APPENDIX B
Air Quality Report

MORGAN HILL DEVCO RESIDENTIAL PROJECT AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Morgan Hill, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with Morgan Hill Devco residential project located in Morgan Hill, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing land uses at the site, construction of new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were estimated using appropriate computer models. In addition, the potential project health risk impact (includes construction and operation) and the impacts of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The project proposes the construction of 358 residential units (which includes 20 accessory dwelling units [ADUs]) on the approximately 69.4-acre site located at the northeast quadrant of Barrett Avenue and Hill Road intersection in the City of Morgan Hill, California. This site is mostly undeveloped. There are four vacant agricultural buildings currently on the site totaling approximately 25,000 square feet (sf), which would be removed as part of the project. The project would subdivide the site into 283 lots, including 262 one- to two-story single-family detached houses, 21 two-story age-restricted single-family houses with 20 ADUs, and 55 age-restricted three-story condominiums. The project would include nine acres of public open space and 916 parking spaces. The project would also include off-site improvements to Jackson Park, Jackson Academy of Math and Music Elementary School, Hill Road, and Barrett Avenue.

Updates to Project

The air quality analysis was completed in 2022. Some changes to the proposed Project's land use sizes and square-footage have been made since the report was completed. These changes included the land uses consisting of 223 single-family homes, 42 court homes, 21 senior cottages, 34 senior duets, and 44 ADUs, for a total of 364 units. This is an overall increase of 6 units from what was originally analyzed. Although the land use changes slightly increase, the overall total square-footage decreases from approximately 720,000-sf to 611,550-sf. Due to the overall decrease and with these changes to construction default assumptions would not change, additional CalEEMod modeling was not conducted.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

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

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

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

[2] 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.

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, infants and 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 the adjacent residents in the single-family homes to the north and east of the site. There are other single-family residences to the west and south of the site at further distances. In addition, there are children at the Jackson Academy of Math and Music Elementary School (five years and older) adjacent to the northeast of the site. This project would also introduce new sensitive receptors (i.e., residents).

Regulatory Agencies

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD) is currently required for use by all vehicles in the U.S.

All of the above Federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles[4]. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X in the future.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards

[4] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

(CAAQS). The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's 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.[5] 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. Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[6] 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. The project site is not within a CARE area and not within a BAAQMD overburdened area as identified by CalEnviroScreen.

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 TACs, odors, and greenhouse gas (GHG) emissions. *Attachment 1* includes detailed community risk modeling methodology.

[5] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.
[6] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en , accessed 10/1/2021.
[7] Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

Morgan Hill 2035 General Plan

Adopted July 27, 2016, the *Morgan Hill 2035 General Plan* includes goals, policies, and actions to improve air quality issues facing the City of Morgan Hill.[8] The following goals, policies, and actions are applicable to the proposed project:

Goal NRE-10: Reduced air pollution emissions.

Policy NRE-10.1 **Regional and Subregional Cooperation**. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.

Policy NRE-10.2 **State and Federal Regulation**. Encourage effective regulation of mobile and stationary sources of air pollution and support State and federal regulations to improve automobile emission controls.

Policy NRE-10.3 **Automobile Emissions**. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.

Policy NRE-10.4 **Reduced Automobile Use**. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.

Goal NRE-11: Minimized exposure of people to toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Policy NRE-11.1 **TACs and Proposed Sensitive Use**s. Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.

[8] City of Morgan Hill, California (2016). "Chapter 8 Natural Resources and Environment". *City of Morgan Hill General Plan 2035.* https://www.morgan-hill.ca.gov/DocumentCenter/View/22839/MH2035-General-Plan---December-2017?bidId=

Policy NRE-11.2 **TACs and Existing Sensitive Uses**. Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.

Policy NRE-11.3 **Health Risk Assessments.** For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments

Policy NRE-11.4 **Truck Routes**. For development projects generating significant heavy-duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.

Policy NRE-11.5 **Truck Idling**. For development projects generating significant truck traffic, require signage to remind drivers that the State truck idling law limits truck idling to five (5) minutes.

Policy NRE-11.6 **Vegetation Buffers**. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.

Goal NRE-12: Minimized air pollutant emissions from demolition and construction activities

Policy NRE-12.1: **Best Practices.** Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.

Policy NRE-12.2 **Conditions of Approvals.** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

Policy NRE-12.3 **Control Measures.** Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics

control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Policy NRE-12.4 **Grading**. Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

- Action NRE-12.A Standard Measures for Demolition and Grading. Adopt and periodically update dust, particulate matter, and exhaust control standard measures for demolition, grading, and construction activities to include on project plans mitigation measures as conditions of approval based Bay Area Air Quality Management District CEQA Guidelines. Include measures to prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- Action NRE-12.B Grading Ordinance. Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement and construction.

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 that were used in this analysis are summarized in Table 1. Community risks are considered significant if they exceed these levels.

Table 1. 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 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 emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (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.

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 O_3 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 O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NOx), 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.[9] The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Construction Land Uses Entered into CalEEMod[10]

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Single Family Housing	262	Dwelling Units	564,194	69.4
Single Family Housing	20*	Dwelling Units	43,068	
Condo/Townhouse	55	Dwelling Units	118,438	
City Park	9	Acres	392,040	
Parking Lot	916	Parking Spaces	336,400	
* The updated project would have 21 single-family houses with 20 ADUs; however, the square-footage would remain the same and not change the proposed construction activity.				

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

[10] The land uses have changed to include 223 single-family homes, 42 court homes, 21 senior cottages, 34 senior duets, and 44 ADUs, for a total of 364 units, which is an increase of 6 units. The total square-footage would also decrease to 611,550-sf. These changes would not change the default construction activities predicted and modeled in CalEEMod for this project. Therefore, the construction emissions would negligibly change and the construction impacts and mitigation measures would remain the same.

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-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on CalEEMod defaults for a project of this type and size that was then reviewed and approved by the project applicant.

The project construction equipment worksheet approved by the applicant 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 based on CalEEMod defaults. The construction schedule assumed that the earliest possible start date would be January 2022 and the project would be built out over a period of approximately 5 years and 9 months, or 1,480 construction workdays. The first year of full operation was assumed to be 2028. The preliminary plans show phasing of 5 to 14 homes constructed per phase over 27 phases. The project site is flat and mostly undeveloped open fields that would not require extensive grading.

Construction Truck Traffic Emissions

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 were estimated from the provided demolition volumes and 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.

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. The construction 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 defaults, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1 and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, 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 (demolition material export and soil import/export). Since CalEEMod does not address cement or asphalt trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates from the year 2022 for Santa Clara County was used. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 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]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% 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	1,050	-	139	25,150-sf existing building demolition and 100 tons pavement demolition. Default worker trips.
Site Preparation	720	-	-	CalEEMod default worker trips.
Grading	2,200	-	3,202	25,617-cy soil export. CalEEMod default worker trips.
Trenching	550	-	-	CalEEMod default worker trips.
Building Construction	510,600	177,600	500	250 cement truck round trips. CalEEMod default worker and vendor trips.
Interior Construction	6,900	-	-	CalEEMod default worker trips.
Paving	1,125	-	400	200 asphalt truck round trips. CalEEMod default worker trips.

Notes: [1] Based on 2022 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes demolition trips estimated by CalEEMod based on amount of material to be removed. Cement and asphalt trips estimated based on data provided by the applicant.

Summary of Computed Construction 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 4 shows the unmitigated and mitigated annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project.

As indicated in Table 4, unmitigated annualized project construction ROG emissions are predicted to exceed the BAAQMD significance thresholds for ROG in 2027. However, with implementation of *Mitigation Measures AQ-1 through AQ-3*, the ROG emissions would be reduced to a level below the significance thresholds of 54 pounds per day. All other construction criteria pollutants emissions are below the BAAQMD thresholds.

Table 4. Construction Period Emissions

Year	ROG		NOx		PM_{10} Exhaust		$PM_{2.5}$ Exhaust	
Construction Emissions Per Year (Tons)								
Year	Unmit	Mit	Unmit	Mit	Unmit	Mit	Unmit	Mit
2022	0.58	0.27	5.02	3.02	0.24	0.06	0.20	0.03
2023	0.37	0.24	2.70	2.25	0.14	0.06	0.11	0.03
2024	0.36	0.24	2.59	2.26	0.13	0.06	0.10	0.03
2025	0.35	0.24	2.45	2.25	0.12	0.06	0.09	0.03
2026	0.35	0.24	2.45	2.25	0.12	0.06	0.09	0.03
2027	5.36	2.73	1.08	1.12	0.06	0.04	0.04	0.02
Annualized Daily Construction Emissions (pounds/day)								
Year	Unmit	Mit	Unmit	Mit	Unmit	Mit	Unmit	Mit
2022 (259 construction workdays)	4.44	2.11	38.72	23.27	1.86	0.47	1.52	0.25
2023 (261 construction workdays)	2.85	1.81	20.68	17.22	1.08	0.47	0.82	0.24
2024 (262 construction workdays)	2.75	1.82	19.81	17.27	0.99	0.47	0.74	0.24
2025 (261 construction workdays)	2.65	1.81	18.82	17.26	0.91	0.47	0.66	0.24
2026 (261 construction workdays)	2.65	1.81	18.82	17.26	0.91	0.47	0.66	0.24
2027 (176 construction workdays)	**60.92**	31.01	12.34	12.69	0.66	0.41	0.42	0.19
BAAQMD Thresholds (pounds per day)	*54* lbs./day		*54* lbs./day		*82* lbs./day		*54* lbs./day	
Exceed Threshold?	**Yes (2027)**	No	No	No	No	No	No	No
Notes: Unmit = Unmitigated, Mit = Mitigated that assumes use of equipment meeting EPA Tier 4 standards.								

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* needed to control $PM_{2.5}$ concentrations at nearby sensitive receptors.

Mitigation Measure AQ-1: Implement BAAQMD-Recommended Standard 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

Mitigation Measure AQ-1 represents standard mitigation measures that would achieve greater than a 50 percent reduction in on-site fugitive $PM_{2.5}$ emissions. These measures are consistent with recommendations in the BAAMQD CEQA Guidance for providing "best management practices" to control construction emissions.

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. At least 60 percent of 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 4 emission standards and the remaining 40 percent shall meet U.S. EPA Tier 3 emission standards, if feasible, otherwise,

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB verifiable diesel emission control devices

that altogether achieve a 50 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

b. Use of electrical or non-diesel equipment with lower particulate matter emissions that meet the PM reduction requirements above.

2. 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 60 percent Tier 4 and 40 percent Tier 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
   - Implementation of different building techniques 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.

Mitigation Measure AQ-3: Require use of low VOC coatings to reduce ROG emissions.

The project shall use "super-compliant" low volatile organic compound (i.e., ROG) coatings, that have emissions lower than current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 50 percent of all residential and nonresidential interior paints and 50 percent of exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 50 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used. Examples of "super-compliant" coatings are contained in the South Coast Air Quality Management District's website.[11]

Effectiveness of Mitigation AQ-2 and AQ-3

The effectiveness of *Mitigation Measure AQ-2 and AQ-3* are based on CalEEMod modeling conducted to estimate the impacts associated with using Tier 4 interim construction equipment and using 50 percent interior and exterior "super-compliant" coatings. These measures together were found by CalEEMod to reduce on-site construction ROG emissions by 50-percent and below the significant threshold.

[11] SCAQMD: http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings

Operational Period Emissions

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

CalEEMod Inputs

Land Uses

A separate CalEEMod run for the operational period in the year 2028 was modeled in order to capture the operational emissions of the updated project's uses of 21 single-family houses with 20 ADUs. Inputs are summarized in Table 5.

Table 5. Operational Land Uses Entered into CalEEMod[12]

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Single Family Housing	262	Dwelling Units	564,194	69.4
Single Family Housing	20	Dwelling Units	43,068	
Single Family Housing	21	Dwelling Units	37,800	
Condo/Townhouse	55	Dwelling Units	118,438	
City Park	9	Acres	392,040	
Parking Lot	916	Parking Spaces	336,400	

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. The earliest year of full operation would be 2028 if construction begins in 2022. Emissions associated with build-out later than 2028 would be lower.

Traffic Information

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.[13] The project would produce approximately 3,000 daily trips.[14] The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday

[12] The land uses changes would increase the total number of units by 6 and decrease the total square-footage to 611,550-sf. These changes would marginally effect ROG and NOx emissions, but not change impact findings. Therefore, operational impacts would remain the same.

[13] Hexagon Transportation Consultants, Inc., *New Horizons Residential Development Transportation Analysis*, August 12, 2022.

[14] Revised traffic data with the updated land uses indicates the project would produce 3,170 daily trips. This would increase operational emissions slightly, but not change impact findings. Therefore, operational impacts would remain the same.

trips to the default weekday rate with the project-specific daily weekday trip rate. The project traffic consultant determined that the project would generate a vehicle-miles-traveled (VMT) rate of 33.25 VMT per capita. Using this rate, the computed total daily VMT, and computed total daily trips, the project trip lengths were then calculated and entered into CalEEMod. The default trip types specified by CalEEMod were used.

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.[15]

Energy – Electricity

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 model has a default rate of 2 pounds of CO_2 per megawatt of electricity produced, which is based on Silicon Valley Clean Energy (SVCE) 2019 emissions rate. SVCE is the official electricity provider for Morgan Hill. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Morgan Hill are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable sources.[16]

Energy – Natural Gas

Under Ordinance No. 2306 and Chapter 15.63 to the Morgan Hill Municipal Code: Prohibition of Natural Gas Infrastructure in New Buildings, natural gas infrastructure would be prohibited in newly constructed buildings; however, there is an exception where an applicant can establish that it is not feasible. For this analysis, only newly constructed residences were assumed to be all electric with no gas usage.

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 percent aerobic/anerobic conditions to represent wastewater treatment plant conditions. The

[15] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac
[16] See: https://www.svcleanenergy.org/choices/

project site would not send wastewater to septic tanks or facultative lagoons. All hearths were assumed to be powered by natural gas per BAAQMD Regulation 6, Rule 3, which requires that new building construction not install a wood-burning device (effective as of November 1, 2016).[17]

Existing Uses

The existing land uses on the project site include four vacant agricultural buildings. This use produces little to no operational and traffic emissions which would not considerably offset emissions from the proposed project. Therefore, the emissions from the existing uses were not considered, nor used to offset proposed project conditions.

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 6 shows average daily 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 6. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2028 Project Operational Emissions (*tons/year*)	5.34 tons	1.56 tons	4.04 tons	1.04 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Thresholds?	No	No	No	No
2028 Project Operational Emissions (*lbs./day*)[1]	29.29 lbs.	8.53 lbs.	22.12 lbs.	5.69 lbs.
BAAQMD Thresholds (lbs./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. The project would not include the installation of any stationary TAC emissions sources but would increase traffic consisting of mostly light-duty vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC

[17] Bay Area Air Quality Management District,

was also assessed in terms of the cumulative risk that includes the project contribution, as well as the risk on the new sensitive receptors introduced by the project.

Community Risk Methodology for Construction and Operation

Community TAC risk impacts were assessed 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 of TACs. These sources include on-site construction activity, construction truck hauling, project generators, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[18] with the 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 over the 30-year period. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum risk for the entirety of the project. The project 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 calculation of TAC and $PM_{2.5}$ emissions, dispersion modeling of these emissions, and computations of cancer risk and non-cancer health effects.

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 the existing residences surrounding the site and the students at the elementary school to the northeast of the project site, 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. Community risks were also computed for children at Jackson Academy of Math and Music Elementary School (five years and older).

Community Health Risk from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impacts associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust (i.e., DPM) poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that

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

evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[19] This assessment included dispersion modeling to predict the off-site and on-site concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be evaluated.

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 DPM emissions from all construction stages estimated to be 0.56 tons (1,118 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 and EMFAC2021 to be 0.44 tons (879 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences, school) 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.[20] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[21] The release height incorporates both the physical 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, an area source was used with a near-ground level release height of 7 feet (2 meters). 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 of 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

[19] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[20] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[21] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology.* April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

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.

The modeling used a five-year data set (2013-2017) of hourly meteorological data from the San Martin Airport that was prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring Monday through Friday between 8:00 a.m. to 5:00 p.m., when the majority of construction activity would occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2022-2027 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) were used to represent the breathing height on the first floors of nearby single-family residences.[22] A receptor height of 3 feet (1 meter) was used to represent the breathing height of children at the elementary school.

Summary of Construction Community Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the Office of Environmental Health Hazard Assessment (OEHHA) guidance for age sensitivity factors and exposure parameters as recommended by BAAQMD, as described in *Attachment 1*. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. Children at the elementary school were assumed to be five years and older. The child (ages 2 through 16 years old) cancer risk parameters were used to calculate the increased cancer risk for the elementary school students.

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 reference exposure level of 5 $\mu g/m^3$.

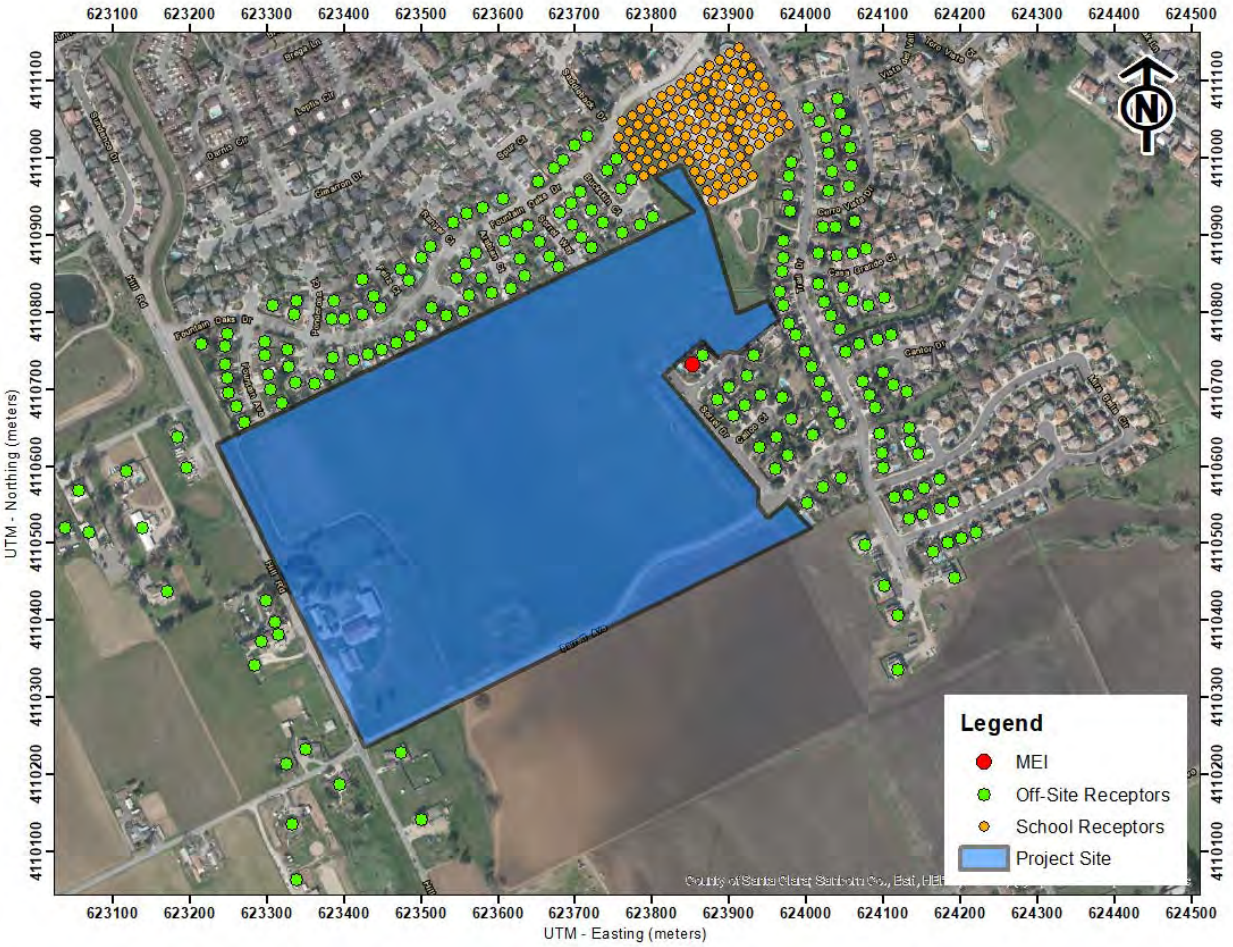
The maximum modeled annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors to find the maximally exposed individuals (MEI). Results of this assessment indicated that the MEI most affected by construction was located on the first floor (5 feet above ground) of a single-family residence to the east of the project site. The location of the MEI and nearby sensitive receptors are shown in Figure 1. Table 7 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with construction activities at the nearby elementary school. The maximum increased cancer risks were adjusted using child exposure parameters. The

[22] 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

unmitigated cancer risk, $PM_{2.5}$ concentration, and HI at the nearby school do not exceed their respective BAAQMD single-source significance thresholds.

