DIRIDON-DUPONT RESIDENTIAL DEVELOPMENT AIR QUALITY ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address air quality and community risk impacts associated with the proposed development located at the southeast corner of the McEvoy Street/Dupont Street intersection in San José, California. The air quality impacts from this project would be associated with construction of the new buildings and infrastructure and operation of the project. Air pollutant emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts (construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The project proposes to demolish the existing industrial buildings and associated parking on the 5-acre project site and construct two apartment buildings, totaling 689 units. Building A would be a seven-story, 314-unit apartment building on the northern portion of the site, with approximately 4,005 square feet (sf) of commercial use on the ground floor. Proposed Building B would be a six-story, 375-unit affordable housing apartment building on the southern portion of the project site. Building A would provide approximately 327 parking spaces and Building B would provide approximately 188 parking spaces for a total of approximately 515 parking spaces. The project site is located within the Diridon Station Area Plan boundary.

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 ($PM_{2.5}$).

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, reduced 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

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

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 (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. 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.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site will be the future residents in the approved 280 McEvoy multi-family housing development adjacent to the southwest of the site. There are additional sensitive receptors at further distances to the north, west and south of the project site. This project would introduce new sensitive receptors (i.e., residents) to the area, which are considered sensitive receptors.

Regulatory Setting

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 also 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 NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM 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 particulate matter 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.[2]

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.

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.[3] 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

[2] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[3] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

at which the fleet either turns over so there are more cleaner vehicles on the road or is 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.

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 the 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 and California Ambient Air Quality Standards. 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.[4] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is within the San José CARE area.

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

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[5] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

San José Envision 2040 General Plan

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

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

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

Applicable Goals – Toxic Air Contaminants

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

Applicable Policies – Toxic Air Contaminants

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

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

MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.

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

Actions – Toxic Air Contaminants

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

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

Applicable Goals – Construction Air Emissions

Goal MS-13 Minimize air pollutant emissions during demolition and construction activities

Applicable Policies – Construction Air Emissions

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

Applicable Actions – Construction Air Emissions

MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

Diridon Station Area Plan

Approved by the City Council on June 17, 2014, the Diridon Station Area Plan (DSAP) established long-term goals for the area, including a land use plan, urban design guidelines, a framework for station expansion, transportation and parking strategies, housing strategies, and an art master plan. The City Council's certification of the associated Environmental Impact Report provided clearance for maximum development capacities in the 250-acre area. The total development capacity includes: 4,950,000 s.f. of commercial industrial, 420,000 s.f. of retail and/or restaurant, 2,588 residential units, and 900 hotel rooms.

In 2019, the City initiated a process to amend the DSAP to align it to current market conditions and planning efforts which included a DSAP Amendment Addendum to the Downtown Strategy 2040 Environmental Impact Report as required by CEQA. The City Council approved the

amended DSAP on May 25, 2021, following a community engagement process. This included approving increased building height limits, among other changes.

The DSAP identified less-than-significant construction period emissions if development projects are in conformance with 2017 BAAQMD CEQA Guidelines, GP Policy MS-13.1, and current City requirements that include various levels of construction emissions control measures. All projects are required to implement the following control measures:

City requirements, all projects will be required to implement the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 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.
- 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). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- 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.

Future projects developed under the DSAP that incorporate these measures and are below the screening levels would not result in a significant impact related to construction emissions of regional criteria pollutants. Projects that exceed the screening levels would be required to complete additional project level analysis of construction-related emissions of criteria pollutants and may require additional measures to ensure that construction emissions would not exceed the threshold for average daily emissions.

Operational emissions of regional criteria air pollutants with measures included to reduce emissions under the DSAP were identified as significant and unavoidable. To reduce operational emissions associated with vehicle travel, future development will be required to implement a

Transportation Demand Management (TDM) program, consistent with the Downtown Transportation Plan.

The TDM programs may incorporate, but would not be limited to, the following Transportation Control Measures (TCMs):

- Rideshare Measures:
  - Implement carpool/vanpool program (e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.).
- Transit Measures:
  - Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
  - Design and locate buildings to facilitate transit access (e.g., locate building entrances near transit stops, eliminate building setbacks, etc.)
- Services Measures:
  - Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.
  - Provide on-site child care or contribute to off-site childcare within walking distance.
- Shuttle Measures:
  - Establish mid-day shuttle service from work site to food service establishments/ commercial areas.
  - Provide shuttle service to transit stations/multimodal centers.
- Parking Measures:
  - Provide preferential parking (e.g., near building entrance, sheltered area, etc.) for carpool and vanpool vehicles.
  - Implement parking fees for single occupancy vehicle commuters.
  - Implement parking cash-out program for employees (i.e., non-driving employees receive transportation allowance equivalent to value of subsidized parking).
- Bicycle and Pedestrian Measures:
  - Provide secure, weather-protected bicycle parking for employees.
  - Provide safe, direct access for bicyclists to adjacent bicycle routes.
  - Provide showers and lockers for employees bicycling or walking to work.
  - Provide secure short-term bicycle parking for retail customers or non-commute trips.
  - Provide direct, safe, attractive pedestrian access from Planning Area to transit stops and adjacent development.
- Other Measures:
  - Implement compressed work week schedule (e.g., 4 days/40 hours, 9 days/80 hours).
  - Implement home-based telecommuting program.

During project-level supplemental review of future individual development projects, the measures will be evaluated for consistency with the DSAP and General Plan policies. All feasible and applicable measures will be required as part of project design or as conditions of approval.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 CEQA Air

Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 1. Impacts above these thresholds are considered potentially significant.

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 1000-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 $\mu g/m^3$	

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

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

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[6] 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 Modeling

Land Use Inputs

According to the project applicant, Building A would be constructed first and then after completion Building B would begin construction. Therefore, separate CalEEMod runs were conducted for each site to capture the consecutive total project construction over several years. The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs for Construction

Project Land Uses	Size	Units	Square Feet	Acreage
Building A				
Apartments Mid Rise	314	Dwelling Unit	312,625	8.26
Strip Mall	4.01	1,000-sf	4,005	0.09
Enclosed Parking with Elevator	327	Parking Space	137,382	2.94
Building B				
Apartments Mid Rise	375	Dwelling Unit	306,930	9.87
Enclosed Parking with Elevator	188	Parking Space	75,425	1.69
Note: Default acreages were used.				

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

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 the type and size for both Buildings A and B.

The construction CalEEMod defaults for both Buildings A and B included the schedules 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 were based on CalEEMod default values. The CalEEMod equipment assumptions are dependent on the project acreage, so the larger default CalEEMod acreages per land use were used to be conversative. The construction schedule assumed that the earliest possible start date for Building A would be January 2023 and for Building B would be January 2025. Building A was assumed to be built out over a period of approximately 19 months or 400 construction workdays and Building B was assumed to be built out over a period of approximately 19 months or 401 construction workdays. The earliest year of full operation for the entire project was assumed to be 2027.

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 and soil material imported and/or exported to the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes by assuming each truck could carry 10 tons per load.

The 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. Therefore, 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 default assumptions, 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 (soil import/export). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On road emissions in Santa Clara County for the years 2023-2026 were used in these calculations. 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 [3]			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	CalEEMod default distance with 5-min truck idle time.
Building A, 2023-2024				
Demolition	300	-	147	32,421-sf existing building demolition. CalEEMod default worker trips.
Site Preparation	180	-	-	CalEEMod default worker trips.
Grading	600	-	550	4,400-cy soil import. CalEEMod default worker trips.
Building Construction	85,500	17,100	-	CalEEMod default worker and vendor trips.
Paving	300	-	-	CalEEMod default worker trips.
Architectural Coating	1,140	-	-	CalEEMod default worker trips.
Building B, 2025-2026				
Demolition	300	-	147	32,421-sf existing building demolition. CalEEMod default worker trips.
Site Preparation	180	-	-	CalEEMod default worker trips.
Grading	600	-	550	4,400-cy soil import. CalEEMod default worker trips.
Building Construction	90,600	15,600	-	CalEEMod default worker and vendor trips.
Paving	300	-	-	CalEEMod default worker trips.
Architectural Coating	1,200	-	-	CalEEMod default worker trips.

Notes: [1] Based on Year 2022-2026 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed.

Summary of Computed Construction Period Emissions for Entire Project

Average daily emissions were annualized for each year of construction by dividing the total annual construction emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the entire project. As indicated in Table 4, predicted annualized project construction emissions for the entire project would not exceed the BAAQMD significance thresholds during any year of construction. Additionally, the DSAP control measures requires projects to implement best management practices to control dust and exhaust during construction. Therefore, air pollutant emissions from the project would be further reduced.

Table 4. Construction Period Emissions for Entire Project

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2023	0.33	2.60	0.13	0.11
2024	2.38	0.93	0.05	0.04
2025	0.30	2.24	0.11	0.09
2026	2.30	0.84	0.04	0.03
Average Daily Construction Emissions Per Year (pounds/day)				
2023 (261 construction workdays)	2.57	19.96	1.00	0.84
2024 (139 construction workdays)	34.28	13.34	0.70	0.56
2025 (261 construction workdays)	2.28	17.13	0.82	0.67
2026 (140 construction workdays)	32.91	12.03	0.61	0.48
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Operational Period Emissions

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

CalEEMod Inputs

Land Uses

Project construction would occur at the two separate apartment buildings. In order to calculate the operational emissions of the entire completed project, a separate CalEEMod run was conducted. The proposed operational land uses for the completed project were input into CalEEMod as described in Table 5.

Table 5. Summary of Project Land Use CalEEMod Inputs for Operation

Project Land Uses	Size	Units	Square Feet	Acres
Apartments Mid Rise	689	Dwelling Unit	619,555	18.13
Strip Mall	4.01	1,000-sf	4,005	0.09
Enclosed Parking with Elevator	515	Parking Space	212,807	4.63
Note: Default acreages were used.				

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 full year of operation would be 2027 if construction begins in 2023. Emissions associated with build-out later than 2027 would be lower.

Operational Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.[7] The project would produce 2,781 new daily trips taking into account the *Location-Based Reduction. Residential-Retail Internal Reduction,* and *VMT Reduction.* The daily trip generation was calculated using the size of the project land uses and the adjusted total automobile trips per land use. The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip types and lengths 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 vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021, which were adjusted with the CARB EMFAC off-model adjustment factors. On road emission rates from 2023-2026 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.[8]

Climate Smart San José

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

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

The California Energy Commission (CEC) updates the California Building Energy Efficiency Standards every three years, in alignment with the California Code of regulations. Title 24 Parts 6 and 11 of the California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) address the need for regulations to improve energy efficiency and combat climate change. The 2019 CAL Green standards include substantial changes intended to

[7] Hexagon Transportation Consultants, Inc., *Diridon Modular Housing Residential Development Transportation Analysis*, June 11, 2021.
[8] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

increase the energy efficiency of buildings. For example, the code encourages the installation of solar and heat pump water heaters in low-rise residential buildings. The 2019 California Code went before City Council in October 2019 for approval, with an effective date of January 1, 2020. As part of this action, the City adopted a "reach code" that requires development projects to exceed the minimum Building Energy Efficiency requirements.[9] The City's reach code applies only to new residential and non-residential construction in San José. It incentivizes all-electric construction, requires increased energy efficiency and electrification-readiness for those choosing to maintain the presence of natural gas. The code requires that non-residential construction include solar readiness. It also requires additional EV charging readiness and/or electric vehicle service equipment (EVSE) installation for all development types.

Energy – 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 electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 807.98 pounds of CO_2 per megawatt of electricity produced, which is based on San José Clean Energy (SJCE)'s 2021 emissions rate. This intensity factor was used in the model along with the assumption that the project would use electricity supplied by SJCE. SJCE would provide electricity that would be 100-percent carbon free by 2021 before the project becomes operational.[10] Electricity was assumed to be 100-percent carbon free in the model since this project would be operational post-2021. Electricity emissions only affect indirect emission of GHG.

Wood-Burning Devices and Natural Gas

CalEEMod default inputs assume new residential construction would include woodburning fireplaces and stoves. The project would not include wood-burning devices, as these devices are prohibited by BAAQMD Regulation 6, Rule 3.[11] Therefore, the number of woodstoves and woodburning fireplaces in CalEEMod were set to zero. Additionally, the City of San José passed an ordinance in December 2020 that prohibits the use of natural gas infrastructure in new buildings.[12] This ordinance applies to any new construction starting August 1, 2021. All project natural gas use was set to zero and assigned to electricity use.

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%

[9] City of San José Transportation and Environmental Committee, *Building Reach Code for New Construction Memorandum,* August 2019.
[10] Kerrie Romanow and Rosalynn Hughey, City of San José, 2019. *Building reach Code for New Construction Memorandum*. August. Web: https://sanjose.legistar.com/LegislationDetail.aspx?ID=4090015&GUID=278596A7-1A2B-4248-B794-7A34E2279E85
[11] Bay Area Air Quality Management District, https://www.baaqmd.gov/~/media/dotgov/files/rules/regulation-6-rule-3/documents/20191120_r0603_final-pdf.pdf?la=en
[12] City of San José, 2020. "Expand Natural Gas Ban", December. Web: https://www.sanjoseca.gov/Home/Components/News/News/2210/4699

aerobic conditions to represent wastewater treatment plant conditions. The project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The existing site consist of existing industrial buildings and associated parking. These uses produce low operational and traffic emissions which would not considerably offset emissions from the proposed project. In addition, no project-specific trip generation rates for the existing land uses were available for this assessment. Therefore, the emissions from the existing uses were not considered.

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were calculated assuming 365 days of operation. Table 6 shows net average daily operational 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}	$PM_{2.5}$
2027 Annual Project Operational Emissions (*tons/year*)	4.05	1.22	2.09	0.56
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2027 Daily Project Operational Emissions (*pounds/day*)[1]	22.19	6.70	11.47	3.05
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*
Notes: [1]Assumes 365-day operation.				

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

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources and stationary 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 emergency generators powered by a diesel engine. Traffic generated by the project would consist of mostly light-duty gasoline-powered 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 was also assessed in terms of the cumulative risk which 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 risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per BAAQMD guidance,[13] 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. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project 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 future adjacent residences to the southwest and the existing residences to the north, west and south of the 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 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 impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[14] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

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

[14] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

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. Total emissions from all construction stages for Building A was 0.15 tons (296 pounds) and for Building B was 0.12 tons (237 pounds). The on-road emissions are a result of haul truck travel during 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 for Building A as 0.11 tons (226 pounds) and for Building B as 0.11 tons (227 pounds) for the overall construction period. The breakdown of yearly emissions is included in *Attachment 4*.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[15] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions. The construction emissions for Buildings A and B would be the different, so multiple construction models were completed.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources for each project site.[16] 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 is used to represent emissions from sources with plume rise, such as construction equipment, and should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area sources for both project sites. 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

[15] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[16] 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

moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction sites. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from the San José Airport prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 4:00 p.m., when the majority of construction activity is expected to occur. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2023-2026 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors.

A receptor height of 5 feet (1.5 meters) was used to represent the breathing height on the first floor of nearby single-family residences.[17] The nearby multi-family buildings typically do not have units located on the ground floor, and therefore the first level of residences in these buildings would occur on the second floor. Based on plans from these nearby multi-family buildings, receptor heights of 15 feet, 17 feet, 23 feet, and 27 feet (4.5 meters, 5.2 meters, 7 meters, and 8.2 meters) and 25 feet, 29 feet, 33 feet, and 37 feet (7.6 meters, 8.8 meters, 10.1 meters, and 11.3 meters) were used to represent the breathing height on the first residential level/second floor and second residential level / third floor of nearby multi-family residences.

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 (see *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.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 micrograms per cubic meter ($\mu g/m^3$).

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the MEI. Results of this assessment indicated that the construction residential MEI was located on the first residential level/second floor (23 feet above ground) at the future adjacent multi-family home southwest of the project site in the northeast corner of the closest building. Due

[17] 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

to the order and distance in which Buildings A and B would be constructed with respect to the MEI, the maximum construction cancer risk impact occurred when third trimester/infant exposure begins in 2025. Table 7 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the construction MEI. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Community Risks from Project Operation – Generator and Traffic

Stationary equipment that could emit substantial TACs (e.g., emergency generators) are not planned for the project. Operation of the project would have long-term emissions from mobile sources (i.e., traffic). Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs.[18] This project would generate 2,781 net daily trips[19] dispersed on the roadway system with a majority of the trips being from light-duty vehicles (i.e., passenger automobiles), which is a fraction of 10,000 daily vehicles. 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 would be exposed to four years of construction cancer risks. 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 and annual $PM_{2.5}$ concentration from project construction activities at the MEI location would exceed their respective single-source significance thresholds. However, with the implementation of the DSAP best management practices to control dust and exhaust during construction and *Mitigation Measure AQ-1*, the mitigated cancer risk would no longer exceed the BAAQMD single-source significance threshold. The HI from construction activities would not exceed the single-source significance threshold, unmitigated or mitigated.

Table 7. Construction Risk Impacts at the Off-Site MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impact				
Project Construction	Unmitigated	**54.15 (infant)**	**0.45**	0.05
	Mitigated*	8.88 (infant)	0.14	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated*	*No*	*No*	*No*

* Construction equipment with Tier 4 interim engines and Best Management Practices as Mitigation.

[18] 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

[19] Hexagon Transportation Consultants, Inc., *Diridon Modular Housing Residential Development Transportation Analysis*, June 11, 2021.

