000899	0	8.88E-05	0.002	0.03185	0.000978	0	9.66E-05	0.008	0.091	974.6428	0	38.21309	0.002303	0	0.053785	0.004696	0	0.082445	0.006534	0	0.197701	0.064874	0.125778	0.787098	0.009534	0	0.216458	0.064874	0.125778	0.787098	0.045	0.577943	0	5.5933	0.009635	0	0.000378
Santa Clara	2022	UBUS	Aggregate	Diesel	Aggregate	435.6475	48716.13	48716.13	0	1742.59	0	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.743	0	0	0.003215	0	0	0.173422	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0	0.187775	0.079368	0	0	0.01043	0	0
Santa Clara	2022	UBUS	Aggregate	Electricity	Aggregate	5.046757	199.0027	0	199.0027	20.18703	346.9103	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Natural Ga	41.84875	4783.781	4783.781	0	167.395	0	0.058772	0	0	0.000282	0	0	0.008181	0.0385	0.000295	0	0	0.032723	0.11	1299.039	0	0	4.245393	0	0	0.264818	0	0	0.060658	0	0	0	0	0	4.332735	0	0	0	0	0	0	0.97	49.03622	0	0	0	0	0

Attachment 3: Construction Health Risk Calculations

Blossom Hill Trail, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.0075	CON_DPM	15.0	0.00412	5.19E-04	4,765	1.09E-07
Total		***0.0075***		***15.0***	***0.0041***	***0.0005***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

Blossom Hill Trail, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.0258	51.6	0.01415	1.78E-03	4,765	3.74E-07
Total			***0.0258***	***51.6***	***0.0141***	***0.0018***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

Blossom Hill Station TOD Trail, San Jose, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)	Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child	(-)	($\mu g/m^3$)
2022	0.0007	0.0024	0.12	0.0001	0.003
Total	-	-	**0.12**	-	-
Maximum	0.0007	0.0024	**-**	**0.0001**	**0.003**

Maximum Impacts at First Step Learning Center - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)	Hazard Index	Maximum Annual PM2.5 Concentration
	Exhaust PM10/DPM ($\mu g/m^3$)	Fugitive PM2.5 ($\mu g/m^3$)	Infant/Child	(-)	($\mu g/m^3$)
2022	0.0001	0.0015	0.09	0.00001	0.002
Total	-	-	**0.09**	-	-
Maximum	0.0001	0.0015	**-**	**0.00001**	**0.002**

Blossom Hill Trail, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0007	10	0.01	2022	0.0007	-	-			
1	1	0 - 1	2022	0.0007	10	0.11	2022	0.0007	1	0.002	0.0001	0.002	0.003
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.000			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.000			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.000			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.000			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.000			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.000			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.000			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.000			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.000			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.000			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.000			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.000			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.000			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.000			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.000			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.000			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.000			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.000			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.000			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.000			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.000			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.000			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.000			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.000			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.000			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.000			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.000			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.000			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.000			
Total Increased Cancer Risk						**0.12**				**0.002**			

* Third trimester of pregnancy

Blossom Hill Trail, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction Impacts at First Step Learning Center - 1 meter - Infant Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/9 hrs) x (7 days/5 days) = 3.73
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	School Child	Adult
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	250	250	250
AT =	70	70	70
SAF =	1.00	3.73	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	0 - 1	2022	0.0007	10	0.1
2	1			0.0000	10	0.0
3	1			0.0000	3	0.0
4	1			0.0000	3	0.0
5	1			0.0000	3	0.0
6	1			0.0000	3	0.0
7	1			0.0000	3	0.0
8	1			0.0000	3	0.0
9	1			0.0000	3	0.0
Total Increased Cancer Risk						**0.09**

* Children assumed to be 3 months to 4.5 years of age.

Maximum		
Hazard Index	**Fugitive PM2.5**	**Total PM2.5**
0.0001	0.0025	0.0025