Figure 1. Locations of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impact Locations (MEI)



Community Risks from Project Operation

Stationary equipment that could emit substantial TACs (e.g., emergency generators) are not planned for this project. Operation of the project would have long-term emissions from mobile sources (i.e., traffic). Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. Per BAAQMD recommended risks and methodology, a local roadway with less than 10,000 total vehicles per day is considered a low-impact source of TACs.[23] This project would generate 3,000 daily trips[24] dispersed on the roadway systems with a majority of the trips being from light-duty vehicles (i.e., passenger automobiles), which is a fraction of 10,000 daily vehicles.

[23] 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

[24] Hexagon Transportation Consultants, Inc., *New Horizons Residential Development Transportation Analysis*, August 12, 2022.

Therefore, emissions from project traffic are considered negligible and not included within this analysis.

Summary of Project-Related Community Risks at the Off-site Project MEI

For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI was modeled to be exposed to six years of project construction and 24 years of project operation. The annual $PM_{2.5}$ concentration and HI values are based on an annual maximum risk for the entirety of the project. As shown in Table 7, the unmitigated maximum cancer risks from construction activities at the MEI location would exceed the BAAQMD single-source significance threshold. However, with the incorporation of the *Mitigation Measure AQ-1 and AQ-2*, the mitigated risk and hazard values would reduce emissions such that cancer risk caused by construction would not exceed the BAAQMD single-source significance thresholds. The unmitigated $PM_{2.5}$ concentration and HI at the MEI do not exceed their respective BAAQMD single-source significance thresholds.

Table 7. Construction and Operation Risk Impacts at the Off-Site Receptors

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**15.96 (infant)**	0.20	0.01
	Mitigated*	2.03 (infant)	0.07	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated*	*No*	*No*	*No*
Jackson Academy of Math and Music Elementary School Student Receptors				
Project Construction	Unmitigated	4.69 (child)	0.10	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceeds Threshold?	Unmitigated	*No*	*No*	*No*

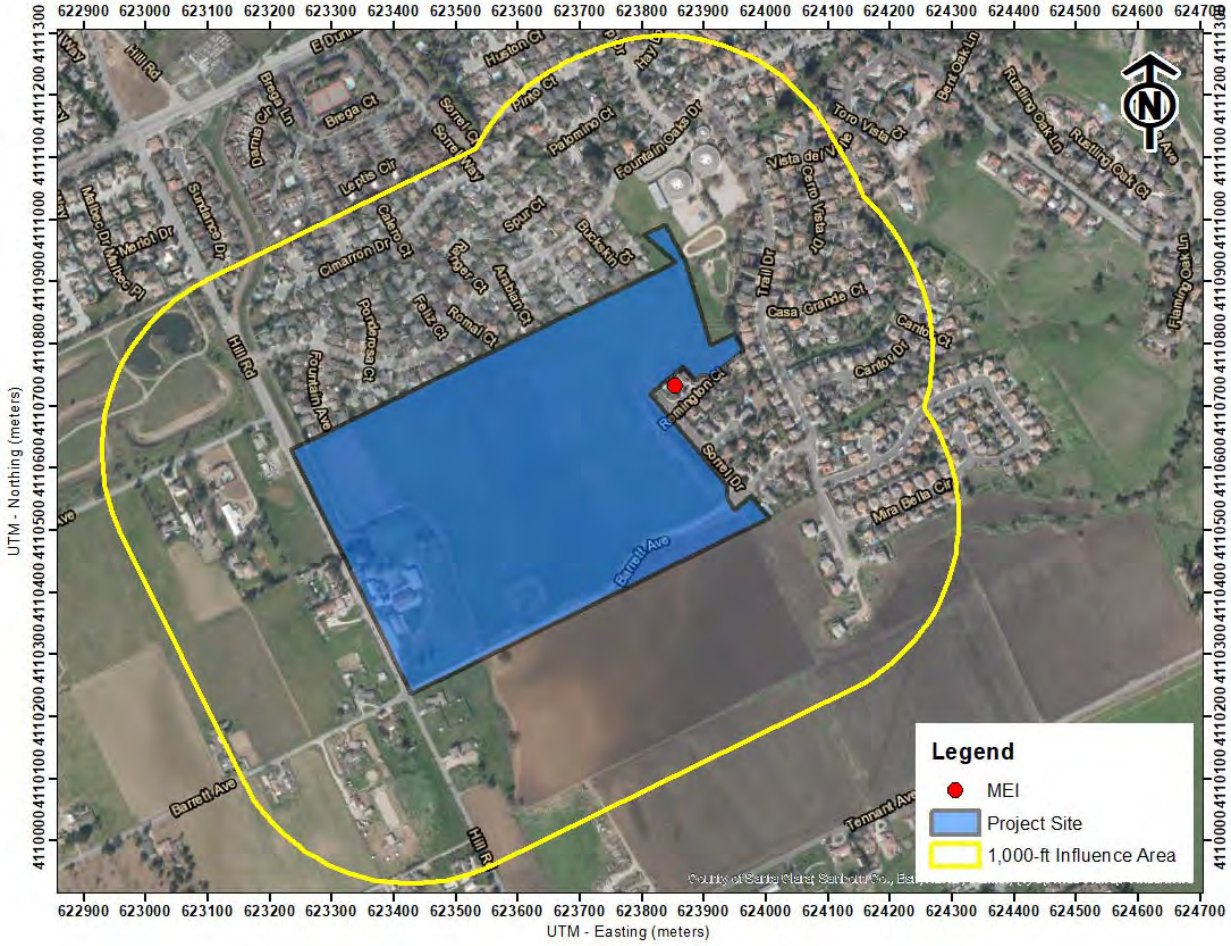
* Construction equipment with Tier 4 engines and BMPs as Mitigation.

Combined Impact of All TAC Sources on the Off-Site 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 the project site (i.e., influence area). These sources include rail lines, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and based on provided traffic information indicated that no roadways within the influence area would have traffic exceeding 10,000 vehicles per day. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified no stationary sources with the potential to affect the project site and MEI. Figure 2 shows the project area included within the influence area and the location of the MEI. Details of the modeling and community risk calculations are included in *Attachment 5.*

Figure 2. Project Site, MEI, 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,[25] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. No sources within the project's 1000-foot influence area were identified using this tool.

Summary of Cumulative Health Risk Impacts at Off-Site MEI

Table 8 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by construction (i.e., the MEI). The project would have an exceedance with respect to community risk caused by project construction activities, since the maximum unmitigated cancer risk exceeds the BAAQMD single-source threshold. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risks would be lowered to a level below the single-

[25] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

source thresholds. The HI and annual $PM_{2.5}$ concentrations, unmitigated and mitigated, do not exceed their cumulative threshold.

Table 8. Cumulative Community Risk Impacts from Combined TAC Sources at MEIs

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**15.96 (infant)**	0.20	0.01
	Mitigated*	2.03 (infant)	0.07	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated*	*No*	*No*	*No*
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Mitigation: Implement Mitigation Measures AQ-1 and AQ-2

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 4 interim engines standards 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 87 percent to 2.03 chances per million. In addition, a plan that uses 60 percent Tier 4 interim engines and 40 percent Tier 3 engines would reduce cancer risk to about 9.50 chances per million, which is below the BAAQMD single-source significance threshold.

Non-CEQA: On-Site Community Risk Assessment for TAC Sources - New Project Residences

There are no existing TAC sources (i.e., roadways with over 10,000 daily vehicles or permitted BAAQMD stationary sources) within 1,000 feet of the project site that would cause substantial health risks at the new proposed sensitive receptors (residents) that that project would introduce. Therefore, an on-site community health risk impact assessment was not conducted.

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 California 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 (AB 32), California Global Warming Solutions Act (2006)

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.

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 Executive Order 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 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*. 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 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 bikeable communities;
- 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 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, 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.

SB 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.[26] 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 systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[27]

[26] 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.
[27] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

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).[28] 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.[29] 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.[30] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

Morgan Hill 2035 General Plan

The Climate Change section of the Natural Resources and Environment chapter of the Morgan Hill 2035 General Plan contains goals, policies and implementing actions that pertain to GHG emissions. Applicable General Plan policies are listed below:

Goal NRE-15 An adaptive and resilient community that responds to climate change.

Policy NRE-15.1 **Greenhouse Gas Emission Reduction Targets**. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.

Policy NRE-15.2 **Linking Land Use and Transportation**. Encourage land use and transportation patterns that reduce dependence on automobiles.

Policy NRE-15.3 **Climate Action Plan**. Utilize policies in this General Plan denoted with the green leaf symbol as the City's greenhouse gas emissions reduction strategy.

Policy NRE-15.4 **Sustainable Land Use**. Promote land use patterns that reduce the number and length of motor vehicle trips.

Policy NRE-15.5 **Jobs Housing Balance**. To the extent feasible, encourage a balance and match between jobs and housing.

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[28] 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.

[29] 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.

[30] 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.

Policy NRE-15.6 **Residential Near Transit**. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.

Policy NRE-15.7 **Mix of Uses in Employment Centers**. Encourage employment areas to include a mix of support services to minimize the number of employee trips.

Policy NRE-15.8 **Walkable City**. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.

Policy NRE-15.9 **Urban Forest**. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.

Policy NRE-15.10 **VMT Reduction**. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.

Policy NRE-15.11 **Green Building**. Promote green building practices in new development.

The General Plan's Energy Efficiency section contains policies that indirectly reduce GHG emissions:

Goal NRE-16 Conservation of energy resources.

Policy NRE-16.1 **Energy Standards for New Development**. New development, including public buildings, should be designed to exceed State standards for the use of energy.

Policy NRE-16.2 **Energy Conservation**. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.

Policy NRE-16.3 **Energy Use Data and Analysis**. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.

Policy NRE-16.5 **Energy Efficiency**. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.

Policy NRE-16.6 **Landscaping for Energy Conservation**. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.

Policy NRE-16.7 **Renewable Energy**. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

Policy NRE-16.8 **Residential Development Code**. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.

Policy NRE-16.9 **Subdivision Design**. In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.

Morgan Hill 2021 Climate Action Plan

The Morgan Hill 2021 Climate Action Plan (CAP) includes goals and actions that focus on the adoption of electric vehicles in the community and the process of decarbonizing existing buildings by reducing the use of fossil fuels. The CAP goal is to eliminate natural gas usage and transition 95 percent of existing buildings in Morgan Hill to all-electric by 2045. The CAP also proposes to prohibit any new gas stations. On December 15, 2021, the City adopted the CAP with guidelines of reducing Morgan Hill's net CO_2 emissions in the building and transportation sectors 35 percent below the 2020 baseline level by 2030 and 100 percent below the 2020 baseline level by 2045.[31]

Applicable measures in the CAP include:

- Action Item 4.a: Require all new construction of single family detached homes, townhouses, and other dwelling units with a garage to install a listed raceway to accommodate a 208/240-volt branch circuit for potential EV charging to be installed in accordance with the California Electrical Code, Article 625.
- No natural gas use.

However, the CAP does not have a specific metric ton GHG threshold for project-level construction or operation or a CAP Compliance Checklist. Therefore, the BAAQMD's CEQA Air Quality Guideline's thresholds are used.

BAAQMD GHG Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the 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.

[31] City of Morgan Hill, *Morgan Hill 2021 Climate Action Plan*, December 15, 2021, https://www.morgan-hill.ca.gov/DocumentCenter/View/40166/Climate-Action-Plan-Draft-December-9-2021-?bidId=

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 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 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[32] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold. Evidence published by the State indicates the AB 32 goal of reducing statewide GHG emissions to 1990 levels was met prior to 2020. Current State plans are to further reduce emissions to 40% below 1990 levels by 2030. Assuming statewide emissions are at 1990 levels or lower in 2020, it would be logical to reduce the BAAQMD-recommended threshold for meeting the AB 32 threshold by 40% to develop a threshold for 2030.

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, 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[33]

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 within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents. For this project, the number of future residents was provided by the applicant assuming 2.93 persons per household for the 223 single-family detached houses and 42 court-style houses, and 2.0 persons per household for the 21 senior cottages, 34 senior duets, and 44 ADUs. Therefore, the number of future residents was estimated to be 975 residents. This total service population was used to calculate the per capita emissions.

[32] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

[33] Due to the Project land use, square-footage, and trip generation changes, the GHG emissions for the project would change, likely increasing slightly because of the increase of mobile emissions. This minor increase would not change the GHG emission impact findings or measures below. In addition, BAAQMD has released new GHG thresholds which are qualitative instead of quantitative, including meeting efficiency measures, VMT reductions, no natural gas appliances, and EV parking requirements.

Construction Emissions

GHG emissions associated with construction were computed to be 5,888 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.

Operational 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. As shown in Table 9, the annual emissions resulting from operation of the proposed project are predicted to be 4,044 MT of CO_2e in 2028 and 3,919 MT of CO_2e in 2030. The service population emission for the year 2028 and 2030 are predicted to be 4.15 and 4.02 MT/CO_{2e}/year/service population, respectively.

To be considered an exceedance, 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 project would exceed the annual emissions bright-line threshold of 660 MT CO_2e/year in 2030 and would exceed the per service population threshold of 2.8 MT of CO_2e/year/service population in 2030. Therefore, the project would be in exceedance for GHG emissions.

Table 9. Annual Project GHG Emissions (CO_2e) in Metric Tons and Per Capita

Source Category	Proposed Project in 2028	Proposed Project in 2030
Area	79	79
Energy Consumption	5	5
Mobile	3,750	3,625
Solid Waste Generation	196	196
Water Usage	14	14
Total (MT CO_{2e}/year)	**4.044**	**3,919**
Significance Threshold		***660 MT CO_2e/year***
Service Population Emissions (MT CO_{2e}/year/service population)	**4.15**	**4.02**
Significance Threshold		***2.8 in 2030***
Exceeds both thresholds?		***Yes***

Measures to Consider to Reduce GHG Emissions

Develop a GHG reduction plan to reduce GHG emissions in the build-out year by 1,189 MT/year. These reductions shall be kept in place by the project until the City adopts it's GHG reduction plan that contains goals and associated strategy to decrease emissions in a manner consistent with meeting the State's interim 2030 GHG emissions reduction target of 40 percent below 1990 levels. The following GHG reduction measure should be considered to further reduce GHG emissions

from operation of the project and the service population efficiency metric such that the metric would be below the significance threshold. Elements of this recommendation may include, but would not be limited to, the following:

1. Implementation of a transportation demand management (TDM) program to reduce mobile GHG emissions;

2. Installation of solar power systems or other renewable electric generating systems that provide electricity to power on-site equipment and possibly provide excess electric power;

3. Provide infrastructure for electric vehicle charging in residential units and parking areas (i.e., provide 220 VAC power);

4. Increase water conservation above State average conditions for residential uses by installing low flow water utilities and irrigation; and

5. Purchase verifiable carbon emission offsets.

Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB's Scoping Plan nor would the project conflict with SB 100 goals. For example, proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. The project would not use natural gas, would utilize electricity that is carbon-free provided by SVCE and would include construction that supports EV charging stations.

Supporting Documentation

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

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for 2030 uses are also included in this attachment. 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 construction health risk assessment. AERMOD dispersion modeling files for these assessments, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the MEI.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (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.[34] 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.[35] 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.[36] 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). 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 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. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[34] 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.
[35] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[36] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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.

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 $(mg/kg\text{-}day)^{-1}$		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*

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 Modeling Inputs and Outputs

Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.41	4.20	0.19	0.18	576.58	
2023	0.20	1.87	0.09	0.09	303.14	
2024	0.19	1.76	0.08	0.08	305.52	
2025	0.18	1.63	0.07	0.06	304.43	
2026	0.18	1.63	0.07	0.06	304.43	
2027	5.24	0.53	0.02	0.02	115.59	
EMFAC						
2022	0.17	0.82	0.05	0.02	697.57	
2023	0.17	0.83	0.05	0.02	701.42	
2024	0.17	0.83	0.05	0.02	703.34	
2025	0.17	0.83	0.05	0.02	701.42	
2026	0.17	0.83	0.05	0.02	701.42	
2027	0.11	0.56	0.03	0.01	472.74	
Total Construction Emissions by Year						
2022	0.58	5.02	0.24	0.20	1274.15	
2023	0.37	2.70	0.14	0.11	1004.55	
2024	0.36	2.59	0.13	0.10	1008.86	
2025	0.35	2.45	0.12	0.09	1005.85	
2026	0.35	2.45	0.12	0.09	1005.85	
2027	5.36	1.08	0.06	0.04	588.33	
	Total Construction Emissions					
Tons	7.35	16.31	0.81	0.61	5887.58	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	4.44	38.72	1.86	1.52		**259**
2023	2.85	20.68	1.08	0.82		**261**
2024	2.75	19.81	0.99	0.74		**262**
2025	2.65	18.82	0.91	0.66		**261**
2026	2.65	18.82	0.91	0.66		**261**
2027	**60.92**	12.34	0.66	0.42		**176**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	76.26	129.19	6.41	4.81	0.00	
Average	9.94	22.04	1.09	0.82	0.00	1480
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Mitigated T4i, Arch Coating Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.11	2.20	0.01	0.01	576.58	
2023	0.07	1.42	0.01	0.01	303.14	
2024	0.07	1.43	0.01	0.01	305.52	
2025	0.07	1.42	0.01	0.01	304.43	
2026	0.07	1.42	0.01	0.01	304.43	
2027	2.61	0.56	0.003	0.003	115.59	
EMFAC						
2022	0.17	0.82	0.05	0.02	697.57	
2023	0.17	0.83	0.05	0.02	701.42	
2024	0.17	0.83	0.05	0.02	703.34	
2025	0.17	0.83	0.05	0.02	701.42	
2026	0.17	0.83	0.05	0.02	701.42	
2027	0.11	0.56	0.03	0.01	472.74	
Total Construction Emissions by Year						
2022	0.27	3.02	0.06	0.03	1274.15	
2023	0.24	2.25	0.06	0.03	1004.55	
2024	0.24	2.26	0.06	0.03	1008.86	
2025	0.24	2.25	0.06	0.03	1005.85	
2026	0.24	2.25	0.06	0.03	1005.85	
2027	2.73	1.12	0.04	0.02	588.33	
	Total Construction Emissions					
Tons	3.95	13.14	0.34	0.18	5887.58	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	2.11	23.27	0.47	0.25		**259**
2023	1.81	17.22	0.47	0.24		**261**
2024	1.82	17.27	0.47	0.24		**262**
2025	1.81	17.26	0.47	0.24		**261**
2026	1.81	17.26	0.47	0.24		**261**
2027	31.01	12.69	0.41	0.19		**176**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
	Total Construction Emissions					
Pounds	40.38	104.97	2.74	1.41	0.00	
Average	5.34	17.77	0.46	0.24	0.00	1480
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	5.34	1.56	4.04	1.04		
	Existing Use Emissions					
Total						
	Net Annual Operational Emissions					
Tons/year	5.34	1.56	4.04	1.04		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	29.29	8.53	22.12	5.69		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	78.92		78.92	
Energy	4.73		4.73	
Mobile	3749.70		3624.94	
Waste	196.03		196.03	
Water	14.51		14.51	
TOTAL	4043.89	0.00	3919.12	0.00
Net GHG Emissions		4043.89		3919.12
Service Population	975			
Per Capita Emissions		4.15		4.02

Air Quality/Noise Construction Information Data Request

Project Name: New Horizons

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	262 SF, 20 SF Sr, 55 Condo Sr	Dwelling Units	69.4 total project acres disturbed
	717,900	s.f. residential (ground floor coverage, only)	
	0	s.f. retail	
	9	Acre - Park/Open Space	
	7,800	s.f. other, specify: recreation building	
	0	s.f. parking garage n/a	spaces
		s.f. parking lot 916	spaces
Construction Hours		am to	pm

Pile Driving? Y/N?