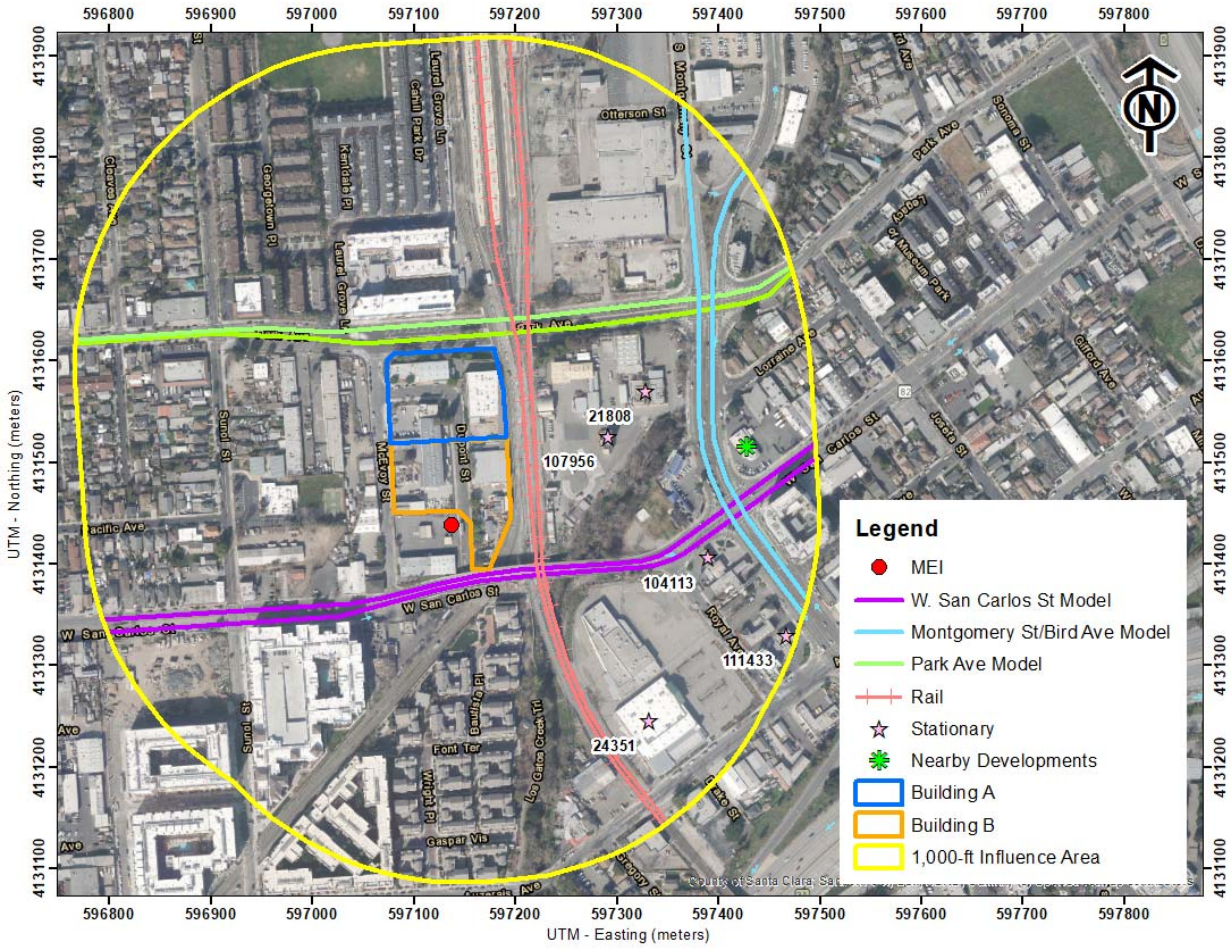
Figure 1. Locations of Project Construction Sites, Off-Site Sensitive Receptors, and Maximum TAC Impact

Cumulative Community Risks of all TAC Sources at the Offsite Project MEI

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

A review of the project area and based on provided traffic information indicated that three roadways, W. San Carlos Street, Montgomery Street/Bird Avenue, and Park Avenue, within the influence area would have traffic exceeding 10,000 vehicles per day. Other nearby streets are assumed to have less than 10,000 vehicles per day. The Caltrain rail lines on which several agencies' trains use are adjacent to the east of the project site. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified five stationary sources with the potential to affect the project site and MEI. In addition, there are nearby development projects whose construction would contribute to the cumulative risk. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI reported in Table 8. Details of the modeling and community risk calculations are included in *Attachment 5*.

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



Local Roadways – W. San Carlos Street, Montgomery Street/Bird Avenue, and Park Avenue

A refined analysis of potential health impacts from vehicle traffic on the W. San Carlos Street, Montgomery Street/Bird Avenue, and Park Avenue was conducted since the roadways were estimated to have average daily traffic (ADT) exceeding 10,000 vehicles. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadways near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on the roadways using the Caltrans version of the CARB EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used,

rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (Santa Clara County), type of road (major/collector), truck percentage for non-state highways in Santa Clara County (3.51 percent),[20] traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2025), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2025, which was when the third trimester/infant exposure began and the maximum construction cancer risk impact occurred. 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 CT-EMFAC2017. Year 2025 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since that was when the maximum construction cancer risk impact occurred due to third trimester/infant exposure and, as discussed above, overall vehicle emissions and in particular diesel truck emissions, will decrease in the future.

The ADT on the roadways were based on AM and PM peak-hour background plus project traffic volumes for the nearby roadway provided by the project's traffic consultant.[21] Assuming a one percent per year increase, the predicted ADT on W. San Carlos Street would be 17,294 vehicles, on Montgomery Street/Bird Avenue would be 22,565 vehicles, and on Park Avenue would be 14,900 vehicles. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[22] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. For all hours of the day, an average speed of 35 mph on W. San Carlos Street and Montgomery Street/Bird Avenue and of 30 mph on Park Avenue was assumed for all vehicles based on posted speed limit signs on the roadways.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis.[23] TAC and $PM_{2.5}$ emissions from traffic on the roadways within about 1,000 feet of the project site was evaluated with the model. Emissions from vehicle traffic were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent the

[20] 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

[21] Hexagon Transportation Consultants, Inc., *Diridon Modular Housing Residential Development Transportation Analysis*, June 11, 2021.

[22] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2014 does not include Burden type output with hour by hour traffic volume information.

[23] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

travel lanes on the roadways. The same meteorological data and off-site sensitive receptors used in the previous construction dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations and heights. Annual TAC and $PM_{2.5}$ concentrations for 2025 from traffic on the roadways were calculated using the model. Concentrations were calculated at the project MEI with receptor heights of 23 feet (7 meters) to represent the breathing heights on the first residential level/second floor of the nearby residence.

Computed Cancer and Non-Cancer Health Impacts

The cancer risk, $PM_{2.5}$ concentration, and HI impacts from W. San Carlos Street, Montgomery Street/Bird Avenue, and Park Avenue on the project MEI are shown in Table 8. Figure 2 shows the roadway links used for the modeling and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling and cancer risk calculations for the receptors with the maximum cancer risk from roadway traffic are provided in *Attachment 5*.

Railroad: Diesel Trains

The project site is located adjacent to the Caltrain rail lines about 500 feet south of the San José Diridon Caltrain station. Rail activity on these lines currently generates DPM and $PM_{2.5}$ emissions from locomotive exhaust. The rail lines are used primarily for passenger service; however, there is some freight service by trains using diesel fueled locomotives. Passenger rail service along these rail lines includes diesel-fueled trains for Caltrain and the Amtrak Coast Starlight. Based on the current Caltrain schedule effective August 30, 2021, there are 49 trains passing the project site during weekdays and 20 on weekends. The Amtrak Coast Starlight operates between Seattle and Los Angles with 2 daily trains. In addition to the passenger trains, there are up to six freight trains that use the rail lines on a daily basis.[24]

The Peninsula Corridor Electrification Project is a key component of the Caltrain Modernization Program that would electrify the Caltrain Corridor from San Francisco to the Tamien Caltrain station in San José. Currently all of Caltrain's trains use diesel locomotives. As part of the program to modernize operation of the Caltrain rail corridor between San José and San Francisco, Caltrain is planning to phase in the change from using diesel locomotives to use of electric trains.[25] This plan was formally adopted on January 8, 2015[26] and electrified service is anticipated to begin in late 2024.[27]

Caltrain plans are that initial service between San José and San Francisco would use a mixed fleet of electric and diesel locomotives, with approximately 75 percent of the service being electric and 25 percent being diesel. Diesel locomotives would be replaced with electric trains over time as they reach the end of their service life. Caltrain's diesel-powered locomotives would continue to

[24] Metropolitan Transportation Commission, 2006. *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*. November 15.
[25] Caltrain, 2014. *Peninsula Corridor Electrification Project. Final Environmental Impact Report.* December 2014.
[26] Caltrain, 2015. *Peninsula Corridor Electrification Fact Sheet.* May 2015.
[27] Caltrain, 2021. *Caltrain Electrification Delayed to 2024*. June 3, 2021. See: *www.caltrain.com/about/MediaRelations/news/Caltrain_Electrification_Delayed_to_2024.html*

be used to provide service between the San José Diridon Station and Gilroy. It is expected that all of the San José to San Francisco fleet would be electric trains about five to eight years after initial electric service begins.[28]

Rail Line Emissions

For this evaluation the rail exposure period was assumed to begin in 2025, as this was when the third trimester/infant exposure began for the maximum construction cancer risk impact at the project MEI. In calculating cancer risks from DPM emissions from rail line diesel locomotives a 30-year exposure period is used per BAAQMD health risk guidance.[29] In this case, the exposure period would be from 2025 through 2054. Rail line DPM emissions from Caltrain diesel trains were conservatively calculated for 2025 using the current Caltrain train schedule. Modeled concentrations from the rail lines for 2025 were used to calculate potential increased cancer risks for the MEI assuming almost continual exposure (350 days per year for 24 hours per day) over the 30-year exposure period. Use of 2025 emissions is conservative in that after electrification begins there would be fewer Caltrain diesel trains in service until such time as all Caltrain diesel trains between San Francisco and San Jose are replaced by electric trains. The Amtrak passenger trains and freight trains were assumed to continue to use diesel locomotives over the entire 2025 through 2054 period. DPM emissions from diesel-fueled locomotives will be reduced over time due to regulatory requirements for reduced particulate matter emissions from diesel locomotives.

DPM and $PM_{2.5}$ emissions from trains on the rail line were calculated using EPA emission factors for locomotives[30] and CARB adjustment factors to account for fuels used in California[31]. Caltrain's current locomotive fleet consists of twenty-three 3,200 horsepower (hp) locomotives of model year or overhaul date of 1999 or earlier and six 3,600 hp locomotives of model year 2003.[32] The current fleet average locomotive engine size is about 3,285 horsepower. In estimating diesel exhaust emissions for Caltrain locomotives in 2025, the current fleet average diesel locomotive engine horsepower was used. For the Amtrak passenger trains, a locomotive diesel engine horsepower of 3,200 was assumed.

Each passenger train (Caltrain and Amtrak) was assumed to use one locomotive and would be traveling at an average speed of 10 mph while near the Diridon Station and 35 mph in the vicinity of the project site. Emissions from the freight trains, which would bypass the Diridon Station, were calculated assuming the trains would use two locomotives with 2,300 hp engines (total of 4,600 hp) and would be traveling at about 40 mph.

Dispersion Modeling

Dispersion modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model and five-year data set (2013-2017) of hourly meteorological data from the San

[28] Caltrain 2015. *Short Range Transit Plan:FY2015-2024*. October 1, 2015.
[29] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.
[30] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)
[31] *Offroad Modeling, Change Technical Memo*, Changes to the Locomotive Inventory, CARB July 2006.
[32] Caltrain *Commute Fleets*. Available at: http://www.caltrain.com/about/statsandreports.html. Accessed September 9, 2021.

José Airport prepared for use by the AERMOD model by the BAAQMD. Locomotive emissions from train travel within about 1,000 feet of the project site were modeled as five line-volume sources, one to represent the rail line used by the freight trains and four for the Caltrain and Amtrak passenger trains. Two of the line sources for the Caltrain and Amtrak trains were use to represent travel near the Diridon Station and the other two line sources were used to represent train travel away from the station. The line-volume sources for modeling are comprised of a series of adjacent volume sources along the rail lines. Concentrations were calculated at the project MEI with receptor heights of 23 feet (7 meters) to represent the breathing heights on the first residential level/second floor of the nearby residence.

Computed Cancer and Non-Cancer Health Impacts

The maximum increased cancer risk and annual $PM_{2.5}$ concentrations at the MEI are shown in Table 8 and were computed using the maximum modeled DPM and $PM_{2.5}$ concentrations and the BAAQMD recommended methods and exposure parameters described in *Attachment 1*. Figure 2 shows the rail line links used for the modeling and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling and cancer risk calculations for the receptors with the maximum cancer risk from the rail line are provided in *Attachment 5.*

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,[33] 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. Five sources were identified using this tool with two sources being diesel generators and three being a gas dispensing facility. The BAAQMD GIS website provided screening risks and hazards for this source, so a stationary source information request was not required to be submitted to BAAQMD.

The screening level risks and hazards provided by BAAQMD for the remaining stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines and Gas Dispensing Facilities*. Community risk impacts from the stationary sources upon the MEI are reported in Table 8.

Construction Risk Impacts from Nearby Developments

Cumulative health risk impacts would include temporary construction impacts from nearby construction projects. Only developments under construction or planning approved were included. Developments under planning review are not included within the cumulative analysis since it is speculative to include construction emissions from projects that may or may not be approved.

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

From the City's website,[34] the following approved projects are located within 1,000 feet of the proposed project:

- **McEvoy Residences** – this project is located at 0 McEvoy Street, adjacent to the project site in the southwestern corner. This residential development would consist of 12-stories of 358 affordable housing units. This project is currently in the pre-construction review process, and construction is expected to start in Spring 2022. The project MEI was found to be at this site, so for conservative assessment the construction for this site would assumed to be completed.

- **Montgomery 7** – this project is located at 282 South Montgomery Street, which is about 715 feet east of the project site. This project is in the pre-construction phase and includes the construction of a 10-story building with 54 residential units and 1,856 square feet of ground-floor retail. While the construction schedule is unknown at this time, construction could occur simultaneously or concurrently.

The mitigated construction risks and hazard impact values for certain developments were available from their air quality technical reports either conducted by *Illingworth & Rodin, Inc*. or on the City of San José Environmental Review website for Active EIRs,[35] Completed EIRs,[36] or Negative Declaration / Initial Studies.[37] For developments that did not have available construction impact results at the time of this study, it was assumed the construction risks would be less than the BAAQMD single-source thresholds for community risks and hazards. If the nearby developments were more than 500 feet from the project site, the construction risks were assumed to be half of the BAAQMD single-source thresholds due to the distance and dispersion between the source and receptors. For the purpose of this analysis, it was conservatively assumed the entire construction period from the proposed project would overlap with the nearby developments' construction schedule. This approach likely provides an overestimate of the community risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEI. The mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 8.

Summary of Cumulative Health Risk Impact at Off-Site Project 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 and $PM_{2.5}$ concentration exceeds the BAAQMD single-source thresholds. With the implementation of the DSAP best management practices to control dust and exhaust during

[34] City of San Jose, Private / Key Economic Development Projects Map, Web: https://gis.sanjoseca.gov/maps/devprojects/
[35] City of San José, *Active EIRs*, https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/active-eirs
[36] City of San José, *Completed EIRs*, https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/completed-eirs
[37] City of San José, *Negative Declaration / Initial Studies,* https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/negative-declaration-initial-studies

construction and *Mitigation Measures AQ-1*, the project's cancer risks and $PM_{2.5}$ concentration would be lowered to levels below the single-source thresholds. The Hazard Index, unmitigated and mitigated, do not exceed their single-source or cumulative threshold. According to BAAQMD, health risks would be less-than-significant if the risks from the project are reduced below the single source thresholds.

Table 8. Cumulative Community Risk Impacts at the Location of the Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**54.15 (infant)**	**0.45**	0.05
	Mitigated	8.88 (infant)	0.14	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	***Yes***	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Sources				
W. San Carlos Street, ADT 17,294		0.78	0.06	<0.01
Montgomery Street/Bird Avenue, ADT 22,565		0.09	0.01	<0.01
Park Avenue, ADT 14,900		0.29	0.03	<0.01
Rail Line		15.14	<0.01	<0.01
San Jose Fire Dept / Accts Payable (Facility ID #21808, Generator), MEI at 700 feet		0.22	-	-
TC Agoge Associates LLC (Facility ID #24351, Generator), MEI at 805 feet		0.02	-	-
San Carlos 76 (Facility ID #104113, Gas Station), MEI at 815 feet		0.32	-	<0.01
City of San Jose Fire Training Center (Facility ID #107956, Gas Station), MEI at 550 feet		0.28	-	<0.01
Bird Ave Chevron Inc (Facility ID #111433, Gas Station), MEI at +1,000 feet		0.58	-	<0.01
Montgomery 7 Mitigated Construction Emissions - 725 feet east		<5.00	<0.15	<0.50
Combined Sources	Unmitigated	<76.87	<0.71	<0.62
	Mitigated	<31.60	<0.40	<0.58
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Mitigation Measure AQ-1: **Use construction equipment that has low diesel particulate matter exhaust to minimize emissions**

A feasible plan to reduce emissions such that increased cancer risk and annual $PM_{2.5}$ concentrations from construction would be reduced below significance levels is as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for particulate matter (PM_{10} and $PM_{2.5}$), 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 Level 3 verifiable diesel emission control

devices that altogether achieve an 82 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

b. Use of electrical or non-diesel fueled equipment.

Alternatively, the applicant could develop a separate feasible plan that reduces on- and near-site construction diesel particulate matter emissions by 82 percent or greater. Such a plan would have to be reviewed and approved by the City.

Effectiveness of the DSAP Best Management Practices and Mitigation Measure AQ-1

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 interim engines standards and the DSAP best management practices for construction were included. With these implemented, the project's construction cancer risk impact, assuming infant exposure, would be reduced by 84 percent to 8.88 chances per million and the project's annual $PM_{2.5}$ concentrations would be reduced by 69 percent to 0.14 $\mu g/m^3$. As a result, the project's construction cancer risk and $PM_{2.5}$ concentration would be reduced below the BAAQMD single-source thresholds.