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	HP Annual Hours	Comments
	Demolition	**Start Date:**	**1/3/2022**	**Total phase:**	**70**			**Overall Import/Export Volumes**
		End Date:	**4/8/2022**					
1	Concrete/Industrial Saws	81	0.73	8	70	8	33113	**Demolition Volume**
3	Excavators	158	0.38	8	70	8	100867	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	8	70	8	110656	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	25,150 square feet
								25 Hauling volume (tons)
								Any pavement demolished and hauled? **100 tons**
	Site Preparation	**Start Date:**	**4/9/2022**	**Total phase:**	**40**			
		End Date:	**6/3/2022**					
	Graders	187	0.41			0	0	
3	Rubber-Tired Dozers	247	0.4	8	40	8	94848	
4	Tractors/Loaders/Backhoes	97	0.37	8	40	8	45939	
	Grading / Excavation	**Start Date:**	**6/4/2022**	**Total phase:**	**110**			
		End Date:	**11/4/2022**					**Soil Hauling Volume**
2	Excavators	158	0.38	8	110	8	105670	Export volume = **0** cubic yards
1	Graders	187	0.41	8	110	8	67470	Import volume = **0** cubic yards
2	Scrapers	367	0.48	8	110	8	310042	
1	Rubber-Tired Dozers	247	0.4	8	110	8	86944	
2	Tractors/Loaders/Backhoes	97	0.37	8	110	8	63166	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**6/4/2022**	**Total phase:**	**110**			
		End Date:	**11/4/2022**					
1	Tractor/Loader/Backhoe	97	0.37	8	110	8	31583	
1	Excavators	158	0.38	8	110	8	52835	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**11/5/2022**	**Total phase:**	**1110**			**Cement Trucks 250 Total Round-Trips**
		End Date:	**2/5/2027**					
1	Cranes	231	0.29	7	1110	7	520512	Electric? (Y/N) ___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	1110	8	474192	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	1110	8	551981	Or temporary line power? (Y/N) _Y__
3	Tractors/Loaders/Backhoes	97	0.37	7	1110	7	836596	
1	Welders	46	0.45	8	1110	8	183816	
	Other Equipment?					0		
	Building - Interior/Architectural Coating	**Start Date:**	**2/6/2027**	**Total phase:**	**75**			
		End Date:	**5/21/2027**					
1	Air Compressors	78	0.48	6	75	6	16848	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**5/22/2027**	**Total phase:**	**75**			
		Start Date:	**9/3/2027**					
	Cement and Mortar Mixers	9	0.56			0	0	
2	Pavers	130	0.42	8	75	8	65520	**Asphalt 2500 cubic yards or 200 round trips**
2	Paving Equipment - Rollers	80	0.38	8	75	8	36480	
2	Rollers	80	0.38	8	75	8	36480	
	Graders	187	0.41			0	0	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						

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 horepower 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
Single Family Housing	DU	303	2,804	2804	***9.25***	9.44	9.54	8.55
(SF & Senior)						*Rev*	***9.35***	***8.38***
Senior Condo/Townhome	DU	55	196	196	***3.56***	7.32	8.14	6.28
						Rev	***3.96***	***3.06***

Trip Generation Estimates

			Daily		AM Peak Hour						PM Peak Hour					
						Split		Trip				Split		Trip		
Land Use	Size		Rate	Trip	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Proposed Land Uses																
Single-Family Detached Housing (210)	282	Dwelling Units[1]	9.440	2,662	0.740	25%	75%	52	157	209	0.990	63%	37%	176	103	279
Senior Adult Housing—Detached (251)	21	Dwelling Units	6.785	142	0.594	33%	67%	4	8	12	0.677	61%	39%	9	5	14
Senior Adult Housing—Attached (252)	55	Dwelling Units	3.559	196	0.197	35%	65%	4	7	11	0.281	55%	45%	8	7	15
Total Proposed Project Trips/Units	**358**	**Dwelling Units**		**3,000**				**60**	**172**	**232**				**193**	**115**	**308**

Source: ITE Trip Generation Manual, 10th Edition 2017

[1]Includes 262 single-family homes and 20 accessory dwelling units

supplements the CEQA required VMT analysis. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

CEQA VMT Analysis

The results of the VMT analysis using the VTA's VMT Evaluation Tool indicate that the existing VMT for residential uses in the project vicinity is 36.94 VMT per capita.

The results also indicate that the project is projected to generate VMT per capita (33.25), which would exceed the OPR's recommended impact threshold of 20.94 VMT per capita. Therefore, the project would result in an impact on the transportation system based on OPR's VMT impact criteria.

VMT Impacts and Mitigation

Using OPR's impact thresholds, the project would need to implement VMT reduction measures to achieve a 37% reduction (33.25 to 20.94) in its VMT per capita for the proposed residential uses to reduce its impact to less than significant levels. However, per the VMT tool, the maximum reduction possible is 29.55. Further reductions in VMT are not likely feasible for residential projects due to the limited alternative modes of transportation and supporting employment land uses within the City.

OPR's recommended 15% below the existing VMT impact threshold encourages developments in transit-rich, highly mixed-use areas to implement design features and trip reduction measures to take advantage of existing multi-model infrastructure and land use mixes in reducing trip making and/or trip lengths. However, many communities such as Morgan Hill have very limited multi-modal transportation infrastructure and lack a mix of complementary land uses. The lack of employment in these communities along with minimal transit options results in a greater number and longer commute trips. Therefore, it is highly unlikely that developments like the proposed project in these cities can achieve OPR's recommended 15% reduction in VMT. Therefore, absent of the City adopting its own City-specific VMT policies and impact thresholds, the proposed project's VMT impact must be deemed significant and unavoidable.

Traffic Operations Analysis

Project Trip Generation

Based on the recommended rates and the size of the proposed project, it is estimated that the proposed project would generate 3,000 daily trips, with 232 trips (60 inbound and 172 outbound) occurring during the AM peak hour and 308 trips (193 inbound and 115 outbound) occurring during the PM peak hour.

Year 2030 Intersection Operations Analyses

The results of the traffic operations analysis indicate that the proposed project would have an adverse effect on intersection operations at the following six study intersections under Year 2030 Cumulative with project conditions based on the City's operating standards.

8. Condit Road and Main Avenue (AM and PM Peak Hours)
10. Condit Road and Tennant Avenue (PM Peak Hour)
13. Murphy Avenue and Tennant Avenue (AM and PM Peak Hours)
19. Hill Road and Fountain Oaks Drive (AM Peak Hour)

VMT from traffic	33.25	miles / capita
Project population	1,113	persons
Weekday VMT	37,007	miles / day (weekday)
total project trips	3,000	trips / day
Daily trip length	12.34	Miles / trip

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Morgan Hill Devco, Morgan Hill - Construction Unmitigated

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	916.00	Space	0.00	366,400.00	0
City Park	9.00	Acre	0.00	392,040.00	0
Condo/Townhouse	55.00	Dwelling Unit	0.00	118,438.00	157
Single Family Housing	262.00	Dwelling Unit	69.40	564,194.00	749
Single Family Housing	20.00	Dwelling Unit	0.00	43,068.00	57

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2028
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - construction worksheet & Site Plans

Construction Phase - Construction Schedule defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Date: 3/9/2022 10:39 AM

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

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Trips and VMT - 0 Trips for EMFAC2021 Adjustments, pavement demo = 100 ton, building = 250 cement truck round trips, paving = 200 asphalt truck round trips

Demolition - demo 25,150-sf

Grading - grading = export 25,617-cy

Vehicle Trips - Provided trip gens, Adjusted trip length with traffic provided VMT

Woodstoves - No wood burning, all gas

Energy Use - Reach code - no natural gas, all electric

Water And Wastewater - Wastewater treatment, 100% aerobic, no septric tanks or lagoons

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

Morgan Hill Devco, Morgan Hill - 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 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
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
tblEnergyUse	NT24E	3,795.01	3,796.10
tblEnergyUse	NT24E	6,155.97	6,157.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24E	149.52	153.30
tblEnergyUse	T24E	209.15	215.10
tblEnergyUse	T24NG	12,903.77	0.00
tblEnergyUse	T24NG	20,314.55	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	8.25	17.60
tblFireplaces	NumberGas	70.50	191.76
tblFireplaces	NumberWood	9.35	0.00
tblFireplaces	NumberWood	121.26	0.00
tblGrading	MaterialExported	0.00	25,617.00
tblLandUse	LandUseSquareFeet	55,000.00	118,438.00
tblLandUse	LandUseSquareFeet	36,000.00	43,068.00

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

tblLandUse	LandUseSquareFeet	471,600.00	564,194.00
tblLandUse	LotAcreage	8.24	0.00
tblLandUse	LotAcreage	9.00	0.00
tblLandUse	LotAcreage	3.44	0.00
tblLandUse	LotAcreage	6.49	0.00
tblLandUse	LotAcreage	85.06	69.40
tblTripsAndVMT	HaulingTripNumber	114.00	0.00
tblTripsAndVMT	HaulingTripNumber	3,202.00	0.00
tblTripsAndVMT	VendorTripNumber	160.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	460.00	0.00
tblTripsAndVMT	WorkerTripNumber	92.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	HO_TL	5.70	12.30
tblVehicleTrips	HO_TL	5.70	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	3.96
tblVehicleTrips	ST_TR	9.54	9.35
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	3.06
tblVehicleTrips	SU_TR	8.55	8.38
tblVehicleTrips	WD_TR	0.78	0.00

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

tblVehicleTrips	WD_TR	7.32	3.56
tblVehicleTrips	WD_TR	9.44	9.25
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	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4095	4.2005	3.3414	6.5300e-003	0.9132	0.1915	1.1047	0.4051	0.1770	0.5821	0.0000	572.1086	572.1086	0.1761	0.0000	576.5108
2023	0.2045	1.8700	2.1117	3.5000e-003	0.0000	0.0910	0.0910	0.0000	0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383

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

2024	0.1928	1.7611	2.1179	3.5300e-003	0.0000	0.0803	0.0803	0.0000	0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
2025	0.1785	1.6273	2.0991	3.5200e-003	0.0000	0.0689	0.0689	0.0000	0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
2026	0.1785	1.6273	2.0991	3.5200e-003	0.0000	0.0689	0.0689	0.0000	0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
2027	5.2434	0.5269	0.8236	1.3200e-003	0.0000	0.0245	0.0245	0.0000	0.0228	0.0228	0.0000	114.7964	114.7964	0.0319	0.0000	115.5937
Maximum	**5.2434**	**4.2005**	**3.3414**	**6.5300e-003**	**0.9132**	**0.1915**	**1.1047**	**0.4051**	**0.1770**	**0.5821**	**0.0000**	**572.1086**	**572.1086**	**0.1761**	**0.0000**	**576.5108**

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	0.1080	2.1956	4.0443	6.5300e-003	0.4109	0.0114	0.4223	0.1823	0.0114	0.1937	0.0000	572.1080	572.1080	0.1761	0.0000	576.5101
2023	0.0694	1.4186	2.3236	3.5000e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
2024	0.0699	1.4295	2.3415	3.5300e-003	0.0000	0.0111	0.0111	0.0000	0.0111	0.0111	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
2025	0.0696	1.4240	2.3325	3.5200e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
2026	0.0696	1.4240	2.3325	3.5200e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
2027	5.2064	0.5581	0.9497	1.3200e-003	0.0000	2.6500e-003	2.6500e-003	0.0000	2.6500e-003	2.6500e-003	0.0000	114.7963	114.7963	0.0319	0.0000	115.5935
Maximum	**5.2064**	**2.1956**	**4.0443**	**6.5300e-003**	**0.4109**	**0.0114**	**0.4223**	**0.1823**	**0.0114**	**0.1937**	**0.0000**	**572.1080**	**572.1080**	**0.1761**	**0.0000**	**576.5101**

	ROG	NOx	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

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

Percent Reduction	12.71	27.24	-13.75	0.00	55.00	88.91	67.38	55.00	88.13	73.14	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	0.9115	0.4546
2	4-3-2022	7-2-2022	1.2653	0.5365
3	7-3-2022	10-2-2022	1.5209	0.7901
4	10-3-2022	1-2-2023	0.9096	0.5246
5	1-3-2023	4-2-2023	0.5129	0.3679
6	4-3-2023	7-2-2023	0.5186	0.3720
7	7-3-2023	10-2-2023	0.5243	0.3761
8	10-3-2023	1-2-2024	0.5236	0.3761
9	1-3-2024	4-2-2024	0.4847	0.3720
10	4-3-2024	7-2-2024	0.4847	0.3720
11	7-3-2024	10-2-2024	0.4901	0.3761
12	10-3-2024	1-2-2025	0.4893	0.3761
13	1-3-2025	4-2-2025	0.4448	0.3679
14	4-3-2025	7-2-2025	0.4497	0.3720
15	7-3-2025	10-2-2025	0.4546	0.3761
16	10-3-2025	1-2-2026	0.4546	0.3761
17	1-3-2026	4-2-2026	0.4448	0.3679
18	4-3-2026	7-2-2026	0.4497	0.3720
19	7-3-2026	10-2-2026	0.4546	0.3761
20	10-3-2026	1-2-2027	0.4546	0.3761
21	1-3-2027	4-2-2027	2.9596	2.9266
22	4-3-2027	7-2-2027	2.5851	2.5947
23	7-3-2027	9-30-2027	0.2137	0.2334
		Highest	2.9596	2.9266

3.0 Construction Detail

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

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	4/8/2022	5	70	
2	Site Preparation	Site Preparation	4/9/2022	6/3/2022	5	40	
3	Grading	Grading	6/4/2022	11/4/2022	5	110	
4	Trenching	Trenching	6/4/2022	11/4/2022	5	110	
5	Building Construction	Building Construction	11/5/2022	2/5/2027	5	1110	
6	Architectural Coating	Architectural Coating	2/6/2027	5/21/2027	5	75	
7	Paving	Paving	5/22/2027	9/3/2027	5	75	

Acres of Grading (Site Preparation Phase): 60

Acres of Grading (Grading Phase): 330

Acres of Paving: 0

Residential Indoor: 1,469,542; Residential Outdoor: 489,848; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 21,984

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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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
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	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	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	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

Reduce Vehicle Speed on Unpaved Roads

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

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					0.0124	0.0000	0.0124	1.8700e-003	0.0000	1.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0924	0.9002	0.7208	1.3600e-003		0.0435	0.0435		0.0404	0.0404	0.0000	118.9658	118.9658	0.0334	0.0000	119.8012
Total	**0.0924**	**0.9002**	**0.7208**	**1.3600e-003**	**0.0124**	**0.0435**	**0.0559**	**1.8700e-003**	**0.0404**	**0.0423**	**0.0000**	**118.9658**	**118.9658**	**0.0334**	**0.0000**	**119.8012**

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**

Morgan Hill Devco, Morgan Hill - 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					5.5700e-003	0.0000	5.5700e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.4745	0.8636	1.3600e-003		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	118.9657	118.9657	0.0334	0.0000	119.8011
Total	**0.0204**	**0.4745**	**0.8636**	**1.3600e-003**	**5.5700e-003**	**2.1600e-003**	**7.7300e-003**	**8.4000e-004**	**2.1600e-003**	**3.0000e-003**	**0.0000**	**118.9657**	**118.9657**	**0.0334**	**0.0000**	**119.8011**

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

Date: 3/9/2022 10:39 AM

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.6617	0.3940	7.6000e-004		0.0323	0.0323		0.0297	0.0297	0.0000	66.8788	66.8788	0.0216	0.0000	67.4195
Total	**0.0634**	**0.6617**	**0.3940**	**7.6000e-004**	**0.3931**	**0.0323**	**0.4254**	**0.2021**	**0.0297**	**0.2317**	**0.0000**	**66.8788**	**66.8788**	**0.0216**	**0.0000**	**67.4195**

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

Morgan Hill Devco, Morgan Hill - 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					
Fugitive Dust					0.1769	0.0000	0.1769	0.0909	0.0000	0.0909	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0139	0.2432	0.4592	7.6000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	66.8787	66.8787	0.0216	0.0000	67.4195
Total	**0.0139**	**0.2432**	**0.4592**	**7.6000e-004**	**0.1769**	**1.2400e-003**	**0.1782**	**0.0909**	**1.2400e-003**	**0.0922**	**0.0000**	**66.8787**	**66.8787**	**0.0216**	**0.0000**	**67.4195**

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

Date: 3/9/2022 10:39 AM

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5077	0.0000	0.5077	0.2012	0.0000	0.2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1994	2.1364	1.5973	3.4100e-003		0.0899	0.0899		0.0827	0.0827	0.0000	299.9403	299.9403	0.0970	0.0000	302.3655
Total	**0.1994**	**2.1364**	**1.5973**	**3.4100e-003**	**0.5077**	**0.0899**	**0.5976**	**0.2012**	**0.0827**	**0.2839**	**0.0000**	**299.9403**	**299.9403**	**0.0970**	**0.0000**	**302.3655**

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

Morgan Hill Devco, Morgan Hill - 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					
Fugitive Dust					0.2284	0.0000	0.2284	0.0905	0.0000	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0556	1.0599	2.0197	3.4100e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	299.9399	299.9399	0.0970	0.0000	302.3651
Total	**0.0556**	**1.0599**	**2.0197**	**3.4100e-003**	**0.2284**	**5.5800e-003**	**0.2340**	**0.0905**	**5.5800e-003**	**0.0961**	**0.0000**	**299.9399**	**299.9399**	**0.0970**	**0.0000**	**302.3651**

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 - 2022

Unmitigated Construction On-Site

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	0.0202	0.1899	0.3021	4.6000e-004		9.6800e-003	9.6800e-003		8.9100e-003	8.9100e-003	0.0000	39.9787	39.9787	0.0129	0.0000	40.3020
Total	**0.0202**	**0.1899**	**0.3021**	**4.6000e-004**		**9.6800e-003**	**9.6800e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**39.9787**	**39.9787**	**0.0129**	**0.0000**	**40.3020**

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

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	7.3200e-003	0.1997	0.3443	4.6000e-004		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	39.9787	39.9787	0.0129	0.0000	40.3019
Total	**7.3200e-003**	**0.1997**	**0.3443**	**4.6000e-004**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**39.9787**	**39.9787**	**0.0129**	**0.0000**	**40.3019**

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

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	0.0341	0.3123	0.3273	5.4000e-004		0.0162	0.0162		0.0152	0.0152	0.0000	46.3451	46.3451	0.0111	0.0000	46.6226
Total	**0.0341**	**0.3123**	**0.3273**	**5.4000e-004**		**0.0162**	**0.0162**		**0.0152**	**0.0152**	**0.0000**	**46.3451**	**46.3451**	**0.0111**	**0.0000**	**46.6226**

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					

Morgan Hill Devco, Morgan Hill - 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	0.0107	0.2182	0.3575	5.4000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	46.3450	46.3450	0.0111	0.0000	46.6226
Total	**0.0107**	**0.2182**	**0.3575**	**5.4000e-004**		**1.6900e-003**	**1.6900e-003**		**1.6900e-003**	**1.6900e-003**	**0.0000**	**46.3450**	**46.3450**	**0.0111**	**0.0000**	**46.6226**

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

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	0.0694	1.4186	2.3236	3.5000e-003		0.0110	0.0110		0.0110	0.0110	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0694**	**1.4186**	**2.3236**	**3.5000e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

Morgan Hill Devco, Morgan Hill - 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 - 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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

Morgan Hill Devco, Morgan Hill - 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	0.0699	1.4295	2.3415	3.5300e-003		0.0111	0.0111		0.0111	0.0111	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0699**	**1.4295**	**2.3415**	**3.5300e-003**		**0.0111**	**0.0111**		**0.0111**	**0.0111**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

Mitigated Construction Off-Site

Morgan Hill Devco, Morgan Hill - 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 - 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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

Morgan Hill Devco, Morgan Hill - 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	0.0696	1.4240	2.3325	3.5200e-003		0.0110	0.0110		0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0696**	**1.4240**	**2.3325**	**3.5200e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

Morgan Hill Devco, Morgan Hill - 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**

3.6 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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					

Morgan Hill Devco, Morgan Hill - 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**

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	0.0696	1.4240	2.3325	3.5200e-003		0.0110	0.0110		0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0696**	**1.4240**	**2.3325**	**3.5200e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

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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**

3.6 Building Construction - 2027

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	0.0178	0.1621	0.2091	3.5000e-004		6.8600e-003	6.8600e-003		6.4500e-003	6.4500e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**0.0178**	**0.1621**	**0.2091**	**3.5000e-004**		**6.8600e-003**	**6.8600e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

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

Morgan Hill Devco, Morgan Hill - 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	6.9400e-003	0.1419	0.2324	3.5000e-004		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**6.9400e-003**	**0.1419**	**0.2324**	**3.5000e-004**		**1.1000e-003**	**1.1000e-003**		**1.1000e-003**	**1.1000e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

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

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

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 - 2027

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	5.1849					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4100e-003	0.0430	0.0678	1.1000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**5.1913**	**0.0430**	**0.0678**	**1.1000e-004**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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	5.1849					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0400e-003	0.0397	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**5.1870**	**0.0397**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

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

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 - 2027

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	0.0343	0.3218	0.5467	8.5000e-004		0.0157	0.0157		0.0144	0.0144	0.0000	75.0722	75.0722	0.0243	0.0000	75.6792
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0343**	**0.3218**	**0.5467**	**8.5000e-004**		**0.0157**	**0.0157**		**0.0144**	**0.0144**	**0.0000**	**75.0722**	**75.0722**	**0.0243**	**0.0000**	**75.6792**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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	0.0125	0.3765	0.6486	8.5000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	75.0721	75.0721	0.0243	0.0000	75.6791
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0125**	**0.3765**	**0.6486**	**8.5000e-004**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**75.0721**	**75.0721**	**0.0243**	**0.0000**	**75.6791**