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

In addition to evaluating health impact from project construction, a health risk assessment was completed to assess the impact existing TAC sources would have on the new proposed sensitive receptors (residents) that that project would introduce. The same TAC sources identified above were used in this health risk assessment.[38]

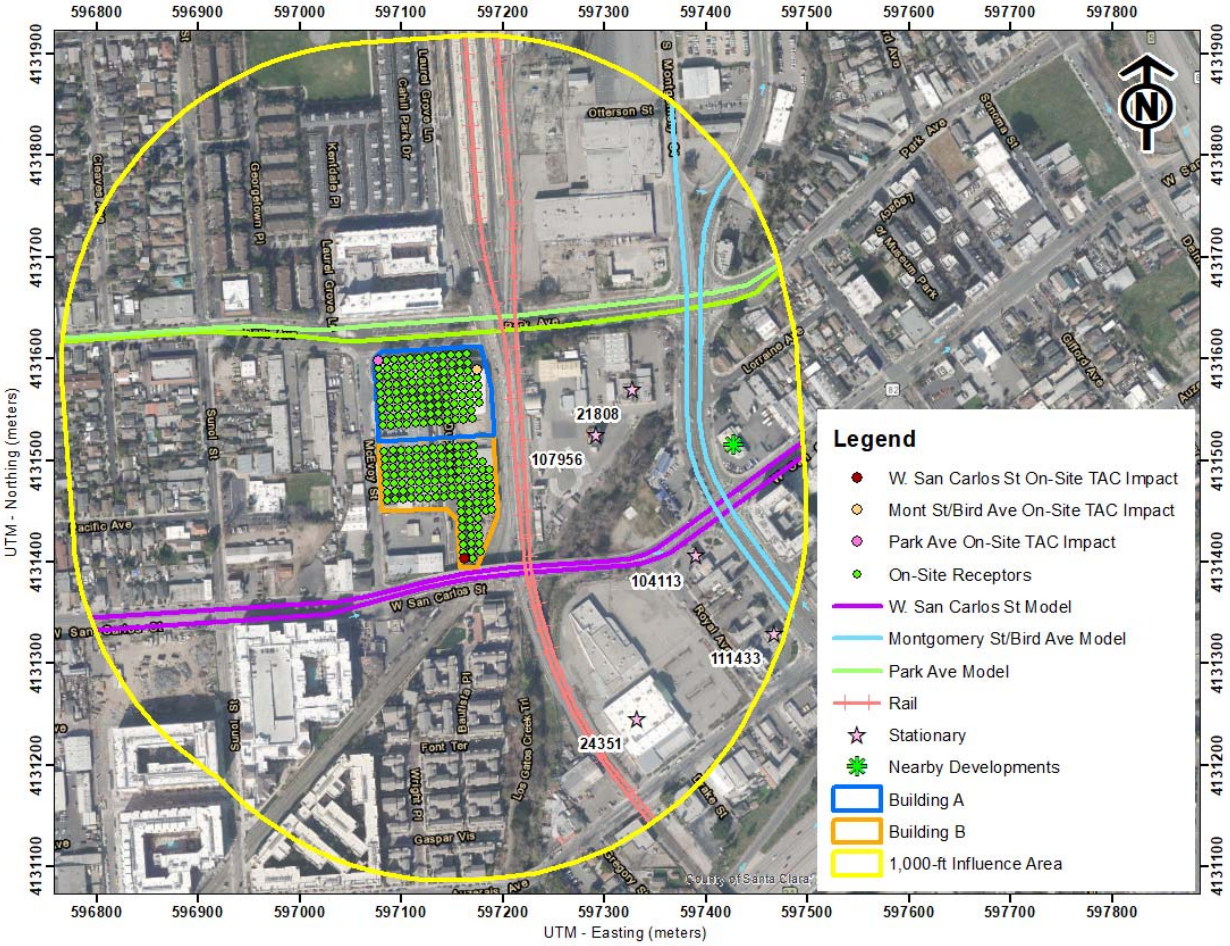
Local Roadways – W. San Carlos Street, Montgomery Street/Bird Avenue, and Park Avenue

The roadway analysis for the project residents was conducted in the same manner as described above for the off-site MEI. Impacts to future project residents on the first through second residential levels of the proposed Buildings A and B were evaluated. Building A would have residential units starting on the third floor (29 feet, 8.8 meter), while Building B would have residential units starting on the second floor (17 feet, 5.2 meter). The modeling used receptors placed in the proposed new residential areas of Buildings A and B with 26 feet (8 meter) spacing. Project sensitive receptors higher than the third residential level would have roadway impacts less than those on the third residential level. The portions of the nearby roadways included in the modeling are shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include third trimester pregnancy and infants/children and were assumed to be in the new housing area for 24 hours per day for 350 days per year. The highest impacts from W. San Carlos Street occurred at the first residential level/second-floor receptor in the southwest corner of Building B closest to the roadway. The highest impacts from Montgomery Street/Bird Avenue occurred at the first residential level/third-floor receptor in the northeast corner of Building A closest to the roadway. The highest impacts from Park Avenue occurred at the first residential level/third-floor receptor in the northwest corner of Building A closest to the roadway. Cancer risks associated with the roadways are greatest closest to each roadway and decrease with distance from the roads. The roadway community risk impacts at the project site are shown in Table 9. Details of the emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 5.*

[38] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473, which confirm that the impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts.

Figure 3. Project Site, On-Site Residential Receptors, Roadway Segments Evaluated, and Locations of Maximum Roadway TAC Impacts

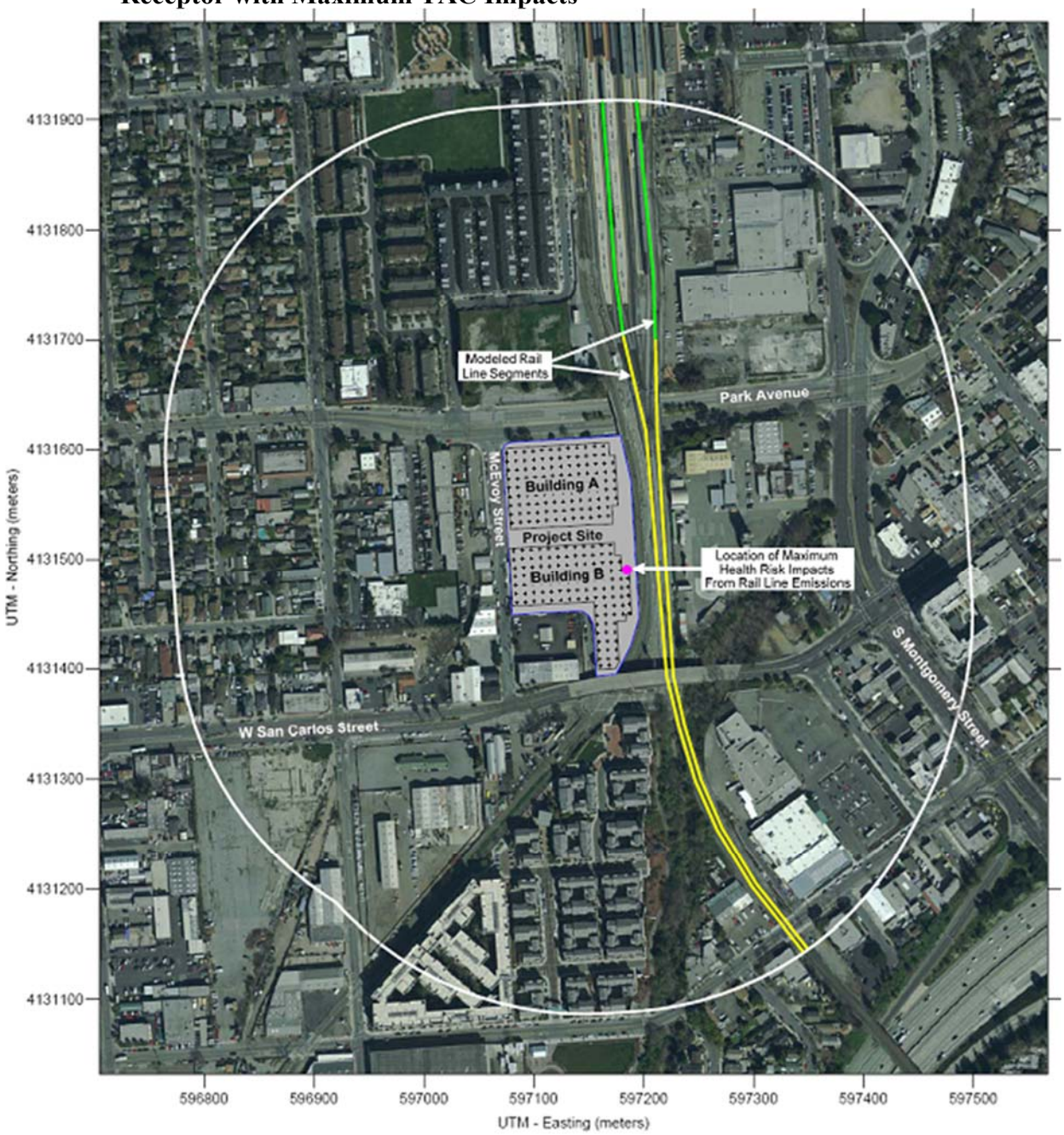


Railroad: Diesel Trains

The railroad analysis for the project residents was conducted in the same manner as described above for the off-site MEI. Impacts to future project residents on the first through third residential levels of the proposed Buildings A and B were evaluated. Figure 4 shows the railroad segments used for the modeling and receptor locations where concentrations were calculated. The maximum modeled long-term DPM and $PM_{2.5}$ concentrations occurred at the first residential level/second floor of Building B on the eastern side of the building adjacent to the rail lines.

The maximum increased cancer risk and annual $PM_{2.5}$ concentrations for new residents at the project site are shown in Table 9 and were computed using the maximum modeled DPM and $PM_{2.5}$ concentrations and the BAAQMD recommended methods and exposure parameters described in *Attachment 1*. The location of the project receptors where the maximum TAC and $PM_{2.5}$ impacts from the rail line occurred is shown in Figure 4. The modeling results and health risk calculations for the receptor with the maximum cancer risk from the diesel locomotives using the rail line are also provided in *Attachment 5*.

Figure 4. Project Site, On-Site Sensitive Receptors, Rail Line Segments Modeled and Receptor with Maximum TAC Impacts



Stationary Sources

The stationary source screening analysis for the new project sensitive receptors was conducted in the same manner as described above for the project MEI. Table 9 shows the health risk assessment results from the stationary sources.

Construction Risk Impacts from Nearby Developments

The same mitigated construction risks from the nearby developments were included in the cumulative table for the on-site project sensitive receptors. However, the on-site project sensitive receptors would only be exposed to a portion of the construction from the nearby developments, as opposed to the project MEI which could be exposed to the entire portion of the nearby developments' construction. Therefore, the construction risks from the nearby developments would be lower at the proposed on-site project sensitive receptors.

Combined Community Health Risk at Project Site

Community risk impacts from the existing TAC sources upon the project site are reported in Table 9. The risks from the singular TAC sources are compared against the BAAQMD single-source threshold. The risks from all the sources are then combined and compared against the BAAQMD cumulative-source threshold. As shown, the maximum cancer risk from the rail line exceeds the BAAQMD single-source threshold, but does not exceed the cumulative-source threshold. The annual $PM_{2.5}$ concentrations and HI from the nearby sources do not exceed their single-source or cumulative-source thresholds.

Table 9. Cumulative Community Risk Impacts Upon the On-site Sensitive Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
W. San Carlos Street, ADT 17,294	1.59	0.11	<0.01
Montgomery Street/Bird Avenue, ADT 22,565	0.24	0.02	<0.01
Park Avenue, ADT 14,900	0.81	0.06	<0.01
Rail Line	**28.60**	<0.01	<0.01
San Jose Fire Dept / Accts Payable (Facility ID #21808, Generator), MEI at 700 feet	0.50	-	-
TC Agoge Associates LLC (Facility ID #24351, Generator), MEI at 805 feet	0.03	-	-
San Carlos 76 (Facility ID #104113, Gas Station), MEI at 815 feet	0.51	-	<0.01
City of San Jose Fire Training Center (Facility ID #107956, Gas Station), MEI at 550 feet	0.70	-	<0.01
Bird Ave Chevron Inc (Facility ID #111433, Gas Station), MEI at +1,000 feet	0.67	-	<0.01
Montgomery 7 Mitigated Construction Emissions - 725 feet east	<5.00	<0.15	<0.50
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	***Yes***	*No*	*No*
Cumulative Total	<38.65	<0.35	<0.57
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

Recommended Design Features to Reduce Project Receptor Exposure

Filtration in ventilation systems at the project site would be recommended to reduce the level of harmful pollutants to below the significant thresholds. The significant exposure for new project receptors is judged by two effects: (1) increased cancer risk, and (2) annual $PM_{2.5}$ concentration.

Exposure to maximum cancer risk from the rail line are above the BAAQMD single source threshold. Cancer risk is mostly the result of exposure to diesel particulate matter, although, gasoline vehicle exhaust contributes to this effect. Annual $PM_{2.5}$ concentrations are based on the exposure to $PM_{2.5}$ resulting from emissions attributable to truck and auto exhaust, the wearing of brakes and tires and re-entrainment of roadway dust from vehicles traveling over pavement. The modeled $PM_{2.5}$ exposure to future residents drives the mitigation. Reducing particulate matter exposure would reduce both annual $PM_{2.5}$ exposures and cancer risk.

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

1. Install air filtration for the entire project. Air filtration devices shall be rated MERV13 or higher. To ensure adequate health protection to sensitive receptors (i.e., residents), this ventilation system, whether mechanical or passive, shall filter all fresh air that would be circulated into the dwelling units.

2. The ventilation system shall be designed to keep the building at positive pressure when doors and windows are closed to reduce the intrusion of unfiltered outside air into the building

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

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

Effectiveness of Recommended Design Features

A properly installed and operated ventilation system with MERV13 would achieve an 80-percent reduction for small particulates.[39] The overall effectiveness calculations take into account the amount of time spent outdoors at the project site but not time spent away from home. Assuming that the filtration system is 80-percent effective and the individual is being exposed to 21 hours of indoor filtered air and three hours of outdoor unfiltered air at the site, then the overall effectiveness of a MERV13 filtration system would be about 70-percent for $PM_{2.5}$ exposure. For the rail line, this would reduce the cancer risk to 8.58 per million. With this recommended design feature, impacts from the rail line would be below the cancer risk single-source threshold.

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

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

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

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.[40] 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.[41] 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.[42] 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

[40] 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.
[41] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[42] 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

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

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

Air Quality/Noise Construction Information Data Request

Project Name: Diridon-Dupont Building A

See Equipment Type TAB for type, horsepower and load factor

Complete ALL Portions in Yellow

Project Size
- 314 Dwelling Units
- _____ total project acres disturbed
- 312625 s.f. residential
- 4005 s.f. retail
- _____ s.f. office/commercial
- _____ s.f. other, specify:
- 137,382 s.f. parking garage — 327 spaces
- _____ s.f. parking lot — _____ spaces

Construction Hours _____ am to _____ pm

Pile Driving? Y/N?

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION? 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:**	**1/2/2023**	**Total phase:**	**20**			**Overall Import/Export Volumes**
		End Date:	**1/27/2023**					
1	Concrete/Industrial Saws	81	0.73	8	20	8	9461	**Demolition Volume**
3	Excavators	158	0.38	8	20	8	28819	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	8	20	8	31616	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	**32,421** square feet *or*
	Other Equipment?							**?** Hauling volume (tons)
								Any pavement demolished and hauled? **? tons**
	Site Preparation	**Start Date:**	**1/28/2023**	**Total phase:**	**10**			
		End Date:	**2/10/2023**					
	Graders	187	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	8	10	8	23712	
4	Tractors/Loaders/Backhoes	97	0.37	8	10	8	11485	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**2/11/2023**	**Total phase:**	**30**			
		End Date:	**3/24/2023**					**Soil Hauling Volume**
2	Excavators	158	0.38	8	30	8	28819	Export volume = **?** cubic yards?
1	Graders	187	0.41	8	30	8	18401	Import volume = **4,400** cubic yards?
1	Rubber Tired Dozers	247	0.4	8	30	8	23712	
2	Scrapers	367	0.48	8	30	8	84557	
2	Tractors/Loaders/Backhoes	97	0.37	8	30	8	17227	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**		**Total phase:**				
		End Date:						
	Tractor/Loader/Backhoe	97	0.37			#DIV/0!	0	
	Excavators	158	0.38			#DIV/0!	0	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**3/25/2023**	**Total phase:**	**300**			**Cement Trucks? ? Total Round-Trips**
		End Date:	**5/17/2024**					
1	Cranes	231	0.29	7	300	7	140679	Electric? (Y/N) ___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	300	8	128160	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	300	8	149184	Or temporary line power? (Y/N) ___
3	Tractors/Loaders/Backhoes	97	0.37	7	300	7	226107	
1	Welders	46	0.45	8	300	8	49680	
	Other Equipment?							
Building - Interior/Architectural Coating		**Start Date:**	**6/15/2024**	**Total phase:**	**20**			
		End Date:	**7/12/2024**					
1	Air Compressors	78	0.48	6	20	6	4493	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**5/18/2024**	**Total phase:**	**20**			
		Start Date:	**6/14/2024**					
	Cement and Mortar Mixers	9	0.56			0	0	
2	Pavers	130	0.42	8	20	8	17472	**Asphalt? ___ cubic yards or ____ round trips?**
2	Paving Equipment	132	0.36	8	20	8	15206	
2	Rollers	80	0.38	8	20	8	9728	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Air Quality/Noise Construction Information Data Request

Project Name: Diridon-Dupont Building B

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
375 Dwelling Units
306930 s.f. residential
s.f. retail
s.f. office/commercial
s.f. other, specify:
75,425 s.f. parking garage
s.f. parking lot
total project acres disturbed
188 spaces
spaces

Construction Hours am to pm

Pile Driving? Y/N?

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION? 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:**	**1/1/2025**	**Total phase:**	**20**			**Overall Import/Export Volumes**
		End Date:	**1/28/2025**					
1	Concrete/Industrial Saws	81	0.73	8	20	8	9461	**Demolition Volume**
3	Excavators	158	0.38	8	20	8	28819	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	8	20	8	31616	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	**32,421** square feet *or*
	Other Equipment?							**?** Hauling volume (tons)
								Any pavement demolished and hauled? **?** **tons**
	Site Preparation	**Start Date:**	**1/29/2025**	**Total phase:**	**10**			
		End Date:	**2/11/2025**					
	Graders	187	0.41			0	0	
3	Rubber Tired Dozers	247	0.4	8	10	8	23712	
4	Tractors/Loaders/Backhoes	97	0.37	8	10	8	11485	
	Other Equipment?							
	Grading / Excavation	**Start Date:**	**2/12/2025**	**Total phase:**	**30**			
		End Date:	**3/25/2025**					**Soil Hauling Volume**
2	Excavators	158	0.38	8	30	8	28819	Export volume = **?** cubic yards?
1	Graders	187	0.41	8	30	8	18401	Import volume = **4,400** cubic yards?
1	Rubber Tired Dozers	247	0.4	8	30	8	23712	
2	Scrapers	367	0.48	8	30	8	84557	
2	Tractors/Loaders/Backhoes	97	0.37	8	30	8	17227	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**		**Total phase:**				
		End Date:						
	Tractor/Loader/Backhoe	97	0.37			#DIV/0!	0	
	Excavators	158	0.38			#DIV/0!	0	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**3/26/2025**	**Total phase:**	**300**			**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**5/19/2026**					
1	Cranes	231	0.29	7	300	7	140679	Electric? (Y/N) ___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	300	8	128160	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	300	8	149184	Or temporary line power? (Y/N) ___
3	Tractors/Loaders/Backhoes	97	0.37	7	300	7	226107	
1	Welders	46	0.45	8	300	8	49680	
	Other Equipment?							
	Building - Interior/Architectural Coating	**Start Date:**	**6/17/2026**	**Total phase:**	**20**			
		End Date:	**7/14/2026**					
1	Air Compressors	78	0.48	6	20	6	4493	
	Aerial Lift	62	0.31			0	0	
	Other Equipment?							
	Paving	**Start Date:**	**5/20/2026**	**Total phase:**	**20**			
		Start Date:	**6/16/2026**					
	Cement and Mortar Mixers	9	0.56			0	0	
2	Pavers	130	0.42	8	20	8	17472	**Asphalt? ___ cubic yards or ____ round trips?**
2	Paving Equipment	132	0.36	8	20	8	15206	
2	Rollers	80	0.38	8	20	8	9728	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Traffic Consultant Trip Gen						CalEEMod Default			
Land Use		Size	Daily Trips	New Trips	Weekday Trip Gen	Weekday		Sat	Sun
Apartmetns Mid Rise	DU	689	3748	2653	***3.85***		5.44	4.91	4.09
Residential - Retail Internal Reduction			*-23*			*Rev*		***3.48***	***2.89***
Location Based Reduction			*-484*						
VMT Reduction			*-588*						
Shopping Center	1k-SF	4.005	151	128	***31.96***		44.32	42.04	20.43
Residential - Retail Internal Reduction			*-23*			*Rev*		***30.32***	***14.73***

Table 4
Project Trip Generation Estimates

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT[4] Existing	VMT[4] Project	% Reduction	Size	Daily Rate	Daily Trip	AM Peak Hour Pk-Hr Rate	AM Split In	AM Split Out	AM Trip In	AM Trip Out	AM Trip Total	PM Peak Hour Pk-Hr Rate	PM Split In	PM Split Out	PM Trip In	PM Trip Out	PM Trip Total
Proposed Land Uses																					
Multifamily Housing (Mid-Rise)[1]	221						689 Dwelling Units	5.44	3,748	0.36	26%	74%	64	184	248	0.44	61%	39%	185	118	303
- Residential - Retail Internal Reduction[2]									*-23*				*0*	*0*	*0*				*-1*	*-1*	*-2*
- Location Based Reduction[3]		*Urban Low-Transit*	*87%*			*13%*			*-484*				*-8*	*-24*	*-32*				*-24*	*-15*	*-39*
- VMT Reduction[4]				*7.17*	*5.87*	*18%*			*-588*				*-10*	*-29*	*-39*				*-29*	*-18*	*-47*
Residential Sub-Total									***2,653***				***46***	***131***	***177***				***131***	***84***	***215***
Shopping Center[1]	820						4,005 Square Feet	37.75	151	0.94	62%	38%	2	2	4	3.81	48%	52%	7	8	15
- Residential - Retail Internal Reduction[2]						*15%*			*-23*				*0*	*0*	*0*				*-1*	*-1*	*-2*
Retail Sub-Total									***128***				***2***	***2***	***4***				***6***	***7***	***13***
Baseline Vehicle Trips (Before Reductions)									3,899				66	186	252				192	126	318
Gross Project Trips After Reductions									***2,781***				***48***	***133***	***181***				***137***	***91***	***228***

Notes:

[1] Source: ITE *Trip Generation Manual*, 10th Edition 2017, average trip generation rates.

[2] As prescribed by the Transportation Impact Analysis Guidelines from VTA (October 2014), the maximum trip reduction for a mixed-use development project with residential and retail is equal to 15% off the smaller trip generator.

[3] The project site is located within an urban low-transit area based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle.

[4] VMT per capita for residential use. Existing and project VMTs were estimated using the City of San Jose VMT Evaluation Tool.
It is assumed that every percent reduction in VMT per-capita is equivalent to one percent reduction in peak-hour vehicle trips.

	Construction Criteria Air Pollutants						
LAND USE	*Unmitigated*	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
	Year	Tons				MT	
	Construction Equipment						
Building A	2023	0.24	2.31	0.11	0.10	367	
	2024	2.34	0.78	0.04	0.03	139	
Building B	2025	0.21	1.99	0.08	0.08	368	
	2026	2.25	0.71	0.03	0.03	138	
	EMFAC						
Building A	2023	0.09	0.29	0.02	0.01	335	
	2024	0.05	0.15	0.01	0.005	175	
Building B	2025	0.08	0.25	0.02	0.01	322	
	2026	0.04	0.13	0.01	0.005	169	
	Total Construction Emissions by Year						
	2023	0.33	2.60	0.13	0.11	702	
	2024	2.38	0.93	0.05	0.04	315	
	2025	0.30	2.24	0.11	0.09	690	
	2026	2.30	0.84	0.04	0.03	307	
		Total Construction Emissions					
	Tons	5.31	6.61	0.33	0.27	2013	
	Pounds/Workdays	*Average Daily Emissions*				Workdays	
	2023	2.57	19.96	1.00	0.84		**261**
	2024	34.28	13.34	0.70	0.56		**139**
	2025	2.28	17.13	0.82	0.67		**261**
	2026	32.91	12.03	0.61	0.48		**140**
	Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		
		Total Construction Emissions					
	Pounds	72.03	62.46	3.13	2.55	0.00	
	Average	13.27	16.50	0.82	0.67	0.00	801
	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	4.05	1.22	2.09	0.56		
	Existing Use Emissions					
Total						
	Net Annual Operational Emissions					
Tons/year	4.05	1.22	2.09	0.56		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	22.19	6.70	11.47	3.05		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	36.25			
Energy	0.00			
Mobile	2116.23			
Waste	161.50			
Water	154.18			
TOTAL	2468.18	0.00	0.00	0.00
Net GHG Emissions		2468.18		0.00
Service Population	2163.46			
Per Capita Emissions		1.14		0.00
	689	units		
CA DOF 2020 =	3.14	pphh		

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Diridon Dupont Residential - Construction Building A

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	314.00	Dwelling Unit	8.26	312,625.00	898
Enclosed Parking with Elevator	327.00	Space	2.94	137,382.00	0
Strip Mall	4.00	1000sqft	0.09	4,005.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2025
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SJCE

Land Use - Provided project land uses - project description and plans, default acreage, provided gross SF from site plans

Construction Phase - Default Construction Schedule

Off-road Equipment - Default Equipment and Hours

Grading - grading = 4,400-cy import (hald of total) - data from project description

Demolition - Existing building demo = 32,421-sf (half of total) - data from project plans

Trips and VMT - Trips 0 and input into EMFAC2021 Spreadsheet

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

Table Name	Column Name	Default Value	New Value

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

tblGrading	MaterialImported	0.00	4,400.00
tblLandUse	LandUseSquareFeet	314,000.00	312,625.00
tblLandUse	LandUseSquareFeet	130,800.00	137,382.00
tblLandUse	LandUseSquareFeet	4,000.00	4,005.00
tblTripsAndVMT	HaulingTripNumber	147.00	0.00
tblTripsAndVMT	HaulingTripNumber	550.00	0.00
tblTripsAndVMT	VendorTripNumber	57.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	285.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	57.00	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					
2023	0.2431	2.3087	2.3328	4.2000e-003	0.2525	0.1077	0.3602	0.1078	0.1006	0.2084	0.0000	364.3250	364.3250	0.0965	0.0000	366.7382
2024	2.3355	0.7796	0.9727	1.6100e-003	0.0000	0.0360	0.0360	0.0000	0.0338	0.0338	0.0000	138.5043	138.5043	0.0340	0.0000	139.3552
Maximum	**2.3355**	**2.3087**	**2.3328**	**4.2000e-003**	**0.2525**	**0.1077**	**0.3602**	**0.1078**	**0.1006**	**0.2084**	**0.0000**	**364.3250**	**364.3250**	**0.0965**	**0.0000**	**366.7382**

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Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0778	1.5767	2.6998	4.2000e-003	0.1137	0.0109	0.1246	0.0485	0.0109	0.0594	0.0000	364.3245	364.3245	0.0965	0.0000	366.7378
2024	2.2808	0.6566	1.0850	1.6100e-003	0.0000	4.6400e-003	4.6400e-003	0.0000	4.6400e-003	4.6400e-003	0.0000	138.5042	138.5042	0.0340	0.0000	139.3550
Maximum	**2.2808**	**1.5767**	**2.6998**	**4.2000e-003**	**0.1137**	**0.0109**	**0.1246**	**0.0485**	**0.0109**	**0.0594**	**0.0000**	**364.3245**	**364.3245**	**0.0965**	**0.0000**	**366.7378**

	ROG	NOx	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	**8.53**	**27.69**	**-14.50**	**0.00**	**55.00**	**89.17**	**67.39**	**55.00**	**88.43**	**73.55**	**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	1-2-2023	4-1-2023	0.9846	0.5325
2	4-2-2023	7-1-2023	0.5186	0.3720
3	7-2-2023	10-1-2023	0.5243	0.3761
4	10-2-2023	1-1-2024	0.5240	0.3761
5	1-2-2024	4-1-2024	0.4847	0.3720
6	4-2-2024	7-1-2024	1.7249	1.6648
7	7-2-2024	9-30-2024	0.8895	0.8884
		Highest	1.7249	1.6648

3.0 Construction Detail

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/28/2023	2/10/2023	5	10	
3	Grading	Grading	2/11/2023	3/24/2023	5	30	
4	Building Construction	Building Construction	3/25/2023	5/17/2024	5	300	
5	Paving	Paving	5/18/2024	6/14/2024	5	20	
6	Architectural Coating	Architectural Coating	6/15/2024	7/12/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 2.94

Residential Indoor: 633,066; Residential Outdoor: 211,022; Non-Residential Indoor: 6,008; Non-Residential Outdoor: 2,003; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	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
Building Construction	9	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
Architectural Coating	1	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

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0160	0.0000	0.0160	2.4200e-003	0.0000	2.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**0.0160**	**9.9800e-003**	**0.0259**	**2.4200e-003**	**9.2800e-003**	**0.0117**	**0.0000**	**33.9921**	**33.9921**	**9.5200e-003**	**0.0000**	**34.2301**

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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					7.1800e-003	0.0000	7.1800e-003	1.0900e-003	0.0000	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.1356	0.2467	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
Total	**5.8400e-003**	**0.1356**	**0.2467**	**3.9000e-004**	**7.1800e-003**	**6.2000e-004**	**7.8000e-003**	**1.0900e-003**	**6.2000e-004**	**1.7100e-003**	**0.0000**	**33.9920**	**33.9920**	**9.5200e-003**	**0.0000**	**34.2300**

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 - 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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**3.4800e-003**	**0.0608**	**0.1148**	**1.9000e-004**	**0.0442**	**3.1000e-004**	**0.0445**	**0.0227**	**3.1000e-004**	**0.0230**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

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 - 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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.1383	0.0000	0.1383	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	**0.0498**	**0.5177**	**0.4208**	**9.3000e-004**	**0.1383**	**0.0214**	**0.1597**	**0.0548**	**0.0197**	**0.0745**	**0.0000**	**81.8028**	**81.8028**	**0.0265**	**0.0000**	**82.4642**

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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0622	0.0000	0.0622	0.0247	0.0000	0.0247	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.2891	0.5508	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	**0.0152**	**0.2891**	**0.5508**	**9.3000e-004**	**0.0622**	**1.5200e-003**	**0.0638**	**0.0247**	**1.5200e-003**	**0.0262**	**0.0000**	**81.8027**	**81.8027**	**0.0265**	**0.0000**	**82.4641**

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 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

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Off-Road	0.1573	1.4385	1.6244	2.6900e-003		0.0700	0.0700		0.0658	0.0658	0.0000	231.8048	231.8048	0.0551	0.0000	233.1833
Total	**0.1573**	**1.4385**	**1.6244**	**2.6900e-003**		**0.0700**	**0.0700**		**0.0658**	**0.0658**	**0.0000**	**231.8048**	**231.8048**	**0.0551**	**0.0000**	**233.1833**

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					

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Off-Road	0.0534	1.0912	1.7874	2.6900e-003		8.4600e-003	8.4600e-003		8.4600e-003	8.4600e-003	0.0000	231.8045	231.8045	0.0551	0.0000	233.1830
Total	**0.0534**	**1.0912**	**1.7874**	**2.6900e-003**		**8.4600e-003**	**8.4600e-003**		**8.4600e-003**	**8.4600e-003**	**0.0000**	**231.8045**	**231.8045**	**0.0551**	**0.0000**	**233.1830**

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 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	0.0736	0.6722	0.8083	1.3500e-003		0.0307	0.0307		0.0288	0.0288	0.0000	115.9246	115.9246	0.0274	0.0000	116.6099

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

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

Total	**0.0736**	**0.6722**	**0.8083**	**1.3500e-003**		**0.0307**	**0.0307**		**0.0288**	**0.0288**	**0.0000**	**115.9246**	**115.9246**	**0.0274**	**0.0000**	**116.6099**

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	0.0267	0.5456	0.8937	1.3500e-003		4.2300e-003	4.2300e-003		4.2300e-003	4.2300e-003	0.0000	115.9244	115.9244	0.0274	0.0000	116.6097
Total	**0.0267**	**0.5456**	**0.8937**	**1.3500e-003**		**4.2300e-003**	**4.2300e-003**		**4.2300e-003**	**4.2300e-003**	**0.0000**	**115.9244**	**115.9244**	**0.0274**	**0.0000**	**116.6097**

Diridon Dupont Residential - Construction Building A - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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 Paving - 2024

Unmitigated Construction On-Site

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.3400e-003**	**0.1004**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

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

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2502					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	**2.2521**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5569**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Archit. Coating	2.2502					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	**2.2508**	**0.0106**	**0.0183**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5568**

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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Diridon Dupont Residential - Construction Building B

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	375.00	Dwelling Unit	9.87	306,930.00	1073
Enclosed Parking with Elevator	188.00	Space	1.69	75,425.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2027
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SJCE

Land Use - Provided project land uses - project description and plans, default acreage, provided gross SF from site plans

Construction Phase - Default Construction Schedule

Off-road Equipment - Default Equipment and Hours

Grading - grading = 4,400-cy import (half of total) - data from project description

Demolition - Existing building demo = 32,421-sf (half of total) - data from project plans

Trips and VMT - Trips 0 and input into EMFAC2021 Spreadsheet

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

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	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
tblGrading	MaterialImported	0.00	4,400.00

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

tblLandUse	LandUseSquareFeet	375,000.00	306,930.00
tblLandUse	LandUseSquareFeet	75,200.00	75,425.00
tblTripsAndVMT	HaulingTripNumber	147.00	0.00
tblTripsAndVMT	HaulingTripNumber	550.00	0.00
tblTripsAndVMT	VendorTripNumber	52.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	302.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	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					
2025	0.2142	1.9905	2.2952	4.2200e-003	0.2525	0.0839	0.3365	0.1078	0.0784	0.1862	0.0000	365.5695	365.5695	0.0961	0.0000	367.973
2026	2.2549	0.7145	0.9601	1.5900e-003	0.0000	0.0308	0.0308	0.0000	0.0289	0.0289	0.0000	137.3726	137.3726	0.0336	0.0000	138.2126
Maximum	**2.2549**	**1.9905**	**2.2952**	**4.2200e-003**	**0.2525**	**0.0839**	**0.3365**	**0.1078**	**0.0784**	**0.1862**	**0.0000**	**365.5695**	**365.5695**	**0.0961**	**0.0000**	**367.9730**

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

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					
2025	0.0781	1.5821	2.7087	4.2200e-003	0.1137	0.0110	0.1246	0.0485	0.0110	0.0595	0.0000	365.5691	365.5691	0.0961	0.0000	367.9725
2026	2.2066	0.6512	1.0760	1.5900e-003	0.0000	4.6000e-003	4.6000e-003	0.0000	4.6000e-003	4.6000e-003	0.0000	137.3725	137.3725	0.0336	0.0000	138.2125
Maximum	**2.2066**	**1.5821**	**2.7087**	**4.2200e-003**	**0.1137**	**0.0110**	**0.1246**	**0.0485**	**0.0110**	**0.0595**	**0.0000**	**365.5691**	**365.5691**	**0.0961**	**0.0000**	**367.9725**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.47**	**17.44**	**-16.26**	**0.00**	**55.00**	**86.45**	**64.82**	**55.00**	**85.51**	**70.22**	**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	1-1-2025	3-31-2025	0.8437	0.5345
2	4-1-2025	6-30-2025	0.4497	0.3720
3	7-1-2025	9-30-2025	0.4546	0.3761
4	10-1-2025	12-31-2025	0.4546	0.3761
5	1-1-2026	3-31-2026	0.4448	0.3679
6	4-1-2026	6-30-2026	1.4319	1.3978
7	7-1-2026	9-30-2026	1.0948	1.0937
		Highest	1.4319	1.3978

3.0 Construction Detail

Construction Phase

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2025	1/28/2025	5	20	
2	Site Preparation	Site Preparation	1/29/2025	2/11/2025	5	10	
3	Grading	Grading	2/12/2025	3/25/2025	5	30	
4	Building Construction	Building Construction	3/26/2025	5/19/2026	5	300	
5	Paving	Paving	5/20/2026	6/16/2026	5	20	
6	Architectural Coating	Architectural Coating	6/17/2026	7/14/2026	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 1.69

Residential Indoor: 621,533; Residential Outdoor: 207,178; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,526

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40

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Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	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
Building Construction	9	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
Architectural Coating	1	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

3.2 Demolition - 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

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0160	0.0000	0.0160	2.4200e-003	0.0000	2.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0209	0.1920	0.1942	3.9000e-004		8.5300e-003	8.5300e-003		7.9200e-003	7.9200e-003	0.0000	33.9977	33.9977	9.4900e-003	0.0000	34.2350
Total	**0.0209**	**0.1920**	**0.1942**	**3.9000e-004**	**0.0160**	**8.5300e-003**	**0.0245**	**2.4200e-003**	**7.9200e-003**	**0.0103**	**0.0000**	**33.9977**	**33.9977**	**9.4900e-003**	**0.0000**	**34.2350**

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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					7.1800e-003	0.0000	7.1800e-003	1.0900e-003	0.0000	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.1356	0.2467	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	33.9976	33.9976	9.4900e-003	0.0000	34.2349
Total	**5.8400e-003**	**0.1356**	**0.2467**	**3.9000e-004**	**7.1800e-003**	**6.2000e-004**	**7.8000e-003**	**1.0900e-003**	**6.2000e-004**	**1.7100e-003**	**0.0000**	**33.9976**	**33.9976**	**9.4900e-003**	**0.0000**	**34.2349**

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 - 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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0983**	**5.4300e-003**	**0.1037**	**0.0505**	**5.0000e-003**	**0.0555**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4800e-003	0.0608	0.1148	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**3.4800e-003**	**0.0608**	**0.1148**	**1.9000e-004**	**0.0442**	**3.1000e-004**	**0.0445**	**0.0227**	**3.1000e-004**	**0.0230**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