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

Date: 3/9/2022 10:39 AM

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

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Morgan Hill Devco, Morgan Hill - Construction Mitigated

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	916.00	Space	0.00	366,400.00	0
City Park	9.00	Acre	0.00	392,040.00	0
Condo/Townhouse	55.00	Dwelling Unit	0.00	118,438.00	157
Single Family Housing	262.00	Dwelling Unit	69.40	564,194.00	749
Single Family Housing	20.00	Dwelling Unit	0.00	43,068.00	57

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2028
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - construction worksheet & Site Plans

Construction Phase - Construction Schedule defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

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

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Trips and VMT - 0 Trips for EMFAC2021 Adjustments, pavement demo = 100 ton, building = 250 cement truck round trips, paving = 200 asphalt truck round trips

Demolition - demo 25,150-sf

Grading -

Architectural Coating - At least 50% of paints have to be super-compliant VOC = effectively 50g/L interior and 75g/L exterior

Vehicle Trips - Provided trip gens

Woodstoves - No wood burning, all gas

Energy Use - Reach code - no natural gas, all electric

Water And Wastewater - Wastewater treatment, 100% aerobic, no septric tanks or lagoons

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	75.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	75.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	75.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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
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
tblEnergyUse	NT24E	3,795.01	3,796.10
tblEnergyUse	NT24E	6,155.97	6,157.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24E	149.52	153.30
tblEnergyUse	T24E	209.15	215.10
tblEnergyUse	T24NG	12,903.77	0.00
tblEnergyUse	T24NG	20,314.55	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	8.25	17.60

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

tblFireplaces	NumberGas	70.50	191.76
tblFireplaces	NumberWood	9.35	0.00
tblFireplaces	NumberWood	121.26	0.00
tblLandUse	LandUseSquareFeet	55,000.00	118,438.00
tblLandUse	LandUseSquareFeet	36,000.00	43,068.00
tblLandUse	LandUseSquareFeet	471,600.00	564,194.00
tblLandUse	LotAcreage	8.24	0.00
tblLandUse	LotAcreage	9.00	0.00
tblLandUse	LotAcreage	3.44	0.00
tblLandUse	LotAcreage	6.49	0.00
tblLandUse	LotAcreage	85.06	69.40
tblTripsAndVMT	HaulingTripNumber	114.00	0.00
tblTripsAndVMT	VendorTripNumber	160.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	460.00	0.00
tblTripsAndVMT	WorkerTripNumber	92.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	3.96
tblVehicleTrips	ST_TR	9.54	9.35
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	3.06
tblVehicleTrips	SU_TR	8.55	8.38
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	3.56
tblVehicleTrips	WD_TR	9.44	9.25

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

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	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4095	4.2005	3.3414	6.5300e-003	0.9117	0.1915	1.1032	0.4049	0.1770	0.5818	0.0000	572.1086	572.1086	0.1761	0.0000	576.5108
2023	0.2045	1.8700	2.1117	3.5000e-003	0.0000	0.0910	0.0910	0.0000	0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
2024	0.1928	1.7611	2.1179	3.5300e-003	0.0000	0.0803	0.0803	0.0000	0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179

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

2025	0.1785	1.6273	2.0991	3.5200e-003	0.0000	0.0689	0.0689	0.0000	0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
2026	0.1785	1.6273	2.0991	3.5200e-003	0.0000	0.0689	0.0689	0.0000	0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
2027	2.6510	0.5269	0.8236	1.3200e-003	0.0000	0.0245	0.0245	0.0000	0.0228	0.0228	0.0000	114.7964	114.7964	0.0319	0.0000	115.5937
Maximum	**2.6510**	**4.2005**	**3.3414**	**6.5300e-003**	**0.9117**	**0.1915**	**1.1032**	**0.4049**	**0.1770**	**0.5818**	**0.0000**	**572.1086**	**572.1086**	**0.1761**	**0.0000**	**576.5108**

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	0.1080	2.1956	4.0443	6.5300e-003	0.4103	0.0114	0.4217	0.1822	0.0114	0.1936	0.0000	572.1080	572.1080	0.1761	0.0000	576.5101
2023	0.0694	1.4186	2.3236	3.5000e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
2024	0.0699	1.4295	2.3415	3.5300e-003	0.0000	0.0111	0.0111	0.0000	0.0111	0.0111	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
2025	0.0696	1.4240	2.3325	3.5200e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
2026	0.0696	1.4240	2.3325	3.5200e-003	0.0000	0.0110	0.0110	0.0000	0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
2027	2.614	0.5581	0.9497	1.3200e-003	0.0000	2.6500e-003	2.6500e-003	0.0000	2.6500e-003	2.6500e-003	0.0000	114.7963	114.7963	0.0319	0.0000	115.5935
Maximum	**2.6140**	**2.1956**	**4.0443**	**6.5300e-003**	**0.4103**	**0.0114**	**0.4217**	**0.1822**	**0.0114**	**0.1936**	**0.0000**	**572.1080**	**572.1080**	**0.1761**	**0.0000**	**576.5101**

	ROG	NOx	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	**21.34**	**27.24**	**-13.75**	**0.00**	**55.00**	**88.91**	**67.39**	**55.00**	**88.13**	**73.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.9115	0.4546
2	4-3-2022	7-2-2022	1.2653	0.5365
3	7-3-2022	10-2-2022	1.5209	0.7901
4	10-3-2022	1-2-2023	0.9096	0.5246
5	1-3-2023	4-2-2023	0.5129	0.3679
6	4-3-2023	7-2-2023	0.5186	0.3720
7	7-3-2023	10-2-2023	0.5243	0.3761
8	10-3-2023	1-2-2024	0.5236	0.3761
9	1-3-2024	4-2-2024	0.4847	0.3720
10	4-3-2024	7-2-2024	0.4847	0.3720
11	7-3-2024	10-2-2024	0.4901	0.3761
12	10-3-2024	1-2-2025	0.4893	0.3761
13	1-3-2025	4-2-2025	0.4448	0.3679
14	4-3-2025	7-2-2025	0.4497	0.3720
15	7-3-2025	10-2-2025	0.4546	0.3761
16	10-3-2025	1-2-2026	0.4546	0.3761
17	1-3-2026	4-2-2026	0.4448	0.3679
18	4-3-2026	7-2-2026	0.4497	0.3720
19	7-3-2026	10-2-2026	0.4546	0.3761
20	10-3-2026	1-2-2027	0.4546	0.3761
21	1-3-2027	4-2-2027	1.5770	1.5439
22	4-3-2027	7-2-2027	1.3753	1.3849
23	7-3-2027	9-30-2027	0.2137	0.2334
		Highest	1.5770	1.5439

3.0 Construction Detail

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

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	4/8/2022	5	70	
2	Site Preparation	Site Preparation	4/9/2022	6/3/2022	5	40	
3	Grading	Grading	6/4/2022	11/4/2022	5	110	
4	Trenching	Trenching	6/4/2022	11/4/2022	5	110	
5	Building Construction	Building Construction	11/5/2022	2/5/2027	5	1110	
6	Architectural Coating	Architectural Coating	2/6/2027	5/21/2027	5	75	
7	Paving	Paving	5/22/2027	9/3/2027	5	75	

Acres of Grading (Site Preparation Phase): 60

Acres of Grading (Grading Phase): 330

Acres of Paving: 0

Residential Indoor: 1,469,542; Residential Outdoor: 489,848; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 21,984

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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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
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	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	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	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

Reduce Vehicle Speed on Unpaved Roads

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

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					0.0124	0.0000	0.0124	1.8700e-003	0.0000	1.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0924	0.9002	0.7208	1.3600e-003		0.0435	0.0435		0.0404	0.0404	0.0000	118.9658	118.9658	0.0334	0.0000	119.8012
Total	**0.0924**	**0.9002**	**0.7208**	**1.3600e-003**	**0.0124**	**0.0435**	**0.0559**	**1.8700e-003**	**0.0404**	**0.0423**	**0.0000**	**118.9658**	**118.9658**	**0.0334**	**0.0000**	**119.8012**

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**

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

Mitigated Construction 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					5.5700e-003	0.0000	5.5700e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.4745	0.8636	1.3600e-003		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	118.9657	118.9657	0.0334	0.0000	119.8011
Total	**0.0204**	**0.4745**	**0.8636**	**1.3600e-003**	**5.5700e-003**	**2.1600e-003**	**7.7300e-003**	**8.4000e-004**	**2.1600e-003**	**3.0000e-003**	**0.0000**	**118.9657**	**118.9657**	**0.0334**	**0.0000**	**119.8011**

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

Date: 1/12/2022 11:36 AM

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.6617	0.3940	7.6000e-004		0.0323	0.0323		0.0297	0.0297	0.0000	66.8788	66.8788	0.0216	0.0000	67.4195
Total	**0.0634**	**0.6617**	**0.3940**	**7.6000e-004**	**0.3931**	**0.0323**	**0.4254**	**0.2021**	**0.0297**	**0.2317**	**0.0000**	**66.8788**	**66.8788**	**0.0216**	**0.0000**	**67.4195**

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

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1769	0.0000	0.1769	0.0909	0.0000	0.0909	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0139	0.2432	0.4592	7.6000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	66.8787	66.8787	0.0216	0.0000	67.4195
Total	**0.0139**	**0.2432**	**0.4592**	**7.6000e-004**	**0.1769**	**1.2400e-003**	**0.1782**	**0.0909**	**1.2400e-003**	**0.0922**	**0.0000**	**66.8787**	**66.8787**	**0.0216**	**0.0000**	**67.4195**

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

Date: 1/12/2022 11:36 AM

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5062	0.0000	0.5062	0.2010	0.0000	0.2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1994	2.1364	1.5973	3.4100e-003		0.0899	0.0899		0.0827	0.0827	0.0000	299.9403	299.9403	0.0970	0.0000	302.3655
Total	**0.1994**	**2.1364**	**1.5973**	**3.4100e-003**	**0.5062**	**0.0899**	**0.5961**	**0.2010**	**0.0827**	**0.2837**	**0.0000**	**299.9403**	**299.9403**	**0.0970**	**0.0000**	**302.3655**

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

Morgan Hill Devco, Morgan Hill - 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					
Fugitive Dust					0.2278	0.0000	0.2278	0.0904	0.0000	0.0904	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0556	1.0599	2.0197	3.4100e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	299.9399	299.9399	0.0970	0.0000	302.3651
Total	**0.0556**	**1.0599**	**2.0197**	**3.4100e-003**	**0.2278**	**5.5800e-003**	**0.2334**	**0.0904**	**5.5800e-003**	**0.0960**	**0.0000**	**299.9399**	**299.9399**	**0.0970**	**0.0000**	**302.3651**

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 - 2022

Unmitigated Construction On-Site

Date: 1/12/2022 11:36 AM

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	0.0202	0.1899	0.3021	4.6000e-004		9.6800e-003	9.6800e-003		8.9100e-003	8.9100e-003	0.0000	39.9787	39.9787	0.0129	0.0000	40.3020
Total	**0.0202**	**0.1899**	**0.3021**	**4.6000e-004**		**9.6800e-003**	**9.6800e-003**		**8.9100e-003**	**8.9100e-003**	**0.0000**	**39.9787**	**39.9787**	**0.0129**	**0.0000**	**40.3020**

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

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	7.3200e-003	0.1997	0.3443	4.6000e-004		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	39.9787	39.9787	0.0129	0.0000	40.3019
Total	**7.3200e-003**	**0.1997**	**0.3443**	**4.6000e-004**		**7.4000e-004**	**7.4000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**39.9787**	**39.9787**	**0.0129**	**0.0000**	**40.3019**

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

Morgan Hill Devco, Morgan Hill - 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					
Off-Road	0.0341	0.3123	0.3273	5.4000e-004		0.0162	0.0162		0.0152	0.0152	0.0000	46.3451	46.3451	0.0111	0.0000	46.6226
Total	**0.0341**	**0.3123**	**0.3273**	**5.4000e-004**		**0.0162**	**0.0162**		**0.0152**	**0.0152**	**0.0000**	**46.3451**	**46.3451**	**0.0111**	**0.0000**	**46.6226**

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					

Morgan Hill Devco, Morgan Hill - 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	0.0107	0.2182	0.3575	5.4000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	46.3450	46.3450	0.0111	0.0000	46.6226
Total	**0.0107**	**0.2182**	**0.3575**	**5.4000e-004**		**1.6900e-003**	**1.6900e-003**		**1.6900e-003**	**1.6900e-003**	**0.0000**	**46.3450**	**46.3450**	**0.0111**	**0.0000**	**46.6226**

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	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

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	0.0694	1.4186	2.3236	3.5000e-003		0.0110	0.0110		0.0110	0.0110	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.0694**	**1.4186**	**2.3236**	**3.5000e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

Morgan Hill Devco, Morgan Hill - 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 - 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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

Morgan Hill Devco, Morgan Hill - 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	0.0699	1.4295	2.3415	3.5300e-003		0.0111	0.0111		0.0111	0.0111	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0699**	**1.4295**	**2.3415**	**3.5300e-003**		**0.0111**	**0.0111**		**0.0111**	**0.0111**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

Mitigated Construction Off-Site

Morgan Hill Devco, Morgan Hill - 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 - 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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

Morgan Hill Devco, Morgan Hill - 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	0.0696	1.4240	2.3325	3.5200e-003		0.0110	0.0110		0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0696**	**1.4240**	**2.3325**	**3.5200e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

Morgan Hill Devco, Morgan Hill - 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**

3.6 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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					

Morgan Hill Devco, Morgan Hill - 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**

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	0.0696	1.4240	2.3325	3.5200e-003		0.0110	0.0110		0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0696**	**1.4240**	**2.3325**	**3.5200e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

Morgan Hill Devco, Morgan Hill - 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**

3.6 Building Construction - 2027

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	0.0178	0.1621	0.2091	3.5000e-004		6.8600e-003	6.8600e-003		6.4500e-003	6.4500e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**0.0178**	**0.1621**	**0.2091**	**3.5000e-004**		**6.8600e-003**	**6.8600e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

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

Morgan Hill Devco, Morgan Hill - 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	6.9400e-003	0.1419	0.2324	3.5000e-004		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**6.9400e-003**	**0.1419**	**0.2324**	**3.5000e-004**		**1.1000e-003**	**1.1000e-003**		**1.1000e-003**	**1.1000e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4100e-003	0.0430	0.0678	1.1000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**2.5989**	**0.0430**	**0.0678**	**1.1000e-004**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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	2.5925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0400e-003	0.0397	0.0687	1.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**2.5945**	**0.0397**	**0.0687**	**1.1000e-004**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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 - 2027

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	0.0343	0.3218	0.5467	8.5000e-004		0.0157	0.0157		0.0144	0.0144	0.0000	75.0722	75.0722	0.0243	0.0000	75.6792
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0343**	**0.3218**	**0.5467**	**8.5000e-004**		**0.0157**	**0.0157**		**0.0144**	**0.0144**	**0.0000**	**75.0722**	**75.0722**	**0.0243**	**0.0000**	**75.6792**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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	0.0125	0.3765	0.6486	8.5000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	75.0721	75.0721	0.0243	0.0000	75.6791
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0125**	**0.3765**	**0.6486**	**8.5000e-004**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**75.0721**	**75.0721**	**0.0243**	**0.0000**	**75.6791**

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

Morgan Hill Devco, Morgan Hill - Operational 2028

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	916.00	Space	0.00	366,400.00	0
City Park	9.00	Acre	0.00	392,040.00	0
Condo/Townhouse	55.00	Dwelling Unit	0.00	118,438.00	157
Single Family Housing	262.00	Dwelling Unit	69.40	564,194.00	749
Single Family Housing	20.00	Dwelling Unit	0.00	43,068.00	57
Single Family Housing	21.00	Dwelling Unit	0.00	37,800.00	60

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2028
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - construction worksheet & Site Plans

Construction Phase - Construction Schedule defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Date: 8/16/2022 3:03 PM

Morgan Hill Devco, Morgan Hill - 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 - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Trips and VMT - 0 Trips for EMFAC2021 Adjustments, pavement demo = 100 ton, building = 250 cement truck round trips, paving = 200 asphalt truck round trips

Demolition - demo 25,150-sf

Grading - grading = export 25,617-cy

Vehicle Trips - Provided trip gens, Adjusted trip length with traffic provided VMT

Vehicle Emission Factors - EMFAC2021 Vehicle Emissions Factors Santa Clara Co 2028

Woodstoves - No wood burning, all gas

Energy Use - Reach code - no natural gas, all electric

Water And Wastewater - Wastewater treatment, 100% aerobic, no septric tanks or lagoons

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Fleet Mix - EMFAC2021 Fleet Mix Santa Clara Co 2028

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	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
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
tblEnergyUse	NT24E	3,795.01	4,886.11
tblEnergyUse	NT24E	6,155.97	7,247.07
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24E	149.52	3,931.24
tblEnergyUse	T24E	209.15	6,162.76
tblEnergyUse	T24NG	12,903.77	0.00
tblEnergyUse	T24NG	20,314.55	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	8.25	17.60
tblFireplaces	NumberGas	75.75	191.76
tblFireplaces	NumberWood	9.35	0.00
tblFireplaces	NumberWood	130.29	0.00

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

tblFleetMix	HHD	6.1360e-003	7.7177e-003
tblFleetMix	HHD	6.1360e-003	7.7177e-003
tblFleetMix	HHD	6.1360e-003	7.7177e-003
tblFleetMix	HHD	6.1360e-003	7.7177e-003
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
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	5.3040e-003	6.0047e-003
tblFleetMix	LHD2	5.3040e-003	6.0047e-003
tblFleetMix	LHD2	5.3040e-003	6.0047e-003
tblFleetMix	LHD2	5.3040e-003	6.0047e-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	0.11	0.13

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tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MDV	0.11	0.13
tblFleetMix	MH	2.5850e-003	2.3780e-003
tblFleetMix	MH	2.5850e-003	2.3780e-003
tblFleetMix	MH	2.5850e-003	2.3780e-003
tblFleetMix	MH	2.5850e-003	2.3780e-003
tblFleetMix	MHD	8.1880e-003	9.5776e-003
tblFleetMix	MHD	8.1880e-003	9.5776e-003
tblFleetMix	MHD	8.1880e-003	9.5776e-003
tblFleetMix	MHD	8.1880e-003	9.5776e-003
tblFleetMix	OBUS	8.6800e-004	1.0635e-003
tblFleetMix	OBUS	8.6800e-004	1.0635e-003
tblFleetMix	OBUS	8.6800e-004	1.0635e-003
tblFleetMix	OBUS	8.6800e-004	1.0635e-003
tblFleetMix	SBUS	8.6200e-004	6.8355e-004
tblFleetMix	SBUS	8.6200e-004	6.8355e-004
tblFleetMix	SBUS	8.6200e-004	6.8355e-004
tblFleetMix	SBUS	8.6200e-004	6.8355e-004
tblFleetMix	UBUS	3.4900e-004	4.0289e-004
tblFleetMix	UBUS	3.4900e-004	4.0289e-004
tblFleetMix	UBUS	3.4900e-004	4.0289e-004
tblFleetMix	UBUS	3.4900e-004	4.0289e-004
tblGrading	MaterialExported	0.00	25,617.00
tblLandUse	LandUseSquareFeet	55,000.00	118,438.00
tblLandUse	LandUseSquareFeet	36,000.00	43,068.00
tblLandUse	LandUseSquareFeet	471,600.00	564,194.00
tblLandUse	LotAcreage	8.24	0.00
tblLandUse	LotAcreage	9.00	0.00

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tblLandUse	LotAcreage	3.44	0.00
tblLandUse	LotAcreage	6.49	0.00
tblLandUse	LotAcreage	85.06	69.40
tblLandUse	LotAcreage	6.82	0.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblTripsAndVMT	HaulingTripNumber	114.00	0.00
tblTripsAndVMT	HaulingTripNumber	3,202.00	0.00
tblTripsAndVMT	VendorTripNumber	163.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	467.00	0.00
tblTripsAndVMT	WorkerTripNumber	93.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.05	0.10
tblVehicleEF	HHD	0.00	6.0238e-008
tblVehicleEF	HHD	6.31	5.09
tblVehicleEF	HHD	0.41	0.68
tblVehicleEF	HHD	6.3790e-003	8.1752e-004
tblVehicleEF	HHD	972.81	757.82
tblVehicleEF	HHD	1,295.90	1,479.56
tblVehicleEF	HHD	0.05	9.9267e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.21	0.24