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 - 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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.1383	0.0000	0.1383	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7593	81.7593	0.0264	0.0000	82.4204
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.1383**	**0.0170**	**0.1553**	**0.0548**	**0.0156**	**0.0705**	**0.0000**	**81.7593**	**81.7593**	**0.0264**	**0.0000**	**82.4204**

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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0622	0.0000	0.0622	0.0247	0.0000	0.0247	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.2891	0.5508	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.7592	81.7592	0.0264	0.0000	82.4203
Total	**0.0152**	**0.2891**	**0.5508**	**9.3000e-004**	**0.0622**	**1.5200e-003**	**0.0638**	**0.0247**	**1.5200e-003**	**0.0262**	**0.0000**	**81.7592**	**81.7592**	**0.0264**	**0.0000**	**82.4203**

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 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

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
Off-Road	0.1374	1.2532	1.6165	2.7100e-003		0.0530	0.0530		0.0499	0.0499	0.0000	233.0791	233.0791	0.0548	0.0000	234.4488
Total	**0.1374**	**1.2532**	**1.6165**	**2.7100e-003**		**0.0530**	**0.0530**		**0.0499**	**0.0499**	**0.0000**	**233.0791**	**233.0791**	**0.0548**	**0.0000**	**234.4488**

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					

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Off-Road	0.0536	1.0967	1.7963	2.7100e-003		8.5000e-003	8.5000e-003		8.5000e-003	8.5000e-003	0.0000	233.0788	233.0788	0.0548	0.0000	234.4485
Total	**0.0536**	**1.0967**	**1.7963**	**2.7100e-003**		**8.5000e-003**	**8.5000e-003**		**8.5000e-003**	**8.5000e-003**	**0.0000**	**233.0788**	**233.0788**	**0.0548**	**0.0000**	**234.4485**

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 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	0.0677	0.6173	0.7962	1.3300e-003		0.0261	0.0261		0.0246	0.0246	0.0000	114.8001	114.8001	0.0270	0.0000	115.4748

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

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

Total	**0.0677**	**0.6173**	**0.7962**	**1.3300e-003**		**0.0261**	**0.0261**		**0.0246**	**0.0246**	**0.0000**	**114.8001**	**114.8001**	**0.0270**	**0.0000**	**115.4748**

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	0.0264	0.5402	0.8848	1.3300e-003		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	114.8000	114.8000	0.0270	0.0000	115.4746
Total	**0.0264**	**0.5402**	**0.8848**	**1.3300e-003**		**4.1900e-003**	**4.1900e-003**		**4.1900e-003**	**4.1900e-003**	**0.0000**	**114.8000**	**114.8000**	**0.0270**	**0.0000**	**115.4746**

Diridon Dupont Residential - Construction Building B - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.3400e-003	0.1004	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.3400e-003**	**0.1004**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

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

3.7 Architectural Coating - 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					
Archit. Coating	2.1763					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**2.1781**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

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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					
Archit. Coating	2.1763					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4000e-004	0.0106	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**2.1769**	**0.0106**	**0.0183**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

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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**

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	689.00	Dwelling Unit	18.13	619,555.00	1971
Enclosed Parking with Elevator	515.00	Space	4.63	212,807.00	0
Strip Mall	4.01	1000sqft	0.09	4,005.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2027
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SJCE

Land Use - Provided project land uses - project description and plans, default acreage, provided gross SF from site plans

Construction Phase - Operational Model Only. No Construction

Off-road Equipment - Operational Model Only. No Construction

Grading -

Vehicle Trips - Traffic provided trip gen with reductions

Vehicle Emission Factors - EMFAC2021 Vehicle Emissions Factors Santa Clara County 2027

Fleet Mix - EMFAC2021 Fleet Mix Santa Clara County 2027

Woodstoves - No wood burning appliances, all natural gas

Energy Use - San Jose Reach Code, no natural gas all electric

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

Water And Wastewater - Wastewater Treatment, 100% aerobic, no septic tanks or lagoons

Energy Mitigation - SJCE 100% carbon free energy by 2021

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	2/10/2023	1/30/2023
tblEnergyUse	NT24E	3,054.10	3,055.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24E	70.89	72.42
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	2.34	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	103.35	220.48
tblFireplaces	NumberWood	117.13	0.00
tblFleetMix	HHD	6.2400e-003	0.02
tblFleetMix	HHD	6.2400e-003	0.02
tblFleetMix	HHD	6.2400e-003	0.02
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDA	0.58	0.54
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03

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tblFleetMix	LHD2	5.2570e-003	6.2040e-003
tblFleetMix	LHD2	5.2570e-003	6.2040e-003
tblFleetMix	LHD2	5.2570e-003	6.2040e-003
tblFleetMix	MCY	0.02	3.5080e-003
tblFleetMix	MCY	0.02	3.5080e-003
tblFleetMix	MCY	0.02	3.5080e-003
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.6240e-003	6.4000e-004
tblFleetMix	MH	2.6240e-003	6.4000e-004
tblFleetMix	MH	2.6240e-003	6.4000e-004
tblFleetMix	MHD	8.1590e-003	0.01
tblFleetMix	MHD	8.1590e-003	0.01
tblFleetMix	MHD	8.1590e-003	0.01
tblFleetMix	OBUS	8.7700e-004	1.7070e-003
tblFleetMix	OBUS	8.7700e-004	1.7070e-003
tblFleetMix	OBUS	8.7700e-004	1.7070e-003
tblFleetMix	SBUS	8.7400e-004	5.3200e-004
tblFleetMix	SBUS	8.7400e-004	5.3200e-004
tblFleetMix	SBUS	8.7400e-004	5.3200e-004
tblFleetMix	UBUS	3.5600e-004	1.2410e-003
tblFleetMix	UBUS	3.5600e-004	1.2410e-003
tblFleetMix	UBUS	3.5600e-004	1.2410e-003
tblLandUse	LandUseSquareFeet	689,000.00	619,555.00
tblLandUse	LandUseSquareFeet	206,000.00	212,807.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

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

tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.31	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.0890e-003	7.8200e-004
tblVehicleEF	HHD	991.82	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.29	3.97
tblVehicleEF	HHD	2.62	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.3520e-003	1.9390e-003
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	2.2500e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.0000e-005	2.9000e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00

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

tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.2270e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.0000e-005	2.9000e-005
tblVehicleEF	HHD	0.49	0.57
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.2360e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.45	0.54
tblVehicleEF	LDA	1.88	2.42
tblVehicleEF	LDA	224.27	230.34
tblVehicleEF	LDA	47.58	59.41
tblVehicleEF	LDA	3.4320e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1280e-003	1.0170e-003
tblVehicleEF	LDA	1.5160e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0380e-003	9.3500e-004
tblVehicleEF	LDA	1.3940e-003	1.5840e-003
tblVehicleEF	LDA	0.03	0.25

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tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.3770e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDA	2.1190e-003	2.2770e-003
tblVehicleEF	LDA	4.5000e-004	5.8700e-004
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	6.3610e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDT1	2.3950e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.66	1.12
tblVehicleEF	LDT1	2.02	4.20
tblVehicleEF	LDT1	270.32	311.08
tblVehicleEF	LDT1	57.96	80.98
tblVehicleEF	LDT1	4.5300e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.18	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3400e-003	1.5760e-003
tblVehicleEF	LDT1	1.7900e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2320e-003	1.4490e-003
tblVehicleEF	LDT1	1.6460e-003	2.2770e-003

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tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	9.7750e-003	0.02
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.20	0.42
tblVehicleEF	LDT1	2.5540e-003	3.0750e-003
tblVehicleEF	LDT1	5.4800e-004	8.0100e-004
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.22	0.46
tblVehicleEF	LDT2	2.2120e-003	2.2390e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.63	0.71
tblVehicleEF	LDT2	2.47	3.08
tblVehicleEF	LDT2	284.70	320.53
tblVehicleEF	LDT2	61.63	81.54
tblVehicleEF	LDT2	4.6700e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.20	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.2100e-003	1.1830e-003
tblVehicleEF	LDT2	1.5700e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1140e-003	1.0890e-003

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tblVehicleEF	LDT2	1.4440e-003	1.7710e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6400e-003	8.4950e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	2.6900e-003	3.1680e-003
tblVehicleEF	LDT2	5.8200e-004	8.0600e-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	0.25	0.34
tblVehicleEF	LHD1	4.5230e-003	4.8530e-003
tblVehicleEF	LHD1	6.3000e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	0.96	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.83	729.06
tblVehicleEF	LHD1	10.77	17.05
tblVehicleEF	LHD1	7.3900e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.44	0.46

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tblVehicleEF	LHD1	0.26	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0700e-004	1.6900e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.7350e-003	2.7890e-003

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tblVehicleEF	LHD2	5.8140e-003	5.4840e-003
tblVehicleEF	LHD2	6.0230e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.53	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.94	9.14
tblVehicleEF	LHD2	1.7040e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.54	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.10	0.10

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tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.17
tblVehicleEF	MCY	17.99	11.71
tblVehicleEF	MCY	9.14	7.90
tblVehicleEF	MCY	209.89	186.47
tblVehicleEF	MCY	59.90	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.14	0.54
tblVehicleEF	MCY	0.27	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.90	3.85

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tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.15	0.96
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	1.90	1.23
tblVehicleEF	MCY	2.0770e-003	1.8430e-003
tblVehicleEF	MCY	5.9300e-004	4.4800e-004
tblVehicleEF	MCY	0.90	0.08
tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.69	1.17
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	2.07	1.34
tblVehicleEF	MDV	2.3750e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.64	0.76
tblVehicleEF	MDV	2.58	3.20
tblVehicleEF	MDV	343.09	384.38
tblVehicleEF	MDV	72.97	97.04
tblVehicleEF	MDV	6.1060e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.22	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2450e-003	1.1780e-003
tblVehicleEF	MDV	1.6000e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1480e-003	1.0850e-003
tblVehicleEF	MDV	1.4710e-003	1.7380e-003

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tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.5430e-003	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.26	0.37
tblVehicleEF	MDV	3.2410e-003	3.7980e-003
tblVehicleEF	MDV	6.8900e-004	9.5900e-004
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.28	0.41
tblVehicleEF	MH	6.9300e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.58	0.77
tblVehicleEF	MH	1.80	2.17
tblVehicleEF	MH	1,418.06	1,669.13
tblVehicleEF	MH	16.70	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.17	1.40
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	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02

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tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6500e-004	2.1000e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.6950e-003	0.01
tblVehicleEF	MHD	1.2530e-003	9.5450e-003
tblVehicleEF	MHD	8.5300e-003	7.5570e-003
tblVehicleEF	MHD	0.40	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.94	0.88
tblVehicleEF	MHD	68.38	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.72	7.64
tblVehicleEF	MHD	9.8750e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.4170e-003	5.5230e-003

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tblVehicleEF	MHD	0.37	0.81
tblVehicleEF	MHD	1.44	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.4000e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.3000e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4900e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.6000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0730e-003	7.5660e-003

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tblVehicleEF	OBUS	2.7540e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.69	1.70
tblVehicleEF	OBUS	96.38	89.08
tblVehicleEF	OBUS	1,261.24	1,320.54
tblVehicleEF	OBUS	14.17	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.41	0.36
tblVehicleEF	OBUS	1.44	0.90
tblVehicleEF	OBUS	1.12	1.00
tblVehicleEF	OBUS	1.3500e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.3000e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8500e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08

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tblVehicleEF	OBUS	9.1500e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4000e-004	1.3500e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8500e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.1390e-003	0.09
tblVehicleEF	SBUS	5.5510e-003	5.0470e-003
tblVehicleEF	SBUS	2.58	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.77	0.68
tblVehicleEF	SBUS	343.48	187.75
tblVehicleEF	SBUS	1,012.23	995.30
tblVehicleEF	SBUS	4.55	3.88
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.5840e-003	4.6260e-003
tblVehicleEF	SBUS	3.12	1.26
tblVehicleEF	SBUS	3.92	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.7970e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01

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tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.6760e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2730e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.5000e-005	3.8000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9120e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.14	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.40	3.13

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tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1770e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.0430e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.8060e-003	0.01
tblVehicleTrips	ST_TR	4.91	3.48
tblVehicleTrips	ST_TR	42.04	30.32
tblVehicleTrips	SU_TR	4.09	2.89

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tblVehicleTrips	SU_TR	20.43	14.73
tblVehicleTrips	WD_TR	5.44	3.85
tblVehicleTrips	WD_TR	44.32	31.96
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.0484	0.0827	5.1259	4.2000e-004		0.0303	0.0303		0.0303	0.0303	0.0000	35.8906	35.8906	8.5500e-003	5.0000e-004	36.2548
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,416.4707	1,416.4707	0.0579	7.0100e-003	1,420.0067
Mobile	1.0014	1.1408	7.4359	0.0224	2.0465	0.0160	2.0625	0.5112	0.0150	0.5262	0.0000	2,080.4734	2,080.4734	0.0964	0.1119	2,116.2347
Waste						0.0000	0.0000		0.0000	0.0000	65.1885	0.0000	65.1885	3.8525	0.0000	161.5018

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Water						0.0000	0.0000		0.0000	0.0000	15.9874	126.1463	142.1337	0.0602	0.0354	154.1849
Total	**4.0498**	**1.2235**	**12.5618**	**0.0228**	**2.0465**	**0.0463**	**2.0928**	**0.5112**	**0.0453**	**0.5565**	**81.1759**	**3,658.9810**	**3,740.1569**	**4.0756**	**0.1548**	**3,888.1830**

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	3.0484	0.0827	5.1259	4.2000e-004		0.0303	0.0303		0.0303	0.0303	0.0000	35.8906	35.8906	8.5500e-003	5.0000e-004	36.2548
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.0014	1.1408	7.4359	0.0224	2.0465	0.0160	2.0625	0.5112	0.0150	0.5262	0.0000	2,080.4734	2,080.4734	0.0964	0.1119	2,116.23
Waste						0.0000	0.0000		0.0000	0.0000	65.1885	0.0000	65.1885	3.8525	0.0000	161.5018
Water						0.0000	0.0000		0.0000	0.0000	15.9874	126.1463	142.1337	0.0602	0.0354	154.1849
Total	**4.0498**	**1.2235**	**12.5618**	**0.0228**	**2.0465**	**0.0463**	**2.0928**	**0.5112**	**0.0453**	**0.5565**	**81.1759**	**2,242.5103**	**2,323.6862**	**4.0177**	**0.1478**	**2,468.1763**

	ROG	NOx	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**	**38.71**	**37.87**	**1.42**	**4.53**	**36.52**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Date: 8/12/2021 11:11 AM

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0014	1.1408	7.4359	0.0224	2.0465	0.0160	2.0625	0.5112	0.0150	0.5262	0.0000	2,080.4734	2,080.4734	0.0964	0.1119	2,116.2347
Unmitigated	1.0014	1.1408	7.4359	0.0224	2.0465	0.0160	2.0625	0.5112	0.0150	0.5262	0.0000	2,080.4734	2,080.4734	0.0964	0.1119	2,116.2347

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,652.65	2,397.72	1991.21	5,824,229	5,824,229
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	128.00	121.43	58.99	180,497	180,497
Total	2,780.65	2,519.15	2,050.20	6,004,726	6,004,726

4.3 Trip Type Information

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.000640

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

Enclosed Parking with Elevator	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.000640
Strip Mall	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.000640

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,416.4707	1,416.4707	0.0579	7.0100e-003	1,420.0067
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

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	2.66564e+006	976.9416	0.0399	4.8400e-003	979.3804
Enclosed Parking with Elevator	1.15767e+006	424.2786	0.0173	2.1000e-003	425.3378
Strip Mall	41612	15.2505	6.2000e-004	8.0000e-005	15.2886
Total		**1,416.4707**	**0.0579**	**7.0200e-003**	**1,420.0067**

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.0484	0.0827	5.1259	4.2000e-004		0.0303	0.0303		0.0303	0.0303	0.0000	35.8906	35.8906	8.5500e-003	5.0000e-004	36.2548
Unmitigated	3.0484	0.0827	5.1259	4.2000e-004		0.0303	0.0303		0.0303	0.0303	0.0000	35.8906	35.8906	8.5500e-003	5.0000e-004	36.2548

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	0.4427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4491					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7800e-003	0.0238	0.0101	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003	0.0000	27.5246	27.5246	5.3000e-004	5.0000e-004	27.6881
Landscaping	0.1539	0.0589	5.1158	2.7000e-004		0.0284	0.0284		0.0284	0.0284	0.0000	8.3660	8.3660	8.0300e-003	0.0000	8.5667
Total	**3.0484**	**0.0827**	**5.1259**	**4.2000e-004**		**0.0303**	**0.0303**		**0.0303**	**0.0303**	**0.0000**	**35.8906**	**35.8906**	**8.5600e-003**	**5.0000e-004**	**36.2548**

Diridon Dupont Residential - Operation - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4491					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7800e-003	0.0238	0.0101	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003	0.0000	27.5246	27.5246	5.3000e-004	5.0000e-004	27.6881
Landscaping	0.1539	0.0589	5.1158	2.7000e-004		0.0284	0.0284		0.0284	0.0284	0.0000	8.3660	8.3660	8.0300e-003	0.0000	8.5667
Total	**3.0484**	**0.0827**	**5.1259**	**4.2000e-004**		**0.0303**	**0.0303**		**0.0303**	**0.0303**	**0.0000**	**35.8906**	**35.8906**	**8.5600e-003**	**5.0000e-004**	**36.2548**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	142.1337	0.0602	0.0354	154.1849
Unmitigated	142.1337	0.0602	0.0354	154.1849

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	44.8911 / 28.3009	141.2084	0.0598	0.0352	153.1806
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.29629 / 0.181597	0.9253	3.9000e-004	2.3000e-004	1.0043
Total		**142.1337**	**0.0602**	**0.0354**	**154.1849**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	44.8911 / 28.3009	141.2084	0.0598	0.0352	153.1806
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.29629 / 0.181597	0.9253	3.9000e-004	2.3000e-004	1.0043

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

Total	**142.1337**	**0.0602**	**0.0354**	**154.1849**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	65.1885	3.8525	0.0000	161.5018
Unmitigated	65.1885	3.8525	0.0000	161.5018

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	316.94	64.3360	3.8022	0.0000	159.3896
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		**65.1885**	**3.8525**	**0.0000**	**161.5018**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	316.94	64.3360	3.8022	0.0000	159.3896
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		**65.1885**	**3.8525**	**0.0000**	**161.5018**