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tblVehicleEF	HHD	3.0000e-006	5.6833e-006
tblVehicleEF	HHD	5.26	3.91
tblVehicleEF	HHD	2.59	1.57
tblVehicleEF	HHD	2.32	2.71
tblVehicleEF	HHD	2.2800e-003	1.8638e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.6382e-007
tblVehicleEF	HHD	2.1810e-003	1.7765e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8990e-003	8.7847e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.5062e-007
tblVehicleEF	HHD	1.0000e-006	5.5226e-005
tblVehicleEF	HHD	5.9000e-005	1.7500e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	2.5000e-005	1.5738e-004
tblVehicleEF	HHD	2.0000e-006	3.2662e-007
tblVehicleEF	HHD	9.0490e-003	6.5679e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.00	9.8135e-008
tblVehicleEF	HHD	1.0000e-006	5.5226e-005
tblVehicleEF	HHD	5.9000e-005	1.7500e-005
tblVehicleEF	HHD	0.49	0.56
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12

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tblVehicleEF	HHD	2.5000e-005	1.5738e-004
tblVehicleEF	HHD	3.0000e-006	3.5760e-007
tblVehicleEF	LDA	1.1280e-003	1.4251e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.43	0.52
tblVehicleEF	LDA	1.80	2.29
tblVehicleEF	LDA	208.82	226.02
tblVehicleEF	LDA	44.22	58.17
tblVehicleEF	LDA	3.3260e-003	3.3730e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.13	0.19
tblVehicleEF	LDA	0.04	7.0973e-003
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.0460e-003	9.5485e-004
tblVehicleEF	LDA	1.4250e-003	1.6437e-003
tblVehicleEF	LDA	0.02	2.4840e-003
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	9.6300e-004	8.7845e-004
tblVehicleEF	LDA	1.3100e-003	1.5114e-003
tblVehicleEF	LDA	0.03	0.24
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	3.9220e-003	5.1049e-003
tblVehicleEF	LDA	0.02	0.18
tblVehicleEF	LDA	0.14	0.22
tblVehicleEF	LDA	2.0660e-003	2.2343e-003
tblVehicleEF	LDA	4.3800e-004	5.7504e-004
tblVehicleEF	LDA	0.03	0.24

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tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	5.6980e-003	7.4409e-003
tblVehicleEF	LDA	0.02	0.18
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDT1	2.1200e-003	4.0519e-003
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.61	1.04
tblVehicleEF	LDT1	1.93	3.92
tblVehicleEF	LDT1	251.94	305.92
tblVehicleEF	LDT1	53.96	79.35
tblVehicleEF	LDT1	4.2390e-003	6.8286e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.04	0.08
tblVehicleEF	LDT1	0.17	0.30
tblVehicleEF	LDT1	0.04	9.1816e-003
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	1.2270e-003	1.4650e-003
tblVehicleEF	LDT1	1.6610e-003	2.3392e-003
tblVehicleEF	LDT1	0.02	3.2135e-003
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	1.1280e-003	1.3472e-003
tblVehicleEF	LDT1	1.5280e-003	2.1508e-003
tblVehicleEF	LDT1	0.05	0.50
tblVehicleEF	LDT1	0.11	0.13
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	8.5090e-003	0.02
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.18	0.39

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tblVehicleEF	LDT1	2.4930e-003	3.0243e-003
tblVehicleEF	LDT1	5.3400e-004	7.8445e-004
tblVehicleEF	LDT1	0.05	0.50
tblVehicleEF	LDT1	0.11	0.13
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.20	0.43
tblVehicleEF	LDT2	2.0300e-003	2.0991e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.60	0.68
tblVehicleEF	LDT2	2.37	2.95
tblVehicleEF	LDT2	263.74	314.86
tblVehicleEF	LDT2	57.01	79.95
tblVehicleEF	LDT2	4.4300e-003	4.8615e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.19	0.27
tblVehicleEF	LDT2	0.04	8.8479e-003
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.1330e-003	1.1158e-003
tblVehicleEF	LDT2	1.4830e-003	1.8364e-003
tblVehicleEF	LDT2	0.02	3.0968e-003
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.0430e-003	1.0266e-003
tblVehicleEF	LDT2	1.3630e-003	1.6885e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00

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tblVehicleEF	LDT2	7.8330e-003	7.8650e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.21	0.30
tblVehicleEF	LDT2	2.6090e-003	3.1123e-003
tblVehicleEF	LDT2	5.6400e-004	7.9035e-004
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.32
tblVehicleEF	LHD1	4.3880e-003	4.6811e-003
tblVehicleEF	LHD1	5.9280e-003	5.1820e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.54	0.66
tblVehicleEF	LHD1	0.94	2.14
tblVehicleEF	LHD1	8.45	8.17
tblVehicleEF	LHD1	721.39	709.22
tblVehicleEF	LHD1	10.54	16.72
tblVehicleEF	LHD1	7.3500e-004	6.1243e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.39	0.40
tblVehicleEF	LHD1	0.25	0.36
tblVehicleEF	LHD1	8.9600e-004	6.8126e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8700e-003	9.3929e-003

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tblVehicleEF	LHD1	7.7360e-003	0.01
tblVehicleEF	LHD1	2.2100e-004	1.6127e-004
tblVehicleEF	LHD1	8.5700e-004	6.5179e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4680e-003	2.3482e-003
tblVehicleEF	LHD1	7.3560e-003	0.01
tblVehicleEF	LHD1	2.0300e-004	1.4829e-004
tblVehicleEF	LHD1	1.5610e-003	0.10
tblVehicleEF	LHD1	0.06	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3900e-004	0.00
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.18	0.15
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD1	8.2000e-005	7.9548e-005
tblVehicleEF	LHD1	7.0370e-003	6.9226e-003
tblVehicleEF	LHD1	1.0400e-004	1.6527e-004
tblVehicleEF	LHD1	1.5610e-003	0.10
tblVehicleEF	LHD1	0.06	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.3900e-004	0.00
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.18	0.15
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.6510e-003	2.6861e-003
tblVehicleEF	LHD2	5.6110e-003	5.0944e-003
tblVehicleEF	LHD2	5.5730e-003	9.7199e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.51	0.43

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tblVehicleEF	LHD2	0.51	1.14
tblVehicleEF	LHD2	13.28	13.47
tblVehicleEF	LHD2	700.57	756.59
tblVehicleEF	LHD2	6.75	8.92
tblVehicleEF	LHD2	1.6910e-003	1.6804e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.48	0.60
tblVehicleEF	LHD2	0.14	0.20
tblVehicleEF	LHD2	1.4880e-003	1.4355e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1100e-004	6.7373e-005
tblVehicleEF	LHD2	1.4230e-003	1.3734e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7060e-003	2.6552e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0200e-004	6.1947e-005
tblVehicleEF	LHD2	7.2700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0900e-004	0.00
tblVehicleEF	LHD2	0.10	0.09
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2700e-004	1.2901e-004
tblVehicleEF	LHD2	6.7590e-003	7.2818e-003

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tblVehicleEF	LHD2	6.7000e-005	8.8178e-005
tblVehicleEF	LHD2	7.2700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.0900e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.85	11.46
tblVehicleEF	MCY	9.16	7.88
tblVehicleEF	MCY	209.84	186.14
tblVehicleEF	MCY	59.66	44.44
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.8246e-003
tblVehicleEF	MCY	1.14	0.53
tblVehicleEF	MCY	0.27	0.11
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	2.1060e-003	1.9750e-003
tblVehicleEF	MCY	2.9000e-003	3.4508e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9650e-003	1.8444e-003
tblVehicleEF	MCY	2.7160e-003	3.2337e-003
tblVehicleEF	MCY	0.89	3.81
tblVehicleEF	MCY	0.64	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.14	0.93

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tblVehicleEF	MCY	0.48	3.79
tblVehicleEF	MCY	1.89	1.20
tblVehicleEF	MCY	2.0770e-003	1.8401e-003
tblVehicleEF	MCY	5.9000e-004	4.3935e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.64	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.68	1.14
tblVehicleEF	MCY	0.48	3.79
tblVehicleEF	MCY	2.06	1.30
tblVehicleEF	MDV	2.1400e-003	2.4427e-003
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.60	0.72
tblVehicleEF	MDV	2.45	3.04
tblVehicleEF	MDV	317.99	376.91
tblVehicleEF	MDV	67.38	95.01
tblVehicleEF	MDV	5.7730e-003	6.0461e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	0.04	8.9171e-003
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.1580e-003	1.1030e-003
tblVehicleEF	MDV	1.5000e-003	1.7912e-003
tblVehicleEF	MDV	0.02	3.1210e-003
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.0670e-003	1.0161e-003
tblVehicleEF	MDV	1.3790e-003	1.6469e-003
tblVehicleEF	MDV	0.06	0.30

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tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	8.4840e-003	9.7224e-003
tblVehicleEF	MDV	0.06	0.23
tblVehicleEF	MDV	0.23	0.35
tblVehicleEF	MDV	3.1420e-003	3.7240e-003
tblVehicleEF	MDV	6.6700e-004	9.3925e-004
tblVehicleEF	MDV	0.06	0.30
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.23
tblVehicleEF	MDV	0.26	0.38
tblVehicleEF	MH	6.2680e-003	7.8577e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.49	0.64
tblVehicleEF	MH	1.74	2.08
tblVehicleEF	MH	1,392.93	1,664.51
tblVehicleEF	MH	16.29	20.83
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.13	1.36
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	2.2600e-004	2.5540e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2930e-003	3.3264e-003

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

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.0700e-004	2.3483e-004
tblVehicleEF	MH	0.43	24.71
tblVehicleEF	MH	0.04	6.12
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	8.4430e-003	0.15
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6100e-004	2.0596e-004
tblVehicleEF	MH	0.43	24.71
tblVehicleEF	MH	0.04	6.12
tblVehicleEF	MH	0.16	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	8.4430e-003	0.15
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.7420e-003	0.02
tblVehicleEF	MHD	1.1630e-003	9.5576e-003
tblVehicleEF	MHD	8.4440e-003	7.2175e-003
tblVehicleEF	MHD	0.40	0.65
tblVehicleEF	MHD	0.17	0.20
tblVehicleEF	MHD	0.91	0.82
tblVehicleEF	MHD	67.24	151.31
tblVehicleEF	MHD	1,020.03	1,148.11
tblVehicleEF	MHD	8.65	7.36
tblVehicleEF	MHD	9.7020e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.5160e-003	5.2516e-003
tblVehicleEF	MHD	0.36	0.78

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

tblVehicleEF	MHD	1.44	0.73
tblVehicleEF	MHD	1.70	1.33
tblVehicleEF	MHD	2.1200e-004	9.7319e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0380e-003	7.1915e-003
tblVehicleEF	MHD	1.1100e-004	8.9136e-005
tblVehicleEF	MHD	2.0300e-004	9.3049e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	6.7260e-003	6.8725e-003
tblVehicleEF	MHD	1.0200e-004	8.1957e-005
tblVehicleEF	MHD	3.0500e-004	0.02
tblVehicleEF	MHD	0.01	4.2240e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7100e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.3800e-004	1.3972e-003
tblVehicleEF	MHD	9.7310e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.2771e-005
tblVehicleEF	MHD	3.0500e-004	0.02
tblVehicleEF	MHD	0.01	4.2240e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7100e-004	0.00
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04

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

tblVehicleEF	OBUS	7.0850e-003	7.5623e-003
tblVehicleEF	OBUS	2.5530e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.63	0.55
tblVehicleEF	OBUS	0.30	0.34
tblVehicleEF	OBUS	1.65	1.62
tblVehicleEF	OBUS	96.94	89.66
tblVehicleEF	OBUS	1,242.38	1,295.86
tblVehicleEF	OBUS	13.93	13.10
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.42	0.35
tblVehicleEF	OBUS	1.44	0.87
tblVehicleEF	OBUS	1.12	0.98
tblVehicleEF	OBUS	1.3800e-004	3.5519e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6840e-003	0.01
tblVehicleEF	OBUS	1.5400e-004	1.2387e-004
tblVehicleEF	OBUS	1.3200e-004	3.3971e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	7.3370e-003	0.01
tblVehicleEF	OBUS	1.4100e-004	1.1389e-004
tblVehicleEF	OBUS	1.0770e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8800e-004	0.00

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

tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.2000e-004	8.4582e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3800e-004	1.2949e-004
tblVehicleEF	OBUS	1.0770e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8800e-004	0.00
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	4.8620e-003	0.09
tblVehicleEF	SBUS	5.7680e-003	5.1387e-003
tblVehicleEF	SBUS	2.69	1.79
tblVehicleEF	SBUS	0.40	0.78
tblVehicleEF	SBUS	0.80	0.68
tblVehicleEF	SBUS	341.71	186.34
tblVehicleEF	SBUS	998.71	980.42
tblVehicleEF	SBUS	4.70	3.91
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.12	0.12
tblVehicleEF	SBUS	5.8520e-003	4.6872e-003
tblVehicleEF	SBUS	3.00	1.21
tblVehicleEF	SBUS	3.65	1.92
tblVehicleEF	SBUS	1.06	0.51
tblVehicleEF	SBUS	2.5420e-003	9.2934e-004

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

tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	6.0000e-005	4.4390e-005
tblVehicleEF	SBUS	2.4320e-003	8.8790e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6870e-003	2.6226e-003
tblVehicleEF	SBUS	0.02	9.6805e-003
tblVehicleEF	SBUS	5.6000e-005	4.0815e-005
tblVehicleEF	SBUS	7.2600e-004	0.04
tblVehicleEF	SBUS	6.9730e-003	8.5400e-003
tblVehicleEF	SBUS	0.30	0.19
tblVehicleEF	SBUS	3.4300e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2570e-003	1.6862e-003
tblVehicleEF	SBUS	9.5500e-003	9.1034e-003
tblVehicleEF	SBUS	4.7000e-005	3.8616e-005
tblVehicleEF	SBUS	7.2600e-004	0.04
tblVehicleEF	SBUS	6.9730e-003	8.5400e-003
tblVehicleEF	SBUS	0.43	0.32
tblVehicleEF	SBUS	3.4300e-004	0.00
tblVehicleEF	SBUS	0.08	0.14
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9830e-003	2.4478e-003
tblVehicleEF	UBUS	13.17	6.31

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

tblVehicleEF	UBUS	0.14	0.55
tblVehicleEF	UBUS	1,653.79	1,056.23
tblVehicleEF	UBUS	1.40	3.05
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1970e-003	4.6418e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1720e-003	5.5343e-003
tblVehicleEF	UBUS	1.5000e-005	1.2612e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9460e-003	5.2909e-003
tblVehicleEF	UBUS	1.4000e-005	1.1596e-005
tblVehicleEF	UBUS	3.9000e-005	6.9392e-003
tblVehicleEF	UBUS	4.5100e-004	1.9592e-003
tblVehicleEF	UBUS	2.1000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	8.7000e-005	7.8601e-003
tblVehicleEF	UBUS	8.3600e-003	8.2163e-003
tblVehicleEF	UBUS	0.01	8.5013e-003
tblVehicleEF	UBUS	1.4000e-005	3.0196e-005
tblVehicleEF	UBUS	3.9000e-005	6.9392e-003
tblVehicleEF	UBUS	4.5100e-004	1.9592e-003
tblVehicleEF	UBUS	2.1000e-005	0.00
tblVehicleEF	UBUS	1.77	0.60
tblVehicleEF	UBUS	8.7000e-005	7.8601e-003
tblVehicleEF	UBUS	9.1530e-003	8.9959e-003

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

tblVehicleTrips	HO_TL	5.70	12.30
tblVehicleTrips	HO_TL	5.70	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	3.96
tblVehicleTrips	ST_TR	9.54	9.35
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	3.09
tblVehicleTrips	SU_TR	8.55	8.38
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	3.56
tblVehicleTrips	WD_TR	9.44	9.25
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	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

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

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	3.6423	0.0946	2.6914	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6200e-003	1.3600e-003	78.9182
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
Mobile	1.7025	1.4615	14.2666	0.0401	3.9928	0.0242	4.0170	0.9958	0.0226	1.0184	0.0000	3,702.1001	3,702.1001	0.1398	0.1480	3,749.7015
Waste						0.0000	0.0000		0.0000	0.0000	79.1239	0.0000	79.1239	4.6761	0.0000	196.0260
Water						0.0000	0.0000		0.0000	0.0000	8.2525	0.1952	8.4477	0.0284	0.0180	14.5059
Total	**5.3448**	**1.5561**	**16.9579**	**0.0406**	**3.9928**	**0.0441**	**4.0369**	**0.9958**	**0.0425**	**1.0383**	**87.3763**	**3,785.4032**	**3,872.7795**	**4.8499**	**0.1673**	**4,043.8861**

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	3.6423	0.0946	2.6914	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6200e-003	1.3600e-003	78.9182

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

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
Mobile	1.7025	1.4615	14.2666	0.0401	3.9928	0.0242	4.0170	0.9958	0.0226	1.0184	0.0000	3,702.1001	3,702.1001	0.1398	0.1480	3,749.7015
Waste						0.0000	0.0000		0.0000	0.0000	79.1239	0.0000	79.1239	4.6761	0.0000	196.0260
Water						0.0000	0.0000		0.0000	0.0000	8.2525	0.1952	8.4477	0.0284	0.0180	14.5059
Total	**5.3448**	**1.5561**	**16.9579**	**0.0406**	**3.9928**	**0.0441**	**4.0369**	**0.9958**	**0.0425**	**1.0383**	**87.3763**	**3,785.4032**	**3,872.7795**	**4.8499**	**0.1673**	**4,043.8861**

	ROG	NOx	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**

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	1.7025	1.4615	14.2666	0.0401	3.9928	0.0242	4.0170	0.9958	0.0226	1.0184	0.0000	3,702.1001	3,702.1001	0.1398	0.1480	3,749.7015
Unmitigated	1.7025	1.4615	14.2666	0.0401	3.9928	0.0242	4.0170	0.9958	0.0226	1.0184	0.0000	3,702.1001	3,702.1001	0.1398	0.1480	3,749.7015

4.2 Trip Summary Information

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

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Condo/Townhouse	195.80	217.80	169.95	776,042	776,042
Parking Lot	0.00	0.00	0.00		
Single Family Housing	2,423.50	2,449.70	2195.56	9,517,912	9,517,912
Single Family Housing	185.00	187.00	167.60	726,558	726,558
Single Family Housing	194.25	196.35	175.98	762,886	762,886
Total	2,998.55	3,050.85	2,709.09	11,783,398	11,783,398

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
Condo/Townhouse	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.520010	0.037190	0.236196	0.132940	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Condo/Townhouse	0.520010	0.037190	0.236196	0.132940	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Parking Lot	0.520010	0.037190	0.236196	0.132940	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Single Family Housing	0.520010	0.037190	0.236196	0.132940	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
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
Condo/Townhouse	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
Single Family Housing	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**

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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
Condo/Townhouse	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
Single Family Housing	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
Condo/Townhouse	540015	0.4899	0.0000	0.0000	0.4899

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

Parking Lot	128240	0.1163	0.0000	0.0000	0.1163
Single Family Housing	3.93489e+006	3.5697	0.0000	0.0000	3.5697
Single Family Housing	300373	0.2725	0.0000	0.0000	0.2725
Single Family Housing	315392	0.2861	0.0000	0.0000	0.2861
Total		**4.7345**	**0.0000**	**0.0000**	**4.7345**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	540015	0.4899	0.0000	0.0000	0.4899
Parking Lot	128240	0.1163	0.0000	0.0000	0.1163
Single Family Housing	3.93489e+006	3.5697	0.0000	0.0000	3.5697
Single Family Housing	300373	0.2725	0.0000	0.0000	0.2725
Single Family Housing	315392	0.2861	0.0000	0.0000	0.2861
Total		**4.7345**	**0.0000**	**0.0000**	**4.7345**

6.0 Area Detail

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.6423	0.0946	2.6914	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6200e-003	1.3600e-003	78.9182
Unmitigated	3.6423	0.0946	2.6914	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6200e-003	1.3600e-003	78.9182

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	0.5451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0147	74.0147	1.4200e-003	1.3600e-003	74.4546
Landscaping	0.0805	0.0307	2.6642	1.4000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	4.3586	4.3586	4.2000e-003	0.0000	4.4637
Total	**3.6423**	**0.0946**	**2.6914**	**5.5000e-004**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**78.3734**	**78.3734**	**5.6200e-003**	**1.3600e-003**	**78.9182**

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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	0.5451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0147	74.0147	1.4200e-003	1.3600e-003	74.4546
Landscaping	0.0805	0.0307	2.6642	1.4000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	4.3586	4.3586	4.2000e-003	0.0000	4.4637
Total	**3.6423**	**0.0946**	**2.6914**	**5.5000e-004**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**78.3734**	**78.3734**	**5.6200e-003**	**1.3600e-003**	**78.9182**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

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

Mitigated	8.4477	0.0284	0.0180	14.5059
Unmitigated	8.4477	0.0284	0.0180	14.5059

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 10.7233	0.0341	0.0000	0.0000	0.0341
Condo/Townhouse	3.58347 / 2.25915	1.2926	4.3600e-003	2.7600e-003	2.2233
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19.7417 / 12.4458	7.1211	0.0240	0.0152	12.2485
Total		**8.4477**	**0.0284**	**0.0180**	**14.5059**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

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

City Park	0 / 10.7233	0.0341	0.0000	0.0000	0.0341
Condo/Townhouse	3.58347 / 2.25915	1.2926	4.3600e-003	2.7600e-003	2.2233
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19.7417 / 12.4458	7.1211	0.0240	0.0152	12.2485
Total		**8.4477**	**0.0284**	**0.0180**	**14.5059**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	79.1239	4.6761	0.0000	196.0260
Unmitigated	79.1239	4.6761	0.0000	196.0260

8.2 Waste by Land Use

Unmitigated

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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	0.77	0.1563	9.2400e-003	0.0000	0.3872
Condo/Townhouse	25.3	5.1357	0.3035	0.0000	12.7234
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	363.72	73.8319	4.3633	0.0000	182.9153
Total		**79.1238**	**4.6761**	**0.0000**	**196.0260**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.77	0.1563	9.2400e-003	0.0000	0.3872
Condo/Townhouse	25.3	5.1357	0.3035	0.0000	12.7234
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	363.72	73.8319	4.3633	0.0000	182.9153
Total		**79.1238**	**4.6761**	**0.0000**	**196.0260**

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Morgan Hill Devco, Morgan Hill - Operational 2030

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	916.00	Space	0.00	366,400.00	0
City Park	9.00	Acre	0.00	392,040.00	0
Condo/Townhouse	55.00	Dwelling Unit	0.00	118,438.00	157
Single Family Housing	262.00	Dwelling Unit	69.40	564,194.00	749
Single Family Housing	20.00	Dwelling Unit	0.00	43,068.00	57
Single Family Housing	21.00	Dwelling Unit	0.00	37,800.00	60

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2030
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - construction worksheet & Site Plans

Construction Phase - Construction Schedule defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Date: 8/16/2022 3:12 PM

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

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Off-road Equipment - Construction equip & hours defaults as requested per the City

Trips and VMT - 0 Trips for EMFAC2021 Adjustments, pavement demo = 100 ton, building = 250 cement truck round trips, paving = 200 asphalt truck round trips

Demolition - demo 25,150-sf

Grading - grading = export 25,617-cy

Vehicle Trips - Provided trip gens, Adjusted trip length with traffic provided VMT

Vehicle Emission Factors - EMFAC2021 Vehicle Emissions Factors Santa Clara Co 2030

Woodstoves - No wood burning, all gas

Energy Use - Reach code - no natural gas, all electric

Water And Wastewater - Wastewater treatment, 100% aerobic, no septric tanks or lagoons

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Fleet Mix - EMFAC2021 Fleet Mix Santa Clara Co 2030

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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
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
tblEnergyUse	NT24E	3,795.01	4,886.11
tblEnergyUse	NT24E	6,155.97	7,247.07
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	NT24NG	3,723.00	0.00
tblEnergyUse	T24E	149.52	3,931.24
tblEnergyUse	T24E	209.15	6,162.76
tblEnergyUse	T24NG	12,903.77	0.00
tblEnergyUse	T24NG	20,314.55	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	8.25	17.60
tblFireplaces	NumberGas	75.75	191.76
tblFireplaces	NumberWood	9.35	0.00
tblFireplaces	NumberWood	130.29	0.00

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

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
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

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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
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	25,617.00
tblLandUse	LandUseSquareFeet	55,000.00	118,438.00
tblLandUse	LandUseSquareFeet	36,000.00	43,068.00
tblLandUse	LandUseSquareFeet	471,600.00	564,194.00
tblLandUse	LotAcreage	8.24	0.00
tblLandUse	LotAcreage	9.00	0.00

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tblLandUse	LotAcreage	3.44	0.00
tblLandUse	LotAcreage	6.49	0.00
tblLandUse	LotAcreage	6.82	0.00
tblLandUse	LotAcreage	85.06	69.40
tblTripsAndVMT	HaulingTripNumber	114.00	0.00
tblTripsAndVMT	HaulingTripNumber	3,202.00	0.00
tblTripsAndVMT	VendorTripNumber	163.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	467.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	93.00	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

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

tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
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

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tblVehicleEF	LDA	1.69	2.09
tblVehicleEF	LDA	199.86	218.64
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

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tblVehicleEF	LDT1	0.53	0.90
tblVehicleEF	LDT1	1.82	3.41
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

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tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.55	0.64
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

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tblVehicleEF	LHD1	4.1480e-003	4.3350e-003
tblVehicleEF	LHD1	5.1950e-003	4.0280e-003
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

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tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
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

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tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
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

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tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
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

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tblVehicleEF	MDV	0.54	0.66
tblVehicleEF	MDV	2.29	2.78
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

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tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
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

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tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
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

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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
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

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tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.8820e-003	0.01
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

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tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81
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

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

tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
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

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

tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
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	HO_TL	5.70	12.30
tblVehicleTrips	HO_TL	5.70	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HS_TL	4.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	HW_TL	10.80	12.30
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	3.96
tblVehicleTrips	ST_TR	9.54	9.35
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	3.09
tblVehicleTrips	SU_TR	8.55	8.38
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	3.56
tblVehicleTrips	WD_TR	9.44	9.25
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

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

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	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	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	3.6419	0.0946	2.6868	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6000e-003	1.3600e-003	78.9177
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
Mobile	1.5661	1.3019	13.2868	0.0388	3.9927	0.0217	4.0144	0.9957	0.0202	1.0160	0.0000	3,579.9408	3,579.9408	0.1287	0.1402	3,624.9400
Waste						0.0000	0.0000		0.0000	0.0000	79.1239	0.0000	79.1239	4.6761	0.0000	196.0260
Water						0.0000	0.0000		0.0000	0.0000	8.2525	0.1952	8.4477	0.0284	0.0180	14.5059

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

Total	**5.2080**	**1.3964**	**15.9736**	**0.0393**	**3.9927**	**0.0416**	**4.0343**	**0.9957**	**0.0402**	**1.0359**	**87.3763**	**3,663.2439**	**3,750.6202**	**4.8388**	**0.1595**	**3,919.1240**

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	3.6419	0.0946	2.6868	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6000e-003	1.3600e-003	78.9177
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
Mobile	1.5661	1.3019	13.2868	0.0388	3.9927	0.0217	4.0144	0.9957	0.0202	1.0160	0.0000	3,579.9408	3,579.9408	0.1287	0.1402	3,624.9400
Waste						0.0000	0.0000		0.0000	0.0000	79.1239	0.0000	79.1239	4.6761	0.0000	196.0260
Water						0.0000	0.0000		0.0000	0.0000	8.2525	0.1952	8.4477	0.0284	0.0180	14.5059
Total	**5.2080**	**1.3964**	**15.9736**	**0.0393**	**3.9927**	**0.0416**	**4.0343**	**0.9957**	**0.0402**	**1.0359**	**87.3763**	**3,663.2439**	**3,750.6202**	**4.8388**	**0.1595**	**3,919.1240**

	ROG	NOx	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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5661	1.3019	13.2868	0.0388	3.9927	0.0217	4.0144	0.9957	0.0202	1.0160	0.0000	3,579.9408	3,579.9408	0.1287	0.1402	3,624.9400
Unmitigated	1.5661	1.3019	13.2868	0.0388	3.9927	0.0217	4.0144	0.9957	0.0202	1.0160	0.0000	3,579.9408	3,579.9408	0.1287	0.1402	3,624.9400

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Condo/Townhouse	195.80	217.80	169.95	776,042	776,042
Parking Lot	0.00	0.00	0.00		
Single Family Housing	2,423.50	2,449.70	2195.56	9,517,912	9,517,912
Single Family Housing	185.00	187.00	167.60	726,558	726,558
Single Family Housing	194.25	196.35	175.98	762,886	762,886
Total	2,998.55	3,050.85	2,709.09	11,783,398	11,783,398

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
Condo/Townhouse	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3
Single Family Housing	12.30	12.30	12.30	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

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

City Park	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
Condo/Townhouse	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
Single Family Housing	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

	ROG	NOx	CO	SO2	Fugitive 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	4.7345	4.7345	0.0000	0.0000	4.7345
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.7345	4.7345	0.0000	0.0000	4.7345
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

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

	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
Condo/Townhouse	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
Single Family Housing	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**

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
Condo/Townhouse	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
Single Family Housing	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**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	540015	0.4899	0.0000	0.0000	0.4899
Parking Lot	128240	0.1163	0.0000	0.0000	0.1163
Single Family Housing	3.93489e+006	3.5697	0.0000	0.0000	3.5697
Single Family Housing	300373	0.2725	0.0000	0.0000	0.2725
Single Family Housing	315392	0.2861	0.0000	0.0000	0.2861
Total		**4.7345**	**0.0000**	**0.0000**	**4.7345**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	540015	0.4899	0.0000	0.0000	0.4899

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

Parking Lot	128240	0.1163	0.0000	0.0000	0.1163
Single Family Housing	3.93489e+006	3.5697	0.0000	0.0000	3.5697
Single Family Housing	300373	0.2725	0.0000	0.0000	0.2725
Single Family Housing	315392	0.2861	0.0000	0.0000	0.2861
Total		**4.7345**	**0.0000**	**0.0000**	**4.7345**

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	3.6419	0.0946	2.6868	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6000e-003	1.3600e-003	78.9177
Unmitigated	3.6419	0.0946	2.6868	5.5000e-004		0.0199	0.0199		0.0199	0.0199	0.0000	78.3734	78.3734	5.6000e-003	1.3600e-003	78.9177

6.2 Area by SubCategory

Unmitigated

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0147	74.0147	1.4200e-003	1.3600e-003	74.4546
Landscaping	0.0801	0.0306	2.6596	1.4000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	4.3586	4.3586	4.1800e-003	0.0000	4.4631
Total	**3.6419**	**0.0946**	**2.6868**	**5.5000e-004**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**78.3734**	**78.3734**	**5.6000e-003**	**1.3600e-003**	**78.9177**

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	0.5451					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0092					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.4800e-003	0.0639	0.0272	4.1000e-004		5.1700e-003	5.1700e-003		5.1700e-003	5.1700e-003	0.0000	74.0147	74.0147	1.4200e-003	1.3600e-003	74.4546
Landscaping	0.0801	0.0306	2.6596	1.4000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	4.3586	4.3586	4.1800e-003	0.0000	4.4631
Total	**3.6419**	**0.0946**	**2.6868**	**5.5000e-004**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**78.3734**	**78.3734**	**5.6000e-003**	**1.3600e-003**	**78.9177**

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

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.4477	0.0284	0.0180	14.5059
Unmitigated	8.4477	0.0284	0.0180	14.5059

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 10.7233	0.0341	0.0000	0.0000	0.0341
Condo/Townhouse	3.58347 / 2.25915	1.2926	4.3600e-003	2.7600e-003	2.2233
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19.7417 / 12.4458	7.1211	0.0240	0.0152	12.2485
Total		**8.4477**	**0.0284**	**0.0180**	**14.5059**

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

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 10.7233	0.0341	0.0000	0.0000	0.0341
Condo/Townhouse	3.58347 / 2.25915	1.2926	4.3600e-003	2.7600e-003	2.2233
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	19.7417 / 12.4458	7.1211	0.0240	0.0152	12.2485
Total		**8.4477**	**0.0284**	**0.0180**	**14.5059**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

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

Mitigated	79.1239	4.6761	0.0000	196.0260
Unmitigated	79.1239	4.6761	0.0000	196.0260

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.77	0.1563	9.2400e-003	0.0000	0.3872
Condo/Townhouse	25.3	5.1357	0.3035	0.0000	12.7234
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	363.72	73.8319	4.3633	0.0000	182.9153
Total		**79.1238**	**4.6761**	**0.0000**	**196.0260**

Mitigated

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

Morgan Hill Devco, Morgan Hill - Santa Clara County, Annual

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

City Park	0.77	0.1563	9.2400e-003	0.0000	0.3872
Condo/Townhouse	25.3	5.1357	0.3035	0.0000	12.7234
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	363.72	73.8319	4.3633	0.0000	182.9153
Total		**79.1238**	**4.6761**	**0.0000**	**196.0260**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 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	0.1662	0.8230	1.8591	0.0071	0.4057	0.0494	0.4551	0.0610	0.0206	0.0817	677.3650	0.0332	0.0650	697.5724
2023	0.1671	0.8275	1.8694	0.0072	0.4080	0.0497	0.4576	0.0614	0.0208	0.0821	681.0970	0.0333	0.0654	701.4158
2024	0.1675	0.8298	1.8745	0.0072	0.4091	0.0498	0.4589	0.0616	0.0208	0.0824	682.9630	0.0334	0.0656	703.3375
2025	0.1671	0.8275	1.8694	0.0072	0.4080	0.0497	0.4576	0.0614	0.0208	0.0821	681.0970	0.0333	0.0654	701.4158
2026	0.1671	0.8275	1.8694	0.0072	0.4080	0.0497	0.4576	0.0614	0.0208	0.0821	681.0970	0.0333	0.0654	701.4158
2027	0.1126	0.5577	1.2599	0.0048	0.2750	0.0335	0.3084	0.0414	0.0140	0.0554	459.0407	0.0225	0.0441	472.7350
Toxic Air Contaminants (1 Mile Trip Length)														
2022	0.1383	0.2766	0.6756	0.0010	0.0407	0.0060	0.0468	0.0061	0.0027	0.0089	98.7423	0.0146	0.0136	103.1601
2023	0.1391	0.2781	0.6794	0.0010	0.0410	0.0061	0.0470	0.0062	0.0027	0.0089	99.2863	0.0146	0.0137	103.7284
2024	0.1395	0.2789	0.6812	0.0010	0.0411	0.0061	0.0472	0.0062	0.0027	0.0089	99.5584	0.0147	0.0137	104.0126
2025	0.1391	0.2781	0.6794	0.0010	0.0410	0.0061	0.0470	0.0062	0.0027	0.0089	99.2863	0.0146	0.0137	103.7284
2026	0.1391	0.2781	0.6794	0.0010	0.0410	0.0061	0.0470	0.0062	0.0027	0.0089	99.2863	0.0146	0.0137	103.7284
2027	0.0937	0.1874	0.4579	0.0007	0.0276	0.0041	0.0317	0.0042	0.0018	0.0060	66.9163	0.0099	0.0092	69.9101

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	1050	0	139	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	11340	0	2780
Site Preparation	18	0	720	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	7776	0	0
Grading	20	0	2200	0	3202	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	23760	0	64040
Trenching	5	0	550	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5940	0	0
Building Construction	460	160	510600	177600	500	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	5514480	1296480	3650
Architectural Coating	92	0	6900	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	74520	0	0
Paving	15	0	1125	0	400	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	12150	0	2920

Number of Days Per Year					
2022	1/3/22	12/31/22	363	259	
2023	1/1/23	12/31/23	365	261	
2024	1/1/24	12/31/24	366	262	
2025	1/1/25	12/31/25	365	261	
2026	1/1/26	12/31/26	365	261	
2027	1/1/27	9/3/27	246	176	
			2070	**1480**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/3/2022	4/8/2022	5	70
Site Preparation	4/9/2022	6/3/2022	5	40
Grading	6/4/2022	11/4/2022	5	110
Trenching	6/4/2022	11/4/2022	5	110
Building Construction	11/5/2022	2/5/2027	5	1,110
Architectural Coating	2/6/2027	5/21/2027	5	75
Paving	5/22/2027	9/3/2027	5	75

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

CalEEMod EMFAC2021 Emission Factors Input — Year 2028

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004681	0.002686	0.015111	0.212115634	0.007562	0	0	0.080095	0
A	CH4_RUNEX	0.001425	0.004052	0.002099	0.002443	0.005182	0.005094	0.009558	0.100129934	0.010383	0.534009843	0.148032	0.089223	0.007858
A	CH4_STREX	0.05078	0.0804	0.066131	0.073205	0.01851	0.00972	0.007218	6.02384E-08	0.014744	0.002447775	0.164333	0.005139	0.023908
A	CO_IDLEX	0	0	0	0	0.188693	0.137463	0.652204	5.089184403	0.545964	0	0	1.787728	0
A	CO_RUNEX	0.521113	1.036872	0.681535	0.719012	0.66017	0.430262	0.198131	0.682268113	0.337547	6.308197017	11.46379	0.781582	0.63572
A	CO_STREX	2.294229	3.923757	2.949988	3.040087	2.13812	1.139056	0.820911	0.000817522	1.616531	0.549940604	7.875637	0.676529	2.082199
A	CO2_NBIO_IDLEX	0	0	0	0	8.174906	13.47489	151.3137	757.8199397	89.65996	0	0	186.3421	0
A	CO2_NBIO_RUNEX	226.019	305.9166	314.8594	376.911	709.2157	756.5887	1148.112	1479.563001	1295.864	1056.22719	186.1355	980.422	1664.507
A	CO2_NBIO_STREX	58.16682	79.34988	79.94581	95.00817	16.7174	8.919443	7.360999	0.009926653	13.09844	3.05444779	44.44114	3.906108	20.83311
A	NOX_IDLEX	0	0	0	0	0.040228	0.080872	0.784084	3.914297153	0.349967	0	0	1.2105	0
A	NOX_RUNEX	0.026023	0.083105	0.047401	0.058663	0.401317	0.595736	0.73076	1.566149473	0.873039	0.292637904	0.525696	1.9184	1.356761
A	NOX_STREX	0.191361	0.30277	0.265884	0.301311	0.362492	0.195812	1.328267	2.706913868	0.97934	0.026113624	0.112461	0.514906	0.298385
A	PM10_IDLEX	0	0	0	0	0.000681	0.001436	0.000973	0.00186378	0.000355	0	0	0.000929	0
A	PM10_PMBW	0.007097	0.009182	0.008848	0.008917	0.076058	0.088784	0.044461	0.081989135	0.050018	0.126376132	0.012	0.044367	0.044942
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009393	0.010621	0.012	0.03513875	0.012	0.044658837	0.004	0.01049	0.013305
A	PM10_RUNEX	0.000955	0.001465	0.001116	0.001103	0.01052	0.018516	0.007191	0.024126657	0.013796	0.005534317	0.001975	0.010136	0.025215
A	PM10_STREX	0.001644	0.002339	0.001836	0.001791	0.000161	6.74E-05	8.91E-05	1.63816E-07	0.000124	1.26121E-05	0.003451	4.44E-05	0.000255
A	PM25_IDLEX	0	0	0	0	0.000652	0.001373	0.00093	0.001776496	0.00034	0	0	0.000888	0
A	PM25_PMBW	0.002484	0.003214	0.003097	0.003121	0.02662	0.031075	0.015561	0.028696197	0.017506	0.044231646	0.0042	0.015528	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002348	0.002655	0.003	0.008784687	0.003	0.011164709	0.001	0.002623	0.003326
A	PM25_RUNEX	0.000878	0.001347	0.001027	0.001016	0.010031	0.0177	0.006872	0.023079587	0.01319	0.005290933	0.001844	0.009681	0.024084
A	PM25_STREX	0.001511	0.002151	0.001688	0.001647	0.000148	6.19E-05	8.2E-05	1.50623E-07	0.000114	1.15963E-05	0.003234	4.08E-05	0.000235
A	ROG_DIURN	0.242811	0.502428	0.266297	0.30328	0.104161	0.055259	0.018086	5.52258E-05	0.073045	0.00693921	3.814128	0.035978	24.71437
A	ROG_HTSK	0.067372	0.134098	0.069588	0.076727	0.024934	0.012938	0.004224	1.75002E-05	0.015209	0.001959156	3.558397	0.00854	6.123699
A	ROG_IDLEX	0	0	0	0	0.019017	0.014284	0.022534	0.318402382	0.040376	0	0	0.194779	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.005105	0.01734	0.007865	0.009722	0.061058	0.092017	0.020251	0.01554384	0.036618	0.058866401	0.934888	0.046117	0.060107
A	ROG_RUNLS	0.182649	0.386011	0.19915	0.228657	0.147249	0.074801	0.035188	0.00015738	0.081255	0.007860127	3.787612	0.023629	0.148659
A	ROG_STREX	0.222658	0.3933	0.29546	0.346297	0.089878	0.04658	0.038301	3.26616E-07	0.078288	0.008216344	1.195378	0.029135	0.095976
A	SO2_IDLEX	0	0	0	0	7.95E-05	0.000129	0.001397	0.006567944	0.000846	0	0	0.001686	0
A	SO2_RUNEX	0.002234	0.003024	0.003112	0.003724	0.006923	0.007282	0.010874	0.013349969	0.012337	0.008501298	0.00184	0.009103	0.01631
A	SO2_STREX	0.000575	0.000784	0.00079	0.000939	0.000165	8.82E-05	7.28E-05	9.81351E-08	0.000129	3.01963E-05	0.000439	3.86E-05	0.000206
A	TOG_DIURN	0.242811	0.502428	0.266297	0.30328	0.104161	0.055259	0.018086	5.52258E-05	0.073045	0.00693921	0.083947	0.035978	24.71437
A	TOG_HTSK	0.067372	0.134098	0.069588	0.076727	0.024934	0.012938	0.004224	1.75002E-05	0.015209	0.001959156	3.558397	0.00854	6.123699
A	TOG_IDLEX	0	0	0	0	0.026882	0.019052	0.040694	0.560790581	0.05335	0	0	0.317855	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.007441	0.0253	0.011462	0.014148	0.074104	0.106171	0.032495	0.117637308	0.051922	0.600927917	1.139755	0.142539	0.076332
A	TOG_RUNLS	0.182649	0.386011	0.19915	0.228657	0.147249	0.074801	0.035188	0.00015738	0.081255	0.007860127	3.787612	0.023629	0.148659
A	TOG_STREX	0.243783	0.430614	0.323492	0.379151	0.098405	0.050999	0.041934	3.57604E-07	0.085716	0.008995862	1.300164	0.031899	0.105082
A	N2O_IDLEX	0	0	0	0	0.000612	0.00168	0.023392	0.122368779	0.013015	0	0	0.024273	0
A	N2O_RUNEX	0.003373	0.006829	0.004861	0.006046	0.037739	0.077781	0.147053	0.236311345	0.15401	0.163214312	0.037627	0.118964	0.068662
A	N2O_STREX	0.026528	0.034164	0.032804	0.033699	0.030759	0.016258	0.005252	5.68332E-06	0.012713	0.004641839	0.006825	0.004687	0.032748