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

Diridon Dupont Residential - Operation - Santa Clara County, Annual

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

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

Project: Diridon Dupont - Building A

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	300	0	147	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	2940
Site Preparation	18	0	180	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1944	0	0
Grading	20	0	600	0	550	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	6480	0	11000
Building Construction	285	57	85500	17100	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	923400	124830	0
Paving	15	0	300	0	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	3240	0	0
Architectural Coating	57	0	1140	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	12312	0	0

Number of Days Per Year					
2023	1/2/23	12/31/23	364	261	
2024	1/1/24	7/12/24	194	139	
			558	**400**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/2/2023	1/27/2023	5	20
Site Preparation	1/28/2023	2/10/2023	5	10
Grading	2/11/2023	3/24/2023	5	30
Building Construction	3/25/2023	5/17/2024	5	300
Paving	5/18/2024	6/14/2024	5	20
Architectural Coating	6/15/2024	7/12/2024	5	20

Project: Diridon Dupont - Building B **CalEEMod Construction Inputs**

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	300	0	147	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	2940
Site Preparation	18	0	180	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1944	0	0
Grading	20	0	600	0	550	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	6480	0	11000
Building Construction	302	52	90600	15600	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	978480	113880	0
Paving	15	0	300	0	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	3240	0	0
Architectural Coating	60	0	1200	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	12960	0	0

Number of Days Per Year					
2025	1/1/25	12/31/25	365	261	
2026	1/1/26	7/14/26	195	140	
			560	**401**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2025	1/28/2025	5	20
Site Preparation	1/29/2025	2/11/2025	5	10
Grading	2/12/2025	3/25/2025	5	30
Building Construction	3/26/2025	5/19/2026	5	300
Paving	5/20/2026	6/16/2026	5	20
Architectural Coating	6/17/2026	7/14/2026	5	20

Summary of Construction Traffic Emissions (EMFAC2021)

LAND USE	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															
Building A	*2023*	0.091	0.292	1.010	0.003	0.234	0.023	0.257	0.035	0.009	0.045	327	0.015	0.027	335
	2024	0.046	0.147	0.502	0.002	0.125	0.012	0.137	0.019	0.005	0.024	171	0.008	0.014	175
Building B	*2025*	0.084	0.248	0.918	0.003	0.244	0.023	0.266	0.037	0.009	0.046	314	0.014	0.024	322
	2026	0.042	0.125	0.461	0.002	0.130	0.012	0.142	0.020	0.005	0.024	165	0.007	0.012	169
Toxic Air Contaminants (1 Mile Trip Length)															
Building A	*2023*	0.079	0.105	0.362	0.000	0.023	0.003	0.025	0.003	0.001	0.005	44	0.007	0.006	46
	2024	0.040	0.054	0.181	0.000	0.012	0.001	0.014	0.002	0.001	0.002	23	0.004	0.003	24
Building B	*2025*	0.074	0.093	0.332	0.000	0.024	0.003	0.026	0.004	0.001	0.005	42	0.007	0.005	44
	2026	0.038	0.048	0.167	0.000	0.013	0.001	0.014	0.002	0.001	0.002	22	0.003	0.003	23

CalEEMod EMFAC2021 Emission Factors Input

Year 2027

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004853	0.002789	0.014761	0.218219477	0.007566	0	0	0.078917	0
A	CH4_RUNEX	0.001538	0.004493	0.002239	0.002675	0.005762	0.005484	0.009545	0.10604745	0.010157	0.533948107	0.151026	0.08989	0.008815
A	CH4_STREX	0.053702	0.085745	0.069469	0.078225	0.01948	0.010299	0.007557	6.86812E-08	0.015372	0.003705389	0.168253	0.005047	0.024503
A	CO_IDLEX	0	0	0	0	0.191268	0.138583	0.659814	5.124777958	0.540387	0	0	1.761417	0
A	CO_RUNEX	0.544775	1.115721	0.709007	0.758324	0.707092	0.45901	0.224798	0.708774151	0.368247	6.308397807	11.71041	0.810356	0.76998
A	CO_STREX	2.41599	4.203275	3.084615	3.203013	2.154654	1.156785	0.875978	0.000781552	1.69805	0.484950424	7.90164	0.676847	2.168054
A	CO2_NBIO_IDLEX	0	0	0	0	8.334523	13.53813	154.3221	777.0894715	89.07619	0	0	187.7451	0
A	CO2_NBIO_RUNEX	230.3437	311.0786	320.5327	384.3773	729.0592	776.3679	1175.453	1519.263619	1320.543	1063.591211	186.4654	995.3014	1669.128
A	CO2_NBIO_STREX	59.41318	80.98453	81.53887	97.04411	17.04736	9.141066	7.63784	0.012735171	13.65764	3.127643155	45.31465	3.877311	21.20521
A	NOX_IDLEX	0	0	0	0	0.042288	0.083489	0.810816	3.96507916	0.356426	0	0	1.262512	0
A	NOX_RUNEX	0.027958	0.092558	0.051348	0.065728	0.455172	0.65614	0.814699	1.633848814	0.90016	0.293792506	0.535092	2.082244	1.398837
A	NOX_STREX	0.198989	0.319548	0.27791	0.321671	0.381542	0.206004	1.371111	2.745433901	0.995087	0.037556507	0.117492	0.511229	0.298605
A	PM10_IDLEX	0	0	0	0	0.000685	0.001422	0.001186	0.001939125	0.000372	0	0	0.001021	0
A	PM10_PMBW	0.007109	0.009198	0.008852	0.008933	0.076704	0.089518	0.044837	0.081781797	0.049977	0.125979361	0.012	0.044568	0.044943
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009409	0.010648	0.012	0.03513541	0.012	0.044383261	0.004	0.010516	0.013285
A	PM10_RUNEX	0.001017	0.001576	0.001183	0.001178	0.011274	0.019444	0.008315	0.024472959	0.014286	0.005538264	0.001959	0.010893	0.026527
A	PM10_STREX	0.001723	0.002476	0.001926	0.001891	0.000174	7.39E-05	9.25E-05	2.86377E-07	0.000127	1.2111E-05	0.003451	4.34E-05	0.000267
A	PM25_IDLEX	0	0	0	0	0.000656	0.00136	0.001134	0.001848696	0.000356	0	0	0.000976	0
A	PM25_PMBW	0.002488	0.003219	0.003098	0.003126	0.026846	0.031331	0.015693	0.028623629	0.017492	0.044092776	0.0042	0.015599	0.01573
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002352	0.002662	0.003	0.008783853	0.003	0.011095815	0.001	0.002629	0.003321
A	PM25_RUNEX	0.000935	0.001449	0.001089	0.001085	0.010751	0.018587	0.007947	0.023410841	0.013659	0.005294889	0.00183	0.010405	0.025338
A	PM25_STREX	0.001584	0.002277	0.001771	0.001738	0.00016	6.79E-05	8.51E-05	2.63313E-07	0.000117	1.11356E-05	0.003236	3.99E-05	0.000246
A	ROG_DIURN	0.24955	0.50873	0.274048	0.313625	0.110209	0.057088	0.019771	9.1592E-05	0.072594	0.015803094	3.845178	0.034937	26.64487
A	ROG_HTSK	0.070665	0.139679	0.072649	0.080632	0.02672	0.013817	0.004666	2.90398E-05	0.015605	0.004759601	3.558844	0.008501	6.728387
A	ROG_IDLEX	0	0	0	0	0.019735	0.014654	0.023376	0.321590124	0.040418	0	0	0.19229	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.005603	0.019412	0.008495	0.010814	0.066535	0.097184	0.023627	0.016287015	0.03901	0.059061252	0.961131	0.048783	0.065156
A	ROG_RUNLS	0.187625	0.39349	0.204937	0.237024	0.155779	0.077843	0.038655	0.000261472	0.08075	0.012090992	3.781493	0.022938	0.16219
A	ROG_STREX	0.237505	0.424158	0.312968	0.374715	0.095037	0.049675	0.040569	3.72501E-07	0.081469	0.013094076	1.228813	0.028623	0.099567
A	SO2_IDLEX	0	0	0	0	8.11E-05	0.00013	0.001427	0.006748096	0.000841	0	0	0.001701	0
A	SO2_RUNEX	0.002277	0.003075	0.003168	0.003798	0.007117	0.007474	0.011139	0.013717513	0.012583	0.00857389	0.001843	0.009244	0.016358
A	SO2_STREX	0.000587	0.000801	0.000806	0.000959	0.000169	9.04E-05	7.55E-05	1.259E-07	0.000135	3.09199E-05	0.000448	3.83E-05	0.00021
A	TOG_DIURN	0.24955	0.50873	0.274048	0.313625	0.110209	0.057088	0.019771	9.1592E-05	0.072594	0.015803094	0.084734	0.034937	26.64487
A	TOG_HTSK	0.070665	0.139679	0.072649	0.080632	0.02672	0.013817	0.004666	2.90398E-05	0.015605	0.004759601	3.558844	0.008501	6.728387
A	TOG_IDLEX	0	0	0	0	0.027926	0.01961	0.041291	0.570405698	0.053451	0	0	0.313614	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.008165	0.028322	0.012381	0.015738	0.08106	0.112355	0.036334	0.124403846	0.054529	0.601085521	1.168054	0.146261	0.083601
A	TOG_RUNLS	0.187625	0.39349	0.204937	0.237024	0.155779	0.077843	0.038655	0.000261472	0.08075	0.012090992	3.781493	0.022938	0.16219
A	TOG_STREX	0.260038	0.4644	0.34266	0.410266	0.104053	0.054388	0.044418	4.07842E-07	0.089199	0.014336365	1.336388	0.031339	0.109013
A	N2O_IDLEX	0	0	0	0	0.000622	0.00168	0.02384	0.125416043	0.012876	0	0	0.024561	0
A	N2O_RUNEX	0.00351	0.007365	0.005085	0.006469	0.038764	0.079286	0.150702	0.242608661	0.155325	0.163486082	0.038022	0.121582	0.068779
A	N2O_STREX	0.027208	0.035136	0.033545	0.034764	0.03193	0.016916	0.005523	7.35107E-06	0.013429	0.005963729	0.007087	0.004626	0.032482

CalEEMod EMFAC2021 Fleet Mix Input

Year 2027

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.00064
Enclosed Parking with Ele	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.00064
Strip Mall	0.538301	0.033737	0.229575	0.125512	0.025083	0.006204	0.011015	0.022944	0.001707	0.001241	0.003508	0.000532	0.00064

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

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_ST	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	114.3093	0	69.10781	0	8.107874	0	1.602501	0.00493	0	0.0017	0.005	0.035266	0.005362	0	0.001849	0.02	0.100759	2306.817	0	49.81185	0.340225	0	0.00018	0.208909	0	0.045697	2.104867	0	0.000979	0.158374	1.426645	10.65375	3.071416	0	0.001072	0.158374	1.426645	10.65375	0.040468	83.0074	0	1.02738	0.022805	0	0.000492
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	991289	0	120860.8	0	1.969368	63.40488	2.849455	0.025957	0.031631	0	0.008769	0.027531	0.027131	0.033061	0	0.035077	0.078661	1656.801	12241.32	0	0.000809	0.237446	0	0.26103	1.928625	0	0.017417	5.112156	0	0	0	0	0.019828	5.819801	0	0	0	0	0	0.214624	0.087393	74.20136	0	0.015689	0.115918	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0	411.5054	103.2044	754.9233	0	0	0	0	0	0	0.00874	0.013383	0	0	0	0.03496	0.038238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Ga	753.7366	53295.97	53295.97	0	6914.034	0	1.208844	13.92832	0	0.001774	0.024237	0	0.009	0.046729	0.001929	0.02636	0	0.036	0.133512	1398.51	10630.2	0	2.44811	37.44665	0	0.285095	2.167036	0	0.054572	0.572265	0	0	0	0	0.860105	13.78246	74.03965	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	22370251	0	2795479	0	0.047412	0	0.27189	0.001217	0	0.001992	0.002	0.002656	0.001323	0	0.002167	0.008	0.007588	282.586	0	71.87767	0.002603	0	0.076449	0.004995	0	0.034134	0.01016	0	0.353794	0.094758	0.240611	1.480552	0.014823	0	0.387359	0.094758	0.240611	1.480552	0.033781	0.787617	0	3.436611	0.002794	0	0.000711
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	56220.8	0	8000.531	0	0.238318	0	0	0.018559	0	0	0.002	0.002698	0.019399	0	0	0.008	0.007709	234.6327	0	0	0.001413	0	0	0.036966	0	0	0.030417	0	0	0	0	0	0.034627	0	0	0	0	0	0.0031	0.342459	0	0	0.002223	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	0	2268185	265250.1	875706.7	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	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	15805.32	700610.9	356649.7	343961.3	65355	103886.6	0.00334	0	0.11551	0.000664	0	0.002171	0.002	0.001373	0.000722	0	0.002361	0.008	0.003922	141.9339	0	66.50966	0.000457	0	0.042604	0.000605	0	0.020916	0.001444	0	0.173285	0.040642	0.036088	0.447056	0.002108	0	0.189725	0.040642	0.036088	0.447056	0.019705	0.219019	0	1.339893	0.001403	0	0.000658
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	1744480	0	239737.9	0	0.143293	0	0.404336	0.00185	0	0.002837	0.002	0.003239	0.002012	0	0.003085	0.008	0.009253	333.6435	0	88.48953	0.006987	0	0.112557	0.010257	0	0.039834	0.031222	0	0.583212	0.174145	0.503091	2.807011	0.045546	0	0.638542	0.174145	0.503091	2.807011	0.035775	1.553409	0	5.660037	0.003298	0	0.000875
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	391.8698	0	75.17737	0	1.659056	0	0	0.24041	0	0	0.002	0.003728	0.25128	0	0	0.008	0.010651	415.6155	0	0	0.013928	0	0	0.06548	0	0	0.299852	0	0	0	0	0	0.341362	0	0	0	0	0	0.0031	1.601395	0	0	0.003938	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0	7068.184	916.4832	2728.903	0	0	0	0	0	0	0.002	0.00154	0	0	0	0.008	0.0044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	43.27677	2048.369	944.1579	1104.211	178.9495	333.5047	0.003025	0	0.11551	0.000387	0	0.00141	0.002	0.001383	0.000421	0	0.001534	0.008	0.003951	128.5161	0	72.39136	0.000412	0	0.042439	0.000544	0	0.020762	0.001308	0	0.173285	0.024584	0.021781	0.285922	0.001909	0	0.189725	0.024584	0.021781	0.285922	0.019359	0.198314	0	1.339893	0.001271	0	0.000716
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	10140967	0	1311796	0	0.077207	0	0.358346	0.001265	0	0.002003	0.002	0.003125	0.001375	0	0.002179	0.008	0.008929	351.1382	0	90.07377	0.003121	0	0.087759	0.006381	0	0.038646	0.012417	0	0.410727	0.085119	0.224187	1.404898	0.018118	0	0.449694	0.085119	0.224187	1.404898	0.035545	0.896823	0	3.892097	0.003471	0	0.00089
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	36936.87	0	4673.401	0	0.046157	0	0	0.005431	0	0	0.002	0.003102	0.005677	0	0	0.008	0.008863	315.6668	0	0	0.00065	0	0	0.049733	0	0	0.013984	0	0	0	0	0	0.015919	0	0	0	0	0	0.0031	0.132099	0	0	0.002991	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0	38931.7	5663.051	15030.85	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	1696.55	77270.66	37142.68	40127.98	7015.234	12119.85	0.003154	0	0.11551	0.000504	0	0.001759	0.002	0.001378	0.000548	0	0.001913	0.008	0.003938	134.0231	0	78.93358	0.000429	0	0.042457	0.000568	0	0.020778	0.001364	0	0.173285	0.02624	0.024448	0.318232	0.00199	0	0.189725	0.02624	0.024448	0.318232	0.020144	0.206812	0	1.339893	0.001325	0	0.000778
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	711085.5	0	285767.8	0	0.197814	0.037373	0.6588	0.001595	0	0.000328	0.002	0.0273	0.001734	0	0.000356	0.008	0.078	889.7424	120.2664	25.83956	0.009485	0.115635	0.034516	0.011082	0.003012	0.051891	0.047656	0.428153	0.172233	0.050564	0.277601	2.913784	0.069539	0.62476	0.188574	0.050564	0.277601	2.913784	0.044872	1.225109	3.753425	3.080251	0.008796	0.001189	0.000255
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	384084.8	0	123365.6	0	1.780633	2.029274	0	0.038253	0.026974	0	0.003	0.0273	0.039983	0.028193	0	0.012	0.078	635.427	132.908	0	0.008623	0.005098	0	0.100112	0.02094	0	0.185652	0.10976	0	0	0	0	0.211352	0.124954	0	0	0	0	0.16551	0.518876	0.909745	0	0.006021	0.001259	0
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	90793.04	0	37162.58	0	0.187016	0.036817	0.642061	0.001446	0	0.00026	0.002	0.03185	0.001572	0	0.000283	0.008	0.091	997.3845	138.7974	25.72325	0.007074	0.114568	0.033461	0.01097	0.002967	0.050452	0.033047	0.42203	0.165607	0.046993	0.25097	2.676301	0.048222	0.615826	0.181319	0.046993	0.25097	2.676301	0.044967	0.961891	3.759407	3.119312	0.00986	0.001372	0.000254
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	176769.2	0	56346.87	0	1.416942	1.998258	0	0.034177	0.027026	0	0.003	0.03185	0.035723	0.028248	0	0.012	0.091	764.5039	212.1206	0	0.007824	0.005098	0	0.120448	0.03342	0	0.168448	0.10976	0	0	0	0	0.191767	0.124954	0	0	0	0	0.178982	0.44054	0.909745	0	0.007244	0.00201	0
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	164894.5	0	55788.99	0	0.586927	0	0.142374	0.001778	0	0.003413	0.001	0.0042	0.001899	0	0.003626	0.004	0.012	188.3093	0	49.59811	0.167622	0	0.187482	0.040223	0	0.008379	1.105923	0	1.392636	3.5601	3.745685	3.947874	1.324135	0	1.513873	3.5601	3.745685	3.947874	0.00876	13.08956	0	8.051197	0.001862	0	0.00049
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	5358084	0	712433.9	0	0.117759	0	0.470106	0.001289	0	0.002144	0.002	0.003187	0.001402	0	0.002331	0.008	0.009106	426.0995	0	109.7064	0.004406	0	0.110292	0.008479	0	0.043081	0.018826	0	0.559259	0.101975	0.285798	1.72733	0.02744	0	0.612315	0.101975	0.285798	1.72733	0.035428	1.067328	0	4.333252	0.004212	0	0.001085
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	86834.44	0	11267.05	0	0.053096	0	0	0.00515	0	0	0.002	0.003181	0.005383	0	0	0.008	0.00909	413.3141	0	0	0.000529	0	0	0.065118	0	0	0.011397	0	0	0	0	0	0.012975	0	0	0	0	0	0.0031	0.202592	0	0	0.003916	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0	40073.7	5799.833	15471.76	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hyb	986.0895	41899.14	20787.35	21111.79	4077.48	6376.389	0.003256	0	0.11551	0.000638	0	0.002151	0.002	0.001376	0.000693	0	0.002339	0.008	0.00393	138.3296	0	98.37574	0.000441	0	0.042261	0.000581	0	0.020595	0.001408	0	0.173285	0.02985	0.028058	0.359617	0.002054	0	0.189725	0.02985	0.028058	0.359617	0.020837	0.213457	0	1.339893	0.001368	0	0.000973
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	22546.87	0	252.3754	0	0.479133	0	0.412521	0.001781	0	0.000428	0.003	0.015756	0.001937	0	0.000466	0.012	0.045017	1948.243	0	31.87585	0.018146	0	0.038028	0.02809	0	0.042647	0.082252	0	0.163779	13.03985	0.30297	4.773625	0.120022	0	0.179318	13.03985	0.30297	4.773625	0.044742	2.111943	0	3.629376	0.01926	0	0.000315
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	9344.849	0	95.91578	0	4.269554	0	0	0.097907	0	0	0.004	0.015675	0.102334	0	0	0.016	0.044785	1081.435	0	0	0.005704	0	0	0.17038	0	0	0.122812	0	0	0	0	0	0.139813	0	0	0	0	0	0.150005	0.410284	0	0	0.010247	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	70785.86	0	28385.41	0	0.562864	0.088304	0.453053	0.001386	0	0.000555	0.003	0.015756	0.001507	0	0.000603	0.012	0.045017	1792.411	536.9661	47.19918	0.018074	0.254589	0.049387	0.026381	0.007064	0.032566	0.09086	1.010025	0.279571	0.037187	0.302385	3.037923	0.132583	1.473826	0.306095	0.037187	0.302385	3.037923	0.04497	1.909686	15.08517	6.156285	0.01772	0.005308	0.000467
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	431550.4	0	122418.2	0	1.337342	13.57242	1.624162	0.016518	0.035742	0	0.003	0.015941	0.017265	0.037358	0	0.012	0.045546	1151.562	2263.789	0	0.010721	0.012298	0	0.181429	0.356661	0	0.037048	0.26478	0	0	0	0	0.042176	0.301431	0	0	0	0	0.209014	0.132571	7.583386	0	0.010905	0.021437	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0	101.8022	59.6458	108.685	0	0	0	0	0	0	0.003	0.00799	0	0	0	0.012	0.022828	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Ga	83.841	4047.874	4047.874	0	762.81	0	0.141319	6.52743	0	0.001137	0.017647	0	0.003	0.016002	0.001236	0.019193	0	0.012	0.045721	989.385	5296.533	0	0.740055	17.59163	0	0.201693	1.079733	0	0.010574	0.25135	0	0	0	0	0.755281	17.95355	0	0	0	0	1.06	2.992708	33.64344	0	0	0	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	20830.08	0	9181.619	0	0.553081	0.064991	0.405616	0.000893	0	0.000264	0.003	0.01568	0.000972	0	0.000287	0.012	0.044799	1784.092	381.8461	31.89445	0.015808	0.194938	0.036281	0.026177	0.005253	0.030766	0.078109	0.745234	0.192301	0.034706	0.154035	2.766253	0.113977	1.087444	0.210546	0.034706	0.154035	2.766253	0.044918	1.743956	5.768375	4.071703	0.017638	0.003775	0.000315
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	61645.66	0	8910.755	0	1.203188	7.410097	1.541404	0.020323	0.008632	0	0.003	0.018018	0.021242	0.009022	0	0.012	0.05148	1282.538	1552.949	0	0.001991	0.020568	0	0.202064	0.244668	0	0.04286	0.442828	0	0	0	0	0.048793	0.504126	0	0	0	0	0.215865	0.153454	7.510858	0	0.012145	0.014706	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Ga	6.1456	409.5466	409.5466	0	54.69584	0	0.219315	1.549107	0	0.000923	0.00362	0	0.003	0.016148	0.001004	0.003937	0	0.012	0.046137	1017.405	1188.285	0	0.774069	4.381267	0	0.207405	0.24224	0	0.01106	0.0626	0	0	0	0	0.789994	4.471404	0	0	0	0	1.06	3.211954	6.724204	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	8309.308	0	667.9468	0	0.519317	0.925703	0.7051	0.000862	0	0.000556	0.002	0.015721	0.000937	0	0.000609	0.008	0.044917	815.0909	2602.033	58.66947	0.011871	2.46208	0.074918	0.027733	0.086224	0.064904	0.057744	10.62943	0.427061	0.112221	0.259299	1.591441	0.084259	15.51043	0.467578	0.112221	0.259299	1.591441	0.045	1.469507	82.16746	10.56434	0.008058	0.025724	0.00058
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	15392.68	0	9659.876	0	4.028015	22.39863	0.467155	0.020908	0.02125	0	0.003	0.015721	0.021853	0.022211	0	0.012	0.044917	1148.524	2237.814	0	0.002748	0.008083	0	0.18095	0.352568	0	0.059161	0.174017	0	0	0	0	0.06735	0.198106	0	0	0	0	0.144154	0.181489	4.581854	0	0.010876	0.021191	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0	3.510494	4.378365	3.69815	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.012	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Ga	23.50762	595.8705	595.8705	0	340.3903	0	0.587321	5.282702	0	0.003378	0.011076	0	0.003	0.015721	0.003674	0.012046	0	0.012	0.044917	1271.127	4058.811	0	3.490611	15.40242	0	0.259128	0.827415	0	0.049874	0.22007	0	0	0	0	0.562424	15.7193	0	0	0	0	1.06	11.90284	20.11199	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	4798.244	0	183.7884	0	0.026807	0	0.443444	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.2924	0	36.84613	0.002031	0	0.041715	0.004215	0	0.070149	0.005614	0	0.147842	0.038144	0.09212	0.456803	0.008192	0	0.161868	0.038144	0.09212	0.456803	0.045	0.571128	0	6.073786	0.009157	0	0.000364
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	48829.71	0	1746.672	0	0.386256	0	0	0.007022	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.965	0	0	0.003215	0	0	0.173457	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0.18785	0.079368	0	0	0.010432	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0	199.0027	20.18703	346.9103	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Ga	42.26114	4829.673	4829.673	0	169.0446	0	0.05878	0	0	0.000282	0	0	0.008182	0.0385	0.000295	0	0	0.032727	0.11	1299.127	0	0	4.245742	0	0	0.264835	0	0	0.060663	0	0	0	0	0	4.333091	0	0	0	0	0	0.97	49.04231	0	0	0	0	0