CalEEMod EMFAC2021 Fleet Mix Input — Year 2028

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.52001	0.03719	0.236196	0.13294	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Condo/Townhouse	0.52001	0.03719	0.236196	0.13294	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Parking Lot	0.52001	0.03719	0.236196	0.13294	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378
Single Family Housing	0.52001	0.03719	0.236196	0.13294	0.023827	0.006005	0.009578	0.007718	0.001064	0.000403	0.022009	0.000684	0.002378

Adjustment Factors

Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
HHDT	GAS	1.47083478	1.00695E-05	154.3030105	0.000139	29.42846227	0.000201
HHDT	DSL	9119.07892	0.062430493	1024317.446	0.9224592	134474.3376	0.92063
HHDT	ELEC	270.954005	0.001854989	28275.15131	0.0254635	3483.700255	0.02385
HHDT	NG	909.88698	0.006229214	57673.44076	0.0519384	8080.239508	0.055318
		10301.3907		1110420.341		146067.7059	
LDA	GAS	600154.656	0.186257289	21978504.63	0.8513095	2786673.046	0.864841
LDA	DSL	1207.84831	0.000374854	34499.51948	0.0013363	5156.172328	0.0016
LDA	ELEC	69984.6371	0.021719649	2868125.206	0.1110932	336272.3496	0.104362
LDA	PIH	22751.9262	0.007061033	936162.085	0.036261	94079.21473	0.029197
		694099.068		25817291.44		3222180.783	
LDT1	GAS	49081.0099	0.222026803	1563538.266	0.9851178	218519.1405	0.988511
LDT1	DSL	3.3764189	1.52738E-05	51.57305301	3.249E-05	9.619959751	4.35E-05
LDT1	ELEC	344.716748	0.001559388	14328.80602	0.009028	1657.810379	0.007499
LDT1	PIH	210.972342	0.000954371	9240.009417	0.0058217	872.3706358	0.003946
		49640.0754		1587158.654		221058.9414	
LDT2	GAS	306289.622	0.208431557	10804407.3	0.9704242	1428230.323	0.971918
LDT2	DSL	1124.63424	0.000765319	40163.41313	0.0036074	5296.189892	0.003604
LDT2	ELEC	3966.16594	0.002698995	128586.5393	0.0115493	19886.52116	0.013533
LDT2	PIH	3889.79971	0.002647027	160537.4754	0.0144191	16084.32179	0.010945
		315270.222		11133694.73		1469497.356	
LHDT1	GAS	19758.1764	0.04416775	736964.0424	0.6019816	294367.389	0.658034
LHDT1	DSL	11024.6905	0.024644773	426298.0601	0.3482173	138676.7372	0.31
LHDT1	ELEC	1021.23389	0.002282883	60968.04446	0.0498011	14299.84153	0.031966
		31804.1008	0.071095406	1224230.147		447343.9677	
LHDT2	GAS	2498.39068	0.024172457	89760.81805	0.2961146	37222.29854	0.360134
LHDT2	DSL	5257.64994	0.050868872	198606.7634	0.6551897	66134.62211	0.639866
LHDT2	ELEC	258.907678	0.002504986	14761.07055	0.0486957	3434.170837	0.033226
		8014.9483	0.077546315	303128.652		103356.9206	
MCY	GAS	29377.6579	0.022009355	168474.0032	1	58755.31584	1
MDV	GAS	168553.508	0.204794072	5803821.565	0.9493799	781481.4355	0.949507
MDV	DSL	2426.78477	0.002948566	81862.86931	0.013391	11233.79404	0.013649
MDV	ELEC	4086.68444	0.004965359	132418.1639	0.0216608	20489.54692	0.024895
MDV	PIH	2378.28799	0.002889642	95173.33521	0.0155683	9834.220847	0.011949
		177445.265		6113275.934		823038.9973	
MH	GAS	2135.932	6.727432719	20452.38386	0.6736353	213.6786372	0.673012
MH	DSL	1038.17217	3.269876308	9908.829938	0.3263647	103.8172172	0.326988
		3174.10417		30361.2138		317.4958545	
MHDT	GAS	1401.23397	0.008532925	72189.24736	0.1356928	28035.8892	0.170727
MHDT	DSL	10803.0783	0.065786202	430729.4798	0.8096342	129114.2453	0.786251
MHDT	ELEC	455.754173	0.002775351	23641.623	0.0444387	5888.878929	0.035861
MHDT	NG	123.907996	0.000754548	5444.709533	0.0102343	1175.943642	0.007161
		12783.9744		532005.0597		164214.9571	
OBUS	GAS	397.114471	0.021387874	16622.09352	0.2036011	7945.466334	0.427929
OBUS	DSL	1000.42102	0.053880885	63426.65321	0.776902	10301.54556	0.554823
OBUS	ELEC	11.1861302	0.000602465	887.4727094	0.0108705	223.8120932	0.012054
OBUS	NG	10.8367987	0.000583651	704.2664166	0.0086264	96.44750857	0.005194
		1419.55842		81640.48586		18567.2715	
SBUS	GAS	192.609486	0.017296637	9426.490292	0.3669994	770.4379438	0.069187
SBUS	DSL	672.407102	0.060383222	14961.93086	0.5825094	9736.454837	0.874349
SBUS	ELEC	19.5694243	0.001757365	629.4361187	0.0245057	226.2445637	0.020317
SBUS	NG	27.798612	0.002496359	667.4476259	0.0259856	402.5239015	0.036147
		912.384624		25685.3049		11135.66125	
UBUS	GAS	46.6273084	0.021676301	4869.278876	0.0818022	186.5092335	0.086705
UBUS	DSL	397.790659	0.184926606	44197.61875	0.742505	1591.162635	0.739706
UBUS	ELEC	30.092586	0.118928481	3155.026467	0.4320129	120.3703441	0.475714
UBUS	NG	63.2577367	0.029407525	7303.083978	0.1226893	253.0309468	0.11763
		537.76829		59525.00807		2151.07316	

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
City Park	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
Condo/Townhouse	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
Single Family Housing	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_DIU	PM2.5_TIR	PM2.5_BW	PM10_RUN	PM10_IDL	PM10_STR	PM10_DIU	PM10_TIR	PM10_BW	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	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	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	0.202866	0.125232	70.47019	0	0.015885	0.120052	0
Santa Clara	2022	HHDT	Aggregate	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	0.002	0.00269	0.020879	0	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	0.0031	0.352928	0	0	0.002239	0	0
Santa Clara	2022	LDA	Aggregate	Electricity		49768.56	2058456	0	2058456	247155.6	0	0	0	0	0	0	0	0.002	0.001531	0	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	0.187725	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	0.002	0.003731	0.252061	0	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	0.0031	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	0.002	0.001541	0	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	0.187725	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	0.002	0.003089	0.005871	0	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	0.0031	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	0.002	0.001524	0	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	0.187725	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	Diesel		9466.897	364941.3	364941.3	0	119081.7	2.046185	2.148991	0	0.042212	0.027161	0	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	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	0.033839	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	0.002	0.003153	0.0057	0	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	0.0031	0.20344	0	0	0.003953	0	0
Santa Clara	2022	MDV	Aggregate	Electricity		623.8975	22215.8	0	22215.8	3205.616	0	0	0	0	0	0	0	0.002	0.001523	0	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	0.187725	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	0.004	0.015675	0.109386	0	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	0.143759	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	Diesel		10189.55	428042.3	428042.3	0	121266.8	1.73167	15.28688	1.483339	0.020297	0.042841	0	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		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	301.5881	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	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		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	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		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	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	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	0
Santa Clara	2022	UBUS	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: 2028
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_PMI	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	2028	HHDT	Aggregate	Aggregate	Gasoline	1.470835	154.303	154.303	0	29.42846	3.160849	0	0.799958	0.001802	0	0.000748	0.005	0.032409	0.00196	0	0.000813	0.02	0.092597	1951.66	0	49.27078	0.108026	0	0.000299	0.124786	0	0.028209	0.5443	0	0.001621	0.086862	0.781156	5.484444	0.794242	0	0.001775	0.086862	0.781156	5.484444	0.045	24.51976	0	4.057756	0.019294	0	0.000487
Santa Clara	2028	HHDT	Aggregate	Aggregate	Diesel	9119.079	1024317	1024317	0	134474.3	1.649728	61.49517	2.940109	0.02493	0.025825	0	0.008878	0.027829	0.026057	0.026993	0	0.035118	0.079512	1528	11109.9	0	0.000679	0.234703	0	0.240737	1.750369	0	0.01462	5.053085	0	0	0	0	0.016644	5.752553	0	0	0	0	0.216623	0.067122	73.97201	0	0.014469	0.105204	0
Santa Clara	2028	HHDT	Aggregate	Aggregate	Electricity	270.954	28275.15	0	28275.15	3483.7	0	0	0	0	0	0	0.008552	0.01525	0	0	0	0.034206	0.043571	0	0	0	0	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	2028	HHDT	Aggregate	Aggregate	Natural Ga	909.887	57673.44	57673.44	0	8080.24	0.845299	12.05981	0	0.001592	0.026365	0	0.009	0.050678	0.001731	0.028674	0	0.036	0.144795	1343.406	10310.04	0	1.91551	31.69951	0	0.273862	2.101769	0	0.038157	0.471295	0	0	0	0	1.967209	32.37261	0	0	0	0	0.820835	11.87837	75.6236	0	0	0	0
Santa Clara	2028	LDA	Aggregate	Aggregate	Gasoline	600154.7	21978505	21978505	0	2786673	0.030254	0	0.217367	0.000997	0	0.00169	0.002	0.002654	0.001084	0	0.001838	0.008	0.007582	259.6812	0	65.1265	0.001655	0	0.057308	0.003885	0	0.029996	0.005911	0	0.251605	0.076497	0.209635	1.284962	0.08625	0	0.275476	0.076497	0.209635	1.284962	0.03804	0.603253	0	2.607541	0.002567	0	0.000644
Santa Clara	2028	LDA	Aggregate	Aggregate	Diesel	1207.848	34499.52	34499.52	0	5156.172	0.118376	0	0	0.009649	0	0	0.002	0.002722	0.010085	0	0	0.008	0.007778	222.2686	0	0	0.000886	0	0	0.035019	0	0	0.019079	0	0	0.02172	0	0	0	0	0	0.02172	0	0	0	0.0031	0.281436	0	0	0.002106	0	0
Santa Clara	2028	LDA	Aggregate	Aggregate	Electricity	69984.64	2868125	0	2868125	136272.3	0	0	0	0	0	0	0.002	0.001536	0	0	0	0.008	0.004389	0	0	0	0	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	2028	LDA	Aggregate	Aggregate	Plug-in Hyb	22751.93	936162.1	430803.2	505358.9	94079.21	0.00302	0	0.11551	0.000467	0	0.001715	0.002	0.001393	0.000508	0	0.001865	0.008	0.003979	128.3175	0	63.11439	0.000404	0	0.041698	0.000525	0	0.020069	0.001306	0	0.173285	0.041591	0.046177	0.492538	0.001905	0	0.188725	0.041591	0.046177	0.492538	0.018641	0.198046	0	1.339893	0.001269	0	0.000624
Santa Clara	2028	LDT1	Aggregate	Aggregate	Gasoline	49081.01	1563538	1563538	0	218519.1	0.084308	0	0.305828	0.00136	0	0.002171	0.002	0.00324	0.00148	0	0.002362	0.008	0.009256	309.8369	0	79.99943	0.004111	0	0.081169	0.006927	0	0.034482	0.017586	0	0.397179	0.135565	0.390418	2.261735	0.225662	0	0.443861	0.135565	0.390418	2.261735	0.037654	1.051411	0	3.964013	0.003063	0	0.000791
Santa Clara	2028	LDT1	Aggregate	Aggregate	Diesel	3.376419	51.57305	51.57305	0	9.61996	1.103246	0	0	0.165443	0	0	0.002	0.003602	0.172924	0	0	0.008	0.010292	378.4488	0	0	0.012442	0	0	0.059625	0	0	0.267875	0	0	0	0	0	0.304958	0	0	0	0	0	0	0.0031	1.8775	0	0	0.003586	0	0
Santa Clara	2028	LDT1	Aggregate	Aggregate	Electricity	344.7167	14328.81	0	14328.81	1657.81	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
Santa Clara	2028	LDT1	Aggregate	Aggregate	Plug-in Hyb	210.9723	9240.009	3862.243	5377.766	872.3706	0.002743	0	0.11551	0.000276	0	0.001121	0.002	0.001402	0.0003	0	0.001219	0.008	0.004004	116.5535	0	68.31316	0.000365	0	0.041529	0.000473	0	0.019911	0.001186	0	0.173285	0.023021	0.019863	0.274915	0.017556	0	0.188725	0.023021	0.019863	0.274915	0.017556	0.179889	0	1.339893	0.001152	0	0.000675
Santa Clara	2028	LDT2	Aggregate	Aggregate	Gasoline	306289.6	10804407	10804407	0	1428230	0.048684	0	0.272265	0.001037	0	0.001722	0.002	0.00314	0.001128	0	0.001873	0.008	0.008973	321.5584	0	81.40965	0.002155	0	0.067575	0.00483	0	0.033529	0.008041	0	0.302046	0.071308	0.20464	1.273765	0.011733	0	0.330702	0.071308	0.20464	1.273765	0.038949	0.699045	0	3.020134	0.003179	0	0.000805
Santa Clara	2028	LDT2	Aggregate	Aggregate	Diesel	1124.634	40163.41	40163.41	0	5296.19	0.032087	0	0	0.004136	0	0	0.002	0.003139	0.004324	0	0	0.008	0.008969	293.3692	0	0	0.00057	0	0	0.04622	0	0	0.012281	0	0	0	0	0	0.013981	0	0	0	0	0	0	0.0031	0.127096	0	0	0.00278	0	0
Santa Clara	2028	LDT2	Aggregate	Aggregate	Electricity	3966.166	125586.5	0	125586.5	19886.52	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.00437	0	0	0	0	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	2028	LDT2	Aggregate	Aggregate	Plug-in Hyb	3889.8	160537.5	69997.62	90539.85	16084.32	0.002861	0	0.11551	0.00035	0	0.001357	0.002	0.001398	0.00038	0	0.001476	0.008	0.003995	121.5807	0	75.13065	0.00038	0	0.041442	0.000491	0	0.01983	0.001237	0	0.173285	0.025845	0.023469	0.303951	0.001805	0	0.188725	0.025845	0.023469	0.303951	0.0183	0.187649	0	1.339893	0.001202	0	0.000743
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Gasoline	19758.18	736964	736964	0	294367.4	0.105907	0.032213	0.550872	0.001382	0	0.000225	0.002	0.0273	0.001503	0	0.000245	0.008	0.078	819.0942	115.0602	25.40508	0.005002	0.103139	0.028129	0.006125	0.002833	0.046743	0.023788	0.369318	0.136586	0.037892	0.223771	2.358305	0.034712	0.538908	0.149544	0.037892	0.223771	2.358305	0.045	0.894116	3.764573	3.249257	0.008098	0.001137	0.000251
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Diesel	11024.69	426298.1	426298.1	0	138676.7	0.969403	1.57457	0	0.026418	0.026447	0	0.003	0.0273	0.027612	0.027643	0	0.012	0.078	620.6931	125.5014	0	0.006234	0.005098	0	0.09779	0.019773	0	0.13422	0.10976	0	0	0	0	0.152801	0.124954	0	0	0	0	0.19297	0.350151	0.909745	0	0.005881	0.001189	0
Santa Clara	2028	LHDT1	Aggregate	Aggregate	Electricity	1021.234	60968.04	0	60968.04	14299.84	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	2028	LHDT2	Aggregate	Aggregate	Gasoline	2498.391	89760.82	89760.82	0	37222.3	0.097832	0.031367	0.543719	0.001242	0	0.000172	0.002	0.03185	0.001351	0	0.000187	0.008	0.091	927.6745	133.3883	24.76704	0.003463	0.100393	0.02699	0.006277	0.002707	0.045144	0.014905	0.359925	0.12934	0.035925	0.207704	2.286049	0.021749	0.525202	0.141611	0.035925	0.207704	2.286049	0.045	0.707005	3.772284	3.162872	0.009171	0.001319	0.000245
Santa Clara	2028	LHDT2	Aggregate	Aggregate	Diesel	5257.65	198606.8	198606.8	0	66134.62	0.865041	1.574905	0	0.026454	0.027	0	0.003	0.03185	0.02765	0.02822	0	0.012	0.091	735.4981	201.5097	0	0.00621	0.005098	0	0.115878	0.031748	0	0.133707	0.10976	0	0	0	0	0.152217	0.124954	0	0	0	0	0.198314	0.337166	0.909745	0	0.006969	0.001909	0
Santa Clara	2028	LHDT2	Aggregate	Aggregate	Electricity	258.9077	14761.07	0	14761.07	3434.171	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	2028	MCY	Aggregate	Aggregate	Gasoline	29377.66	168474	168474	0	58755.32	0.525696	0	0.112461	0.001844	0	0.003234	0.001	0.0042	0.001975	0	0.003451	0.004	0.012	186.1355	0	44.44114	0.148032	0	0.164333	0.037627	0	0.006825	0.934888	0	1.195378	3.558397	3.787612	3.814128	1.139755	0	1.300164	3.558397	3.787612	3.814128	0.008853	11.46379	0	7.875637	0.00184	0	0.000439
Santa Clara	2028	MDV	Aggregate	Aggregate	Gasoline	168553.5	5803822	5803822	0	781481.4	0.061284	0	0.315881	0.001013	0	0.001716	0.002	0.003184	0.001101	0	0.001866	0.008	0.009096	389.5067	0	98.90409	0.002561	0	0.076579	0.005494	0	0.035243	0.010093	0	0.362532	0.080433	0.240438	1.475862	0.014727	0	0.396926	0.080433	0.240438	1.475862	0.038637	0.751575	0	3.184891	0.003851	0	0.000978
Santa Clara	2028	MDV	Aggregate	Aggregate	Diesel	2426.785	81862.87	81862.87	0	11233.79	0.032614	0	0	0.003648	0	0	0.002	0.003262	0.003813	0	0	0.008	0.009319	389.9259	0	0	0.00042	0	0	0.061433	0	0	0.009068	0	0	0.010323	0	0	0	0.010323	0	0	0	0	0	0	0.0031	0.190366	0	0	0.003695	0	0
Santa Clara	2028	MDV	Aggregate	Aggregate	Electricity	4086.684	132418.2	0	132418.2	20489.55	0	0	0	0	0	0	0.002	0.00153	0	0	0	0.008	0.004371	0	0	0	0	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	2028	MDV	Aggregate	Aggregate	Plug-in Hyb	2378.288	95173.34	41647.22	53526.11	9834.221	0.002871	0	0.11551	0.000381	0	0.001468	0.002	0.001398	0.000414	0	0.001596	0.008	0.003995	122.0194	0	91.89575	0.00038	0	0.041303	0.00049	0	0.0197	0.001242	0	0.173285	0.029777	0.030116	0.357344	0.001812	0	0.189725	0.029777	0.030116	0.357344	0.018379	0.188325	0	1.339893	0.001206	0	0.000908
Santa Clara	2028	MH	Aggregate	Aggregate	Gasoline	2135.932	20452.38	20452.38	0	213.6786	0.26549	0	0.443358	0.001449	0	0.000349	0.003	0.015756	0.001576	0	0.000379	0.012	0.045017	1945.922	0	30.95502	0.009219	0	0.035524	0.019212	0	0.048669	0.036579	0	0.142607	9.09894	0.220886	3.673671	0.053375	0	0.156136	9.09894	0.220886	3.673671	0.045	0.773269	0	3.09385	0.019237	0	0.000306
Santa Clara	2028	MH	Aggregate	Aggregate	Diesel	1038.172	9908.83	9908.83	0	103.8172	3.609205	0	0	0.070805	0	0	0.004	0.015675	0.074006	0	0	0.016	0.044785	1083.65	0	0	0.005048	0	0	0.170729	0	0	0.108673	0	0	0.123716	0	0	0	0.123716	0	0	0	0	0	0	0.137727	0.351812	0	0	0.010268	0	0
Santa Clara	2028	MHDT	Aggregate	Aggregate	Gasoline	1401.234	72189.25	72189.25	0	28035.89	0.242516	0.078583	0.374586	0.001336	0	0.00048	0.003	0.015756	0.001453	0	0.000522	0.012	0.045017	1692.94	512.6804	43.11567	0.007916	0.26741	0.042275	0.014019	0.006888	0.03076	0.037328	1.020423	0.224339	0.024741	0.206107	2.119603	0.054468	1.488999	0.245622	0.024741	0.206107	2.119603	0.045	0.73501	15.20594	4.808335	0.016736	0.005068	0.000426
Santa Clara	2028	MHDT	Aggregate	Aggregate	Diesel	10803.08	430729.5	430729.5	0	129114.2	0.860613	11.836	1.608029	0.008248	0.013921	0	0.003	0.015941	0.008621	0.01455	0	0.012	0.045546	1122.135	2173.473	0	0.000865	0.009639	0	0.176793	0.342432	0	0.018619	0.207523	0	0	0	0	0.021196	0.23625	0	0	0	0	0.215005	0.083705	7.507183	0	0.010626	0.020581	0
Santa Clara	2028	MHDT	Aggregate	Aggregate	Electricity	455.7542	23641.62	0	23641.62	5888.879	0	0	0	0	0	0	0.003	0.00795	0	0	0	0.012	0.022714	0	0	0	0	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	2028	MHDT	Aggregate	Aggregate	Natural Ga	123.908	5444.71	5444.71	0	1175.944	0.104653	6.319766	0	0.001324	0.019478	0	0.003	0.016008	0.00144	0.021184	0	0.012	0.045737	964.7434	1240.847	0	0.760505	16.16251	0	0.196669	1.068381	0	0.010866	0.23093	0	0	0	0	0.776151	16.49502	0	0	0	0	1.06	2.992399	37.88217	0	0	0	0
Santa Clara	2028	OBUS	Aggregate	Aggregate	Gasoline	397.1145	16622.09	16622.09	0	7945.466	0.357116	0.059942	0.391986	0.001028	0	0.000266	0.003	0.01568	0.001118	0	0.000289	0.012	0.044799	1689.377	370.1334	30.60894	0.009705	0.195421	0.034455	0.017965	0.004869	0.029709	0.046721	0.746963	0.182947	0.035541	0.189879	3.415245	0.068175	1.089967	0.200304	0.035541	0.189879	3.415245	0.045	1.017018	5.778725	3.777572	0.016701	0.003659	0.000303
Santa Clara	2028	OBUS	Aggregate	Aggregate	Diesel	1000.421	63426.65	63426.65	0	10301.55	1.028839	6.455092	1.462805	0.016693	0.006255	0	0.003	0.018135	0.017448	0.006538	0	0.012	0.051815	1214.71	1504.36	0	0.001614	0.021006	0	0.193178	0.237013	0	0.034758	0.452257	0	0	0	0	0.039569	0.51486	0	0	0	0	0.216724	0.130637	7.741349	0	0.011503	0.014245	0
Santa Clara	2028	OBUS	Aggregate	Aggregate	Electricity	11.18613	887.4727	0	887.4727	223.8121	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	2028	OBUS	Aggregate	Aggregate	Natural Ga	10.8368	704.2664	704.2664	0	96.44751	0.118641	1.506606	0	0.001403	0.004634	0	0.003	0.016148	0.001526	0.00504	0	0.012	0.046137	949.9442	1177.671	0	0.829179	3.856516	0	0.193652	0.240076	0	0.011847	0.055102	0	0	0	0	0.846238	3.935858	0	0	0	0	1.06	3.360428	9.009932	0	0	0	0
Santa Clara	2028	SBUS	Aggregate	Aggregate	Gasoline	192.6095	9426.49	9426.49	0	770.4379	0.441988	0.854627	0.742088	0.000877	0	0.00059	0.002	0.015721	0.000954	0	0.000642	0.008	0.044917	795.4934	2545.579	56.45763	0.008926	2.46924	0.074272	0.024568	0.079725	0.067747	0.043131	10.64152	0.421106	0.123435	0.341525	2.080031	0.062937	15.52808	0.461058	0.123435	0.341525	2.080031	0.045	1.111121	82.24088	9.778336	0.007864	0.025166	0.000558
Santa Clara	2028	SBUS	Aggregate	Aggregate	Diesel	672.4071	14961.93	14961.93	0	9736.455	2.992481	19.58581	0.530181	0.015915	0.014197	0	0.003	0.015721	0.016635	0.014839	0	0.012	0.044917	1127.12	2187.632	0	0.002319	0.007838	0	0.177578	0.344662	0	0.049921	0.168747	0	0	0	0	0.056831	0.192106	0	0	0	0	0.16354	0.160085	5.10628	0	0.010673	0.020716	0
Santa Clara	2028	SBUS	Aggregate	Aggregate	Electricity	19.56942	629.4361	0	629.4361	226.2446	0	0	0	0	0	0	0.002	0.002576	0.00786	0	0	0	0.010305	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	2028	SBUS	Aggregate	Aggregate	Natural Ga	27.79861	667.4476	667.4476	0	402.5239	0.501921	5.232817	0	0.003378	0.012266	0	0.003	0.015721	0.003674	0.01334	0	0.012	0.044917	1228.307	4092.288	0	3.255494	14.78651	0	0.250398	0.83424	0	0.046515	0.21127	0	0	0	0	0.322471	15.09072	0	0	0	0	1.06	10.7964	22.79477	0	0	0	0
Santa Clara	2028	UBUS	Aggregate	Aggregate	Gasoline	46.62731	4869.279	4869.279	0	186.5092	0.018118	0	0.301177	0.001197	0	0.000134	0.002	0.03185	0.001302	0	0.000145	0.008	0.091	850.5342	0	35.22796	0.001481	0	0.028231	0.003213	0	0.053536	0.003868	0	0.094762	0.022596	0.090653	0.320129	0.005644	0	0.103752	0.022596	0.090653	0.320129	0.045	0.581279	0	6.342648	0.008408	0	0.000348
Santa Clara	2028	UBUS	Aggregate	Aggregate	Diesel	397.7907	44197.62	44197.62	0	1591.163	0.382083	0	0	0.006946	0	0	0.008	0.08221	0.0385	0.00726	0	0.032883	0.11	1110.56	0	0	0.003188	0	0	0.174969	0	0	0.068627	0	0	0	0	0	0.078126	0	0	0	0	0	0.22	0.07852	0	0	0.010523	0	0
Santa Clara	2028	UBUS	Aggregate	Aggregate	Electricity	30.09259	3155.026	0	3155.026	120.3703	0	0	0	0	0	0	0.008	0.008937	0.01925	0	0	0	0.03575	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	2028	UBUS	Aggregate	Aggregate	Natural Ga	63.25774	7303.084	7303.084	0	253.0309	0.06078	0	0	0.000288	0	0	0.008444	0.0385	0.000301	0	0	0	0.033778	0.11	1320.856	0	0	4.332259	0	0	0.269265	0	0	0.061899	0	0	0	0	0	0.421388	0	0	0	0	0	0.97	50.55326	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_DIU	PM2.5_TIR	PM10_RUN	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	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	0.0045	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	0.0045	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	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
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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.002592	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	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	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	0

Attachment 4: Project Construction and Operational Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

Morgan Hill Devco, Morgan Hill, CA

Year	Unmitigated DPM	DPM EMFAC2021	Unmitigated Emissions	Unmitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions
2022	0.1915	0.0059	0.1974	0.4049	0.0061	0.4110
2023	0.0910	0.0060	0.0970	0.0000	0.0061	0.0061
2024	0.0803	0.0060	0.0863	0.0000	0.0062	0.0062
2025	0.0689	0.0060	0.0749	0.0000	0.0061	0.0061
2026	0.0689	0.0060	0.0749	0.0000	0.0061	0.0061
2027	0.0245	0.0040	0.0285	0.0000	0.0041	0.0041

Year	Mitigated DPM	DPM EMFAC2021	Mitigated Emissions	Mitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Mitigated Emissions
2022	0.0114	0.0059	0.0173	0.1822	0.0061	0.1883
2023	0.0110	0.0060	0.0170	0.0000	0.0061	0.0061
2022	0.0111	0.0060	0.0171	0.0000	0.0062	0.0062
2023	0.0110	0.0060	0.0170	0.0000	0.0061	0.0061
2022	0.0110	0.0060	0.0170	0.0000	0.0061	0.0061
2023	0.0027	0.0040	0.0067	0.0000	0.0041	0.0041

Morgan Hill Devco, Morgan Hill, 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	0.1974	CON_DPM	394.9	0.16876	2.13E-02	280808	7.57E-08
2023	Construction	0.0970	CON_DPM	194.0	0.08289	1.04E-02	280808	3.72E-08
2024	Construction	0.0863	CON_DPM	172.6	0.07376	9.29E-03	280808	3.31E-08
2025	Construction	0.0749	CON_DPM	149.8	0.06400	8.06E-03	280808	2.87E-08
2026	Construction	0.0749	CON_DPM	149.8	0.06400	8.06E-03	280808	2.87E-08
2027	Construction	0.0285	CON_DPM	57.1	0.02439	3.07E-03	280808	1.09E-08
Total		***0.5590***		***1118.0***	***0.4778***	***0.0602***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	260	
hours/year =	2340	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

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	0.0173	CON_DPM	34.7	0.01483	1.87E-03	280808	6.65E-09
2023	Construction	0.0170	CON_DPM	34.0	0.01451	1.83E-03	280808	6.51E-09
2024	Construction	0.0171	CON_DPM	34.2	0.01461	1.84E-03	280808	6.56E-09
2025	Construction	0.0170	CON_DPM	34.0	0.01451	1.83E-03	280808	6.51E-09
2026	Construction	0.0170	CON_DPM	34.0	0.01451	1.83E-03	280808	6.51E-09
2027	Construction	0.0067	CON_DPM	13.4	0.00571	7.20E-04	280808	2.56E-09
Total		***0.0921***		***184.1***	***0.0787***	***0.0099***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	260	
hours/year =	2340	

Morgan Hill Devco, Morgan Hill, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.4110	822.0	0.35128	4.43E-02	280,808	1.58E-07
2023	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2024	Construction	CON_FUG	0.0062	12.3	0.00526	6.63E-04	280,808	2.36E-09
2025	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2026	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2027	Construction	CON_FUG	0.0041	8.3	0.00354	4.45E-04	280,808	1.59E-09
Total			***0.4397***	***879.4***	***0.3758***	***0.0474***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	260	
hours/year =	2340	

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.1883	376.6	0.16094	2.03E-02	280,808	7.22E-08
2023	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2024	Construction	CON_FUG	0.0062	12.3	0.00526	6.63E-04	280,808	2.36E-09
2025	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2026	Construction	CON_FUG	0.0061	12.3	0.00525	6.61E-04	280,808	2.35E-09
2027	Construction	CON_FUG	0.0041	8.3	0.00354	4.45E-04	280,808	1.59E-09
Total			***0.2170***	***434.0***	***0.1855***	***0.0234***		

Construction Hours

hr/day =	9	(8am - 5pm)
days/yr =	260	
hours/year =	2340	

Morgan Hill Devco, Morgan Hill, CA - Construction Health Impact Summary

Maximum Impacts at Residential MEI Location - Without 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): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0545	0.1445	9.68	0.16	0.01	0.20
2023	0.0268	0.0022	4.40	0.08	0.01	0.03
2024	0.0238	0.0022	0.62	0.07	0.00	0.03
2025	0.0206	0.0022	0.53	0.06	0.00	0.02
2026	0.0206	0.0022	0.53	0.06	0.00	0.02
2027	0.0078	0.0015	0.20	0.02	0.00	0.01
Total	-	-	**15.96**	**0.44**	-	-
Maximum	0.0545	0.1445	**-**	**-**	**0.01**	**0.20**

Maximum Impacts at Residential 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): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2022	0.0048	0.0660	0.85	0.01	0.001	0.07
2023	0.0047	0.0022	0.77	0.01	0.001	0.01
2024	0.0047	0.0022	0.12	0.01	0.001	0.01
2025	0.0047	0.0022	0.12	0.01	0.001	0.01
2026	0.0047	0.0022	0.12	0.01	0.001	0.01
2027	0.0018	0.0015	0.05	0.01	0.0004	0.003
Total	-	-	**2.03**	**0.07**	-	-
Maximum	0.0048	0.0660	**-**	**-**	**0.001**	**0.07**

- Tier 4 Interim Engines and BMP Mitigation

Maximum Impacts at Jackson Academy of Math and Music

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	0.0264	0.0785	1.65	0.01	0.10
2023	0.0130	0.0012	0.81	0.003	0.01
2024	0.0115	0.0012	0.72	0.002	0.01
2025	0.0100	0.0012	0.63	0.002	0.01
2026	0.0100	0.0012	0.63	0.002	0.01
2027	0.0038	0.0008	0.24	0.001	0.005
Total	-	-	**4.68**	-	-
Maximum	0.0264	0.0785	**-**	**0.01**	**0.10**

Morgan Hill Devco, Morgan Hill, 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				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0545	10	0.74	2022	0.0545	-	-			
1	1	0 - 1	2022	0.0545	10	8.94	2022	0.0545	1	0.16	0.01	0.14	0.20
2	1	1 - 2	2023	0.0268	10	4.40	2023	0.0268	1	0.08	0.01	0.002	0.03
3	1	2 - 3	2024	0.0238	3	0.62	2024	0.0238	1	0.07	0.005	0.002	0.03
4	1	3 - 4	2025	0.0206	3	0.53	2025	0.0206	1	0.06	0.004	0.002	0.02
5	1	4 - 5	2026	0.0206	3	0.53	2026	0.0206	1	0.06	0.004	0.002	0.02
6	1	5 - 6	2027	0.0078	3	0.20	2027	0.0078	1	0.02	0.002	0.001	0.01
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						**15.96**				**0.44**			

* Third trimester of pregnancy

Morgan Hill Devco, Morgan Hill, CA - Construction Impacts - With 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				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Year**	**Annual**	**Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
0	0.25	-0.25 - 0*	2022	0.0048	10	0.07	2022	0.0048	-	-			
1	1	0 - 1	2022	0.0048	10	0.79	2022	0.0048	1	0.01	0.00	0.07	0.07
2	1	1 - 2	2023	0.0047	10	0.77	2023	0.0047	1	0.01	0.00	0.002	0.01
3	1	2 - 3	2024	0.0047	3	0.12	2024	0.0047	1	0.01	0.001	0.002	0.01
4	1	3 - 4	2025	0.0047	3	0.12	2025	0.0047	1	0.01	0.001	0.002	0.01
5	1	4 - 5	2026	0.0047	3	0.12	2026	0.0047	1	0.01	0.001	0.002	0.01
6	1	5 - 6	2027	0.0018	3	0.05	2027	0.0018	1	0.01	0.000	0.001	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						**2.03**				**0.07**			

* Third trimester of pregnancy

Morgan Hill Devco, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Jackson Academy of Math and Music (+5 years old) - 1 meter - Child 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	5 - 6	2022	0.0264	3	1.65
2	1	6 - 7	2023	0.0130	3	0.81
3	1	7 - 8	2024	0.0115	3	0.72
4	1	8 - 9	2025	0.0100	3	0.63
5	1	9 - 10	2026	0.0100	3	0.63
6	1	10 - 11	2027	0.0038	3	0.24
7	1	11 - 12	2028	0.0000	3	0.00
8	1	12 - 13	2029	0.0000	3	0.00
9	1	13 - 14	2030	0.0000	3	0.00
Total Increased Cancer Risk						**4.68**

Maximum Hazard Index	Maximum Fugitive PM2.5	Maximum Total PM2.5
0.01	0.08	0.10
0.003	0.001	0.01
0.002	0.001	0.01
0.002	0.001	0.01
0.002	0.001	0.01
0.001	0.001	0.005

* Children assumed to be 5 years of age or older with 6 years of Construction Exposure

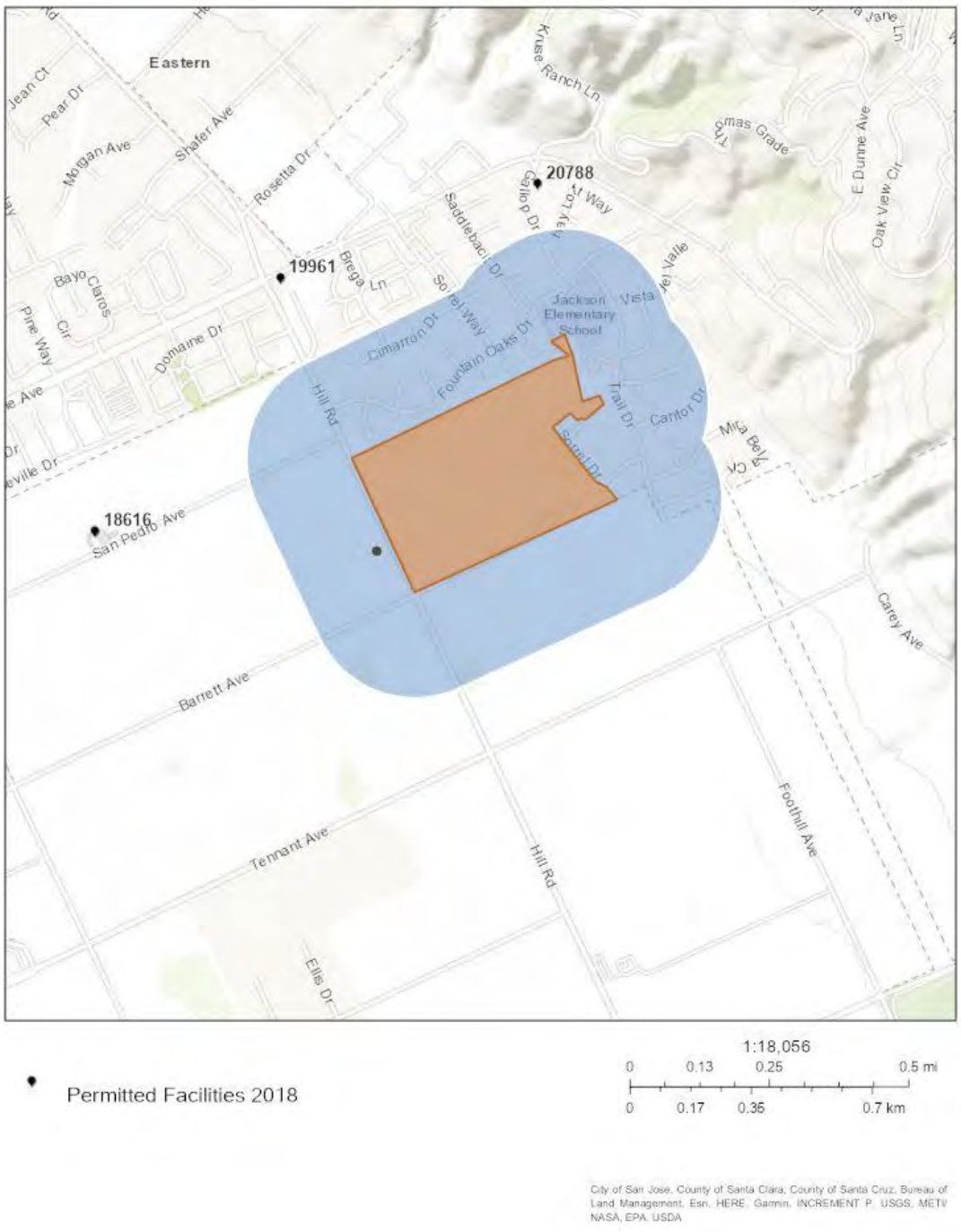
Attachment 5: Community Risk Modeling Information and Calculations

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 13,947,088.34 ft²

Aug 9 2021 15:51:33 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	0	N/A	N/A

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.