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

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSO	ROG_RUNL	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSO	TOG_RUNL	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2024	HHDT	Aggregate	Aggregate	Gasoline	2.58E+08	115.1526	115.1526	0	0	51.79487	0	7.013725	0	0.003612	0	0.001433	0.005	0.03384	0.003929	0	0.001559	0.02	0.096686	2166.164	0	50.04419	0.246012	0	0.000205	0.192927	0	0.049797	1.47824	0	0.001115	0.149022	1.34233	10.02547	2.157045	0	0.001221	0.149022	1.34233	10.02547	0.04274	52.51903	0	1.60109	0.021415	0	0.000495
Santa Clara	2024	HHDT	Aggregate	Aggregate	Diesel	8486.693	1001095	1001095	0	0	124748.4	0	1.894567	62.88367	2.898867	0.025674	0.03017	0	0.00877	0.027454	0.026835	0.031534	0	0.035082	0.07844	1634.1	11997.01	0	0.000777	0.23663	0	0.257453	1.890134	0	0.016732	5.094584	0	0	0	0	0.019048	5.799796	0	0	0	0	0	0.215084	0.082524	74.10576	0	0.015474	0.113605	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Electricity	28.33039	2794.261	0	2794.261	378.7946	5152.341	0	0	0	0	0	0	0	0.008585	0.014055	0	0	0	0.034341	0.040158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	HHDT	Aggregate	Aggregate	Natural Ga	794.401	54591.27	54591.27	0	0	7249.717	0	1.128254	13.55515	0	0.001724	0.024776	0	0.009	0.047521	0.001875	0.026946	0	0.036	0.135775	1387.534	10583.64	0	2.344742	36.30276	0	0.282858	2.157544	0	0.050833	0.550696	0	0	0	0	2.412728	37.08609	0	0	0	0	0	0.85184	13.40196	74.43135	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Gasoline	600108.2	22290344	22290344	0	0	2786617	0	0.042281	0	0.025793	0.001177	0	0.001931	0.002	0.002656	0.00128	0	0.0021	0.008	0.007587	277.9403	0	70.44944	0.002338	0	0.072036	0.004672	0	0.033228	0.008937	0	0.328953	0.090491	0.230394	1.422636	0.013041	0	0.360162	0.090491	0.230394	1.422636	0.034712	0.737516	0	3.233068	0.002748	0	0.000686
Santa Clara	2024	LDA	Aggregate	Aggregate	Diesel	1750.024	51573.48	51573.48	0	0	7442.61	0	0.213181	0	0	0.016747	0	0	0.002	0.002706	0.017504	0	0	0.008	0.00773	232.7849	0	0	0.001289	0	0	0.036675	0	0	0.027749	0	0	0	0.03159	0	0	0	0	0	0	0.0031	0.331109	0	0	0.002206	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Electricity	57627.4	2472767	0	2472767	282733	954692.3	0	0	0	0	0	0	0	0.002	0.001533	0	0	0	0.008	0.00438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDA	Aggregate	Aggregate	Plug-in Hyb	17457.1	767059.2	381568.7	385490.5	72185.1	116429.6	0.003264	0	0.11551	0.000618	0	0.00207	0.002	0.001377	0.000672	0	0.002252	0.008	0.003935	138.6993	0	65.78653	0.000444	0	0.04244	0.000587	0	0.020762	0.001412	0	0.173285	0.041111	0.037292	0.447104	0.019502	0.214038	0	0.189725	0.041111	0.037292	0.447104	0.019502	0.214038	0	1.339893	0.001371	0	0.00065
Santa Clara	2024	LDT1	Aggregate	Aggregate	Gasoline	52693.37	1706864	1706864	0	0	234793.4	0	0.128357	0	0.381294	0.001737	0	0.002678	0.002	0.00324	0.001889	0	0.002913	0.008	0.009258	128.9675	0	86.69483	0.006261	0	0.105365	0.009424	0	0.03869	0.027741	0	0.539321	0.165332	0.472477	2.667158	0.040475	0	0.590488	0.165332	0.472477	2.667158	0.036079	1.427621	0	5.253053	0.003252	0	0.000857
Santa Clara	2024	LDT1	Aggregate	Aggregate	Diesel	23.46233	343.9308	343.9308	0	0	66.44459	0	1.651932	0	0	0.239373	0	0	0.002	0.003724	0.250196	0	0	0.008	0.01064	415.4307	0	0	0.013862	0	0	0.065451	0	0	0.298448	0	0	0	0	0	0.339763	0	0	0	0	0	0.0031	1.593665	0	0	0.003936	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Electricity	211.0028	8008.646	0	8008.646	994.4346	3091.998	0	0	0	0	0	0	0	0.002	0.001539	0	0	0	0.008	0.004397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT1	Aggregate	Aggregate	Plug-in Hyb	67.64578	3164.46	1414.302	1750.158	279.7153	528.6	0.002933	0	0.11551	0.000367	0	0.001381	0.002	0.001389	0.0004	0	0.001502	0.008	0.003967	124.6157	0	71.36186	0.000397	0	0.042219	0.000522	0	0.020556	0.001268	0	0.173285	0.024153	0.020965	0.279628	0.001851	0	0.189725	0.024153	0.020965	0.279628	0.018771	0.192305	0	1.339893	0.001232	0	0.000705
Santa Clara	2024	LDT2	Aggregate	Aggregate	Gasoline	285585.4	10322758	10322758	0	0	1336438	0	0.069091	0	0.334237	0.001227	0	0.001959	0.002	0.003127	0.001334	0	0.00213	0.008	0.008936	344.6046	0	88.12796	0.002864	0	0.082985	0.005943	0	0.037254	0.011242	0	0.384216	0.081741	0.217688	1.368189	0.016404	0	0.420668	0.081741	0.217688	1.368189	0.036359	0.842122	0	3.673764	0.003407	0	0.000871
Santa Clara	2024	LDT2	Aggregate	Aggregate	Diesel	1015.453	37944.26	37944.26	0	0	4835.434	0	0.041515	0	0	0.004813	0	0	0.002	0.003113	0.005031	0	0	0.008	0.008895	311.1925	0	0	0.000609	0	0	0.049029	0	0	0.013105	0	0	0	0.014919	0	0	0	0	0	0	0.0031	0.129976	0	0	0.002949	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Electricity	1597.567	55532.59	0	55532.59	8150.927	21440.16	0	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LDT2	Aggregate	Aggregate	Plug-in Hyb	2116.58	94757.71	44376.61	50381.09	8752.056	15216.59	0.003073	0	0.11551	0.000467	0	0.001672	0.002	0.001383	0.000508	0	0.001819	0.008	0.003953	130.578	0	78.06	0.000416	0	0.042233	0.000547	0	0.020569	0.001329	0	0.173285	0.025949	0.023686	0.309385	0.001939	0	0.189725	0.025949	0.023686	0.309385	0.019635	0.201506	0	1.339893	0.001291	0	0.000772
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Gasoline	19314.14	722529.3	722529.3	0	0	287751.9	0	0.17374	0.036221	0.636996	0.001534	0	0.000302	0.002	0.0273	0.001668	0	0.000328	0.008	0.078	871.4559	119.0993	25.78022	0.008358	0.112945	0.032997	0.009778	0.002977	0.050968	0.041718	0.415023	0.163611	0.047402	0.263136	2.768514	0.060875	0.605601	0.179134	0.047402	0.263136	2.768514	0.044898	1.142278	3.756209	3.123927	0.008615	0.001177	0.000255
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Diesel	10107.74	398004.1	398004.1	0	0	127142.6	0	1.563015	1.92168	0	0.035058	0.026804	0	0.003	0.0273	0.036643	0.028016	0	0.012	0.078	631.4008	131.1503	0	0.008006	0.005098	0	0.099477	0.020663	0	0.172364	0.10976	0	0	0	0	0.196225	0.124954	0	0	0	0	0	0.172781	0.473594	0.909745	0	0.005983	0.001243	0
Santa Clara	2024	LHDT1	Aggregate	Aggregate	Electricity	70.82836	5110.544	0	5110.544	989.4273	3345.376	0	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Gasoline	2506.906	91452.57	91452.57	0	0	37349.16	0	0.16518	0.035604	0.621534	0.00139	0	0.000239	0.002	0.03185	0.001512	0	0.000259	0.008	0.091	980.0361	137.5922	25.51292	0.006183	0.111453	0.031983	0.009819	0.00291	0.049384	0.028613	0.40822	0.157242	0.04419	0.238167	2.558385	0.041752	0.595674	0.17216	0.04419	0.238167	2.558385	0.044971	0.899209	3.762546	3.129931	0.009689	0.00136	0.000252
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Diesel	4663.455	183558.4	183558.4	0	0	58660.4	0	1.266102	1.895403	0	0.032055	0.027	0	0.003	0.03185	0.033504	0.028221	0	0.012	0.091	756.8682	209.5618	0	0.007406	0.005098	0	0.119245	0.033017	0	0.159439	0.10976	0	0	0	0	0.18151	0.124954	0	0	0	0	0	0.184132	0.411861	0.909745	0	0.007172	0.001986	0
Santa Clara	2024	LHDT2	Aggregate	Aggregate	Electricity	18.33259	1253.286	0	1253.286	242.668	808.0022	0	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MCY	Aggregate	Aggregate	Gasoline	28171.51	1660222.3	1660222.3	0	0	56343.02	0	0.571344	0	0.135477	0.001779	0	0.003248	0.001	0.0042	0.001902	0	0.003456	0.004	0.012	187.743	0	48.37697	0.162609	0	0.181972	0.039558	0	0.00802	1.062175	0	1.345317	3.559276	3.75283	3.900294	1.276951	0	1.462608	3.559276	3.75283	3.900294	0.088808	12.6697	0	8.002987	0.001856	0	0.000478
Santa Clara	2024	MDV	Aggregate	Aggregate	Gasoline	156642.4	5468054	5468054	0	0	726101.1	0	0.101279	0	0.42828	0.001229	0	0.002042	0.002	0.003184	0.001336	0	0.002221	0.008	0.009096	418.13	0	107.2801	0.003873	0	0.10186	0.007628	0	0.040967	0.01626	0	0.508806	0.097051	0.275722	1.677059	0.023715	0	0.557077	0.097051	0.275722	1.677059	0.036179	0.972241	0	4.022964	0.004134	0	0.001061
Santa Clara	2024	MDV	Aggregate	Aggregate	Diesel	2400.615	86292.69	86292.69	0	0	11318.82	0	0.048844	0	0	0.004909	0	0	0.002	0.003206	0.005131	0	0	0.008	0.009159	409.13	0	0	0.00051	0	0	0.064459	0	0	0.010978	0	0	0	0.012498	0	0	0	0	0	0	0.0031	0.201538	0	0	0.003877	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Electricity	1678.684	58660.63	0	58660.63	8578.496	22647.84	0	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MDV	Aggregate	Aggregate	Plug-in Hyb	1250.857	52904.03	25301.52	27602.51	5172.294	8336.781	0.003138	0	0.11551	0.000561	0	0.001962	0.002	0.001382	0.00061	0	0.002134	0.008	0.003948	133.3485	0	96.65661	0.000423	0	0.042047	0.000554	0	0.020395	0.001357	0	0.173285	0.030318	0.026684	0.341695	0.00198	0	0.189725	0.030318	0.026684	0.341695	0.020087	0.205781	0	1.339893	0.001318	0	0.000956
Santa Clara	2024	MH	Aggregate	Aggregate	Gasoline	2420.57	22012.3	22012.3	0	0	242.1538	0	0.420938	0	0.419963	0.001679	0	0.000404	0.003	0.015756	0.001826	0	0.000439	0.012	0.045017	1947.501	0	31.65056	0.015478	0	0.037539	0.025731	0	0.04407	0.06827	0	0.159123	12.21143	0.286769	4.596479	0.09962	0	0.174219	12.21143	0.286769	4.596479	0.044846	1.682224	0	3.497247	0.019253	0	0.000313
Santa Clara	2024	MH	Aggregate	Aggregate	Diesel	977.3606	9498.302	9498.302	0	0	97.73606	0	4.117169	0	0	0.091772	0	0	0.004	0.015675	0.099921	0	0	0.016	0.044785	1081.931	0	0	0.005558	0	0	0.170459	0	0	0.11965	0	0	0	0.136214	0	0	0	0	0	0	0.155539	0.397281	0	0	0.010252	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Gasoline	1414.552	71600.35	71600.35	0	0	28302.35	0	0.470752	0.088485	0.440963	0.001362	0	0.000533	0.003	0.015756	0.001482	0	0.000579	0.012	0.045017	1768.687	531.8002	46.25227	0.015051	0.25808	0.047572	0.022913	0.00727	0.03271	0.074951	1.01271	0.265405	0.033945	0.276365	2.798712	0.109368	1.477744	0.290585	0.033945	0.276365	2.798712	0.04498	1.56073	15.11634	5.825814	0.017485	0.005257	0.000457
Santa Clara	2024	MHDT	Aggregate	Aggregate	Diesel	1039.53	4340443.6	4340443.6	0	0	123939	0	1.232824	13.14099	1.642732	0.014397	0.029902	0	0.003	0.015941	0.015048	0.031254	0	0.012	0.045546	1147.309	2248.547	0	0.001507	0.01158	0	0.180759	0.35426	0	0.032455	0.249319	0	0	0	0	0.036947	0.283831	0	0	0	0	0	0.210532	0.120871	7.556027	0	0.010864	0.021292	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Electricity	30.91601	1660.353	0	1660.353	407.4536	1841.064	0	0	0	0	0	0	0	0.003	0.007956	0	0	0	0.012	0.022732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	MHDT	Aggregate	Aggregate	Natural Ga	90.59449	4303.581	4303.581	0	0	827.6228	0	0.133415	6.499719	0	0.001179	0.018131	0	0.003	0.016007	0.001282	0.019719	0	0.012	0.045734	984.6917	5301.101	0	0.74573	17.31409	0	0.200736	1.080664	0	0.010655	0.247384	0	0	0	0	0.761072	17.6703	0	0	0	0	0	1.06	2.995842	34.7393	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Gasoline	443.1467	19894.31	19894.31	0	0	8866.48	0	0.49672	0.06506	0.408547	0.000907	0	0.000252	0.003	0.01568	0.000987	0	0.000274	0.012	0.044799	1764.001	379.4143	31.61308	0.013757	0.195733	0.03606	0.024018	0.005304	0.031028	0.067076	0.746281	0.190964	0.033873	0.154922	2.818385	0.097877	1.088971	0.209081	0.033873	0.154922	2.818385	0.044969	1.491576	5.774637	4.000641	0.017439	0.003751	0.000313
Santa Clara	2024	OBUS	Aggregate	Aggregate	Diesel	893.1376	61949.05	61949.05	0	0	9141.625	0	1.178643	7.363387	1.543157	0.019849	0.008167	0	0.003	0.018015	0.020746	0.008536	0	0.012	0.051472	1273.38	1538.564	0	0.001935	0.020479	0	0.200622	0.242401	0	0.04166	0.440905	0	0	0	0	0.047427	0.501937	0	0	0	0	0	0.216021	0.150181	7.500483	0	0.012058	0.014569	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Electricity	1.087481	92.50105	0	92.50105	21.75833	102.477	0	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	OBUS	Aggregate	Aggregate	Natural Ga	7.05737	469.3876	469.3876	0	0	62.81059	0	0.190585	1.537414	0	0.00106	0.003899	0	0.003	0.016148	0.001153	0.004241	0	0.012	0.046137	1004.237	1191.581	0	0.789796	4.236895	0	0.20472	0.242912	0	0.011285	0.060537	0	0	0	0	0.806045	4.324062	0	0	0	0	0	1.06	3.254325	7.353064	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Gasoline	172.6948	8584.866	8584.866	0	0	690.7791	0	0.50288	0.925939	0.716801	0.000864	0	0.000567	0.002	0.015721	0.000939	0	0.000616	0.008	0.044917	810.6064	2589.131	58.1367	0.011135	2.464862	0.074893	0.027101	0.086311	0.065929	0.054059	10.63288	0.426367	0.113914	0.274691	1.686167	0.078883	15.51547	0.466819	0.113914	0.274691	1.686167	0.045	1.38705	82.18841	10.36621	0.008014	0.025596	0.000575
Santa Clara	2024	SBUS	Aggregate	Aggregate	Diesel	670.5958	15345.26	15345.26	0	0	9710.228	0	3.821388	21.90481	0.482851	0.019766	0.019703	0	0.003	0.015721	0.02066	0.020594	0	0.012	0.044917	1144.18	2229	0	0.002665	0.008001	0	0.180266	0.35118	0	0.057376	0.172257	0	0	0	0	0.065318	0.196101	0	0	0	0	0	0.148025	0.1775	4.677792	0	0.010835	0.021107	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Electricity	2.064666	64.35501	0	64.35501	23.64639	67.79515	0	0	0	0	0	0	0	0.002539	0.00786	0	0	0	0.010157	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	SBUS	Aggregate	Aggregate	Natural Ga	24.3995	612.0941	612.0941	0	0	353.3048	0	0.567729	5.270895	0	0.003378	0.011357	0	0.003	0.015721	0.003674	0.012352	0	0.012	0.044917	1261.305	4066.736	0	3.436672	15.25665	0	0.257125	0.829031	0	0.049103	0.217987	0	0	0	0	3.507376	15.57053	0	0	0	0	0	1.06	11.64901	20.74693	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Gasoline	46.08313	4812.451	4812.451	0	0	1834.325	0	0.027483	0	0.457232	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.0836	0	36.94783	0.002034	0	0.043067	0.004288	0	0.071717	0.005634	0	0.152979	0.038099	0.092116	0.456438	0.008221	0	0.167492	0.038099	0.092116	0.456438	0.045	0.581148	0	6.130495	0.009155	0	0.000365
Santa Clara	2024	UBUS	Aggregate	Aggregate	Diesel	437.4745	48917.61	48917.61	0	0	1749.898	0	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1101.14	0	0	0.003215	0	0	0.173485	0	0	0.069208	0	0	0	0.078788	0	0	0	0	0	0	0.187908	0.079368	0	0	0.010434	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Electricity	5.347565	235.0626	0	235.0626	21.39026	409.7714	0	0	0	0	0	0	0	0.00888	0.01925	0	0	0	0.03552	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2024	UBUS	Aggregate	Aggregate	Natural Ga	42.58696	4865.187	4865.187	0	0	170.3478	0	0.058788	0	0	0.000282	0	0	0.008183	0.0385	0.000295	0	0	0.032731	0.11	1299.206	0	0	4.246059	0	0	0.264852	0	0	0.060668	0	0	0	0	0	4.333415	0	0	0	0	0	0.97	49.04786	0	0	0	0	0

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

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2025	HHDT	Aggregate	Aggregate	Gasoline	2.330359	124.9448	124.9448	0	46.62582	0	5.556909	0	1.379041	0.003103	0	0.001399	0.005	0.033068	0.003375	0	0.001521	0.02	0.09448	2106.229	0	50.03138	0.207413	0	0.000226	0.167059	0	0.041557	1.222197	0	0.00123	0.140217	1.263022	9.434649	1.783427	0	0.001346	0.140217	1.263022	9.434649	0.043157	47.7242	0	2.001616	0.020822	0	0.000495
Santa Clara	2025	HHDT	Aggregate	Aggregate	Diesel	8692.575	1008964	1008964	0	127877.1	0	1.825194	62.42367	2.931995	0.025335	0.028938	0	0.008772	0.027421	0.02648	0.030247	0	0.035088	0.078345	1608.776	11755.34	0	0.00075	0.235891	0	0.253463	1.852058	0	0.016139	5.078674	0	0	0	0	0	0.018373	5.781684	0	0	0	0	0.215507	0.078083	74.00904	0	0.015234	0.111316	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Electricity	63.3712	6579.675	0	6579.675	825.9972	12135.66	0	0	0	0	0	0	0	0.008551	0.014281	0	0	0	0.034206	0.040802	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	HHDT	Aggregate	Aggregate	Natural Ga	832.405	55779.38	55779.38	0	7555.504	0	1.049864	13.18492	0	0.00168	0.025258	0	0.009	0.048303	0.001827	0.02747	0	0.036	0.138007	1375.94	10529.31	0	2.235928	35.17609	0	0.280494	2.146469	0	0.047235	0.530122	0	0	0	0	0	2.299347	35.93114	0	0	0	0	0.843784	13.01274	74.75478	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Gasoline	598860.3	22133915	22133915	0	2780384	0	0.038209	0	0.245539	0.001142	0	0.001188	0.002	0.002655	0.001242	0	0.002044	0.008	0.007587	273.2075	0	69.04168	0.002117	0	0.067825	0.004408	0	0.032293	0.007947	0	0.306311	0.087189	0.224301	1.384954	0.035611	0.6952	0	0.349452	0.002701	0	0.000683
Santa Clara	2025	LDA	Aggregate	Aggregate	Diesel	1620.04	46912.85	46912.85	0	6871.193	0	0.18842	0	0	0.015236	0	0	0.002	0.002712	0.015925	0	0	0.008	0.007748	230.5963	0	0	0.001193	0	0	0.036331	0	0	0.025693	0	0	0	0	0	0	0.02925	0	0	0	0	0.0031	0.319914	0	0	0.002185	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Electricity	61443.19	2670452	0	2670452	299852.7	1031015	0	0	0	0	0	0	0.002	0.001534	0	0	0	0.008	0.004382	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDA	Aggregate	Aggregate	Plug-in Hyb	19037.66	825567.7	401013	424554.8	78720.74	128228.2	0.003187	0	0.11551	0.000578	0	0.001985	0.002	0.001382	0.000629	0	0.002159	0.008	0.003948	135.4391	0	65.04608	0.000432	0	0.042249	0.000569	0	0.020584	0.001378	0	0.173285	0.041164	0.03735	0.440525	0.019241	0.209016	0	1.339893	0.001339	0	0.000643
Santa Clara	2025	LDT1	Aggregate	Aggregate	Gasoline	51680.86	1664706	1664706	0	230186	0	0.115355	0	0.35972	0.001639	0	0.002543	0.002	0.003241	0.001782	0	0.002766	0.008	0.00926	324.1276	0	84.93844	0.005621	0	0.098552	0.008687	0	0.037511	0.02471	0	0.498818	0.156963	0.442299	2.52236	0.036056	0	0.546143	0.156963	0.442299	2.52236	0.036453	1.317416	0	4.886115	0.003204	0	0.00084
Santa Clara	2025	LDT1	Aggregate	Aggregate	Diesel	21.28272	302.8258	302.8258	0	59.13231	0	1.64381	0	0	0.238169	0	0	0.002	0.00372	0.248938	0	0	0.008	0.010628	415.1682	0	0	0.013797	0	0	0.065141	0	0	0.297038	0	0	0	0	0	0	0.338158	0	0	0	0	0.0031	1.585068	0	0	0.003934	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Electricity	234.4578	9323.704	0	9323.704	1109.796	3599.719	0	0	0	0	0	0	0.002	0.001537	0	0	0	0.008	0.004392	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT1	Aggregate	Aggregate	Plug-in Hyb	98.13198	4519.182	1961.286	2557.896	405.7758	772.5609	0.002848	0	0.11551	0.000353	0	0.001365	0.002	0.001394	0.000383	0	0.001485	0.008	0.003982	121.0095	0	70.34635	0.000383	0	0.041987	0.000501	0	0.020339	0.001231	0	0.173285	0.023895	0.020384	0.276746	0.001797	0	0.189725	0.023895	0.020384	0.276746	0.018228	0.186748	0	1.339893	0.001196	0	0.000695
Santa Clara	2025	LDT2	Aggregate	Aggregate	Gasoline	290874.7	10447706	10447706	0	1360241	0	0.06257	0	0.314364	0.001192	0	0.001919	0.002	0.00313	0.001296	0	0.002087	0.008	0.008944	338.2713	0	86.2638	0.002642	0	0.078494	0.005588	0	0.036037	0.010244	0	0.360071	0.079452	0.214938	1.349256	0.037112	0.795621	0	3.47417	0.003344	0	0.000853
Santa Clara	2025	LDT2	Aggregate	Aggregate	Diesel	1049.952	38652.34	38652.34	0	4980.34	0	0.039332	0	0	0.004727	0	0	0.002	0.003123	0.004941	0	0	0.008	0.008921	306.7182	0	0	0.000603	0	0	0.048324	0	0	0.01298	0	0	0	0	0	0	0.014777	0	0	0	0	0.0031	0.129797	0	0	0.002906	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Electricity	2157.059	73663.77	0	73663.77	10962.38	28440.3	0	0	0	0	0	0	0.002	0.001527	0	0	0	0.008	0.004362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LDT2	Aggregate	Aggregate	Plug-in Hyb	2561.885	112327.2	51267.44	61059.78	10593.4	18441.87	0.002995	0	0.11551	0.000438	0	0.00161	0.002	0.001388	0.000477	0	0.001751	0.008	0.003967	127.2609	0	77.17666	0.000403	0	0.041992	0.000528	0	0.020344	0.001295	0	0.173285	0.026071	0.023359	0.305362	0.00189	0	0.189725	0.026071	0.023359	0.305362	0.019143	0.196395	0	1.339893	0.001258	0	0.000763
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Gasoline	19422.46	728337	728337	0	289365.8	0	0.152112	0.035118	0.61458	0.001478	0	0.000276	0.002	0.0273	0.001607	0	0.0003	0.008	0.078	855.4024	117.9783	25.70715	0.007214	0.110329	0.031611	0.008613	0.002941	0.049929	0.03557	0.40247	0.15588	0.044275	0.247775	2.616411	0.051904	0.587284	0.170669	0.044275	0.247775	2.616411	0.044934	1.05316	3.759094	3.16195	0.008457	0.001166	0.000254
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Diesel	10387.1	408019.3	408019.3	0	130656.7	0	1.379237	1.823414	0	0.032347	0.026692	0	0.003	0.0273	0.03381	0.027899	0	0.012	0.078	628.07	129.5472	0	0.007468	0.005098	0	0.098953	0.02041	0	0.160779	0.10976	0	0	0	0	0	0.183036	0.124954	0	0	0	0	0.17898	0.435087	0.909745	0	0.005951	0.001228	0
Santa Clara	2025	LHDT1	Aggregate	Aggregate	Electricity	196.402	13079.06	0	13079.06	2746.629	8564.085	0	0	0	0	0	0	0.002	0.01365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Gasoline	2512.652	91345.05	91345.05	0	37434.78	0	0.146187	0.034452	0.600885	0.001346	0	0.00022	0.002	0.03185	0.001464	0	0.000239	0.008	0.091	964.5764	136.4471	25.31105	0.005467	0.108422	0.030581	0.008804	0.002854	0.048245	0.025115	0.395081	0.149459	0.041982	0.228581	2.471298	0.036648	0.576501	0.163639	0.041982	0.228581	2.471298	0.044974	0.850878	3.765161	3.139903	0.009536	0.001349	0.00025
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Diesel	4837.236	188645	188645	0	60846.34	0	1.139289	1.802658	0	0.030296	0.027005	0	0.003	0.03185	0.031666	0.028226	0	0.012	0.091	750.3571	207.2396	0	0.007043	0.005098	0	0.118219	0.032651	0	0.151622	0.10976	0	0	0	0	0	0.172612	0.124954	0	0	0	0	0.188496	0.387904	0.909745	0	0.00711	0.001964	0
Santa Clara	2025	LHDT2	Aggregate	Aggregate	Electricity	50.46202	3193.251	0	3193.251	669.175	2059.665	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MCY	Aggregate	Aggregate	Gasoline	28484.89	166414.5	166414.5	0	56969.79	0	0.557882	0	0.129146	0.001799	0	0.003253	0.001	0.0042	0.001925	0	0.003464	0.004	0.012	187.2679	0	47.30784	0.158292	0	0.177199	0.038984	0	0.007691	1.024683	0	1.305157	3.558651	3.760078	3.860886	1.236542	0	1.419098	3.558651	3.760078	3.860886	0.008851	12.31202	0	7.965438	0.001851	0	0.000468
Santa Clara	2025	MDV	Aggregate	Aggregate	Gasoline	159532.2	5551044	5551044	0	739781.4	0	0.087905	0	0.391886	0.001179	0	0.001962	0.002	0.003182	0.001282	0	0.002134	0.008	0.009091	410.3223	0	104.9535	0.003431	0	0.094137	0.006921	0	0.039073	0.014165	0	0.463643	0.092515	0.265086	1.620407	0.020668	0	0.50763	0.092515	0.265086	1.620407	0.036883	0.895922	0	3.753621	0.004056	0	0.001038
Santa Clara	2025	MDV	Aggregate	Aggregate	Diesel	2421.364	85326.8	85326.8	0	11351.14	0	0.044948	0	0	0.004686	0	0	0.002	0.003225	0.004898	0	0	0.008	0.009216	404.5816	0	0	0.000492	0	0	0.063742	0	0	0.010592	0	0	0	0	0	0	0.012058	0	0	0	0	0.0031	0.199936	0	0	0.003834	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Electricity	2274.547	77934.96	0	77934.96	11571.06	30089.33	0	0	0	0	0	0	0.002	0.001526	0	0	0	0.008	0.004361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MDV	Aggregate	Aggregate	Plug-in Hyb	1542.366	64484.39	29833.21	34651.18	6377.683	10465.69	0.003036	0	0.11551	0.000507	0	0.00183	0.002	0.001388	0.000551	0	0.00199	0.008	0.003965	128.9983	0	95.11137	0.000407	0	0.041816	0.00053	0	0.02018	0.001313	0	0.173285	0.02949	0.025333	0.327899	0.001916	0	0.189725	0.02949	0.025333	0.327899	0.019431	0.199076	0	1.339893	0.001275	0	0.00094
Santa Clara	2025	MH	Aggregate	Aggregate	Gasoline	2337.876	21506.19	21506.19	0	233.8812	0	0.37652	0	0.425905	0.001612	0	0.000388	0.003	0.015756	0.001753	0	0.000422	0.012	0.045017	1947.057	0	31.4529	0.013722	0	0.036945	0.023864	0	0.045303	0.059455	0	0.154277	11.38549	0.268831	4.357209	0.086757	0	0.168914	11.38549	0.268831	4.357209	0.044879	1.426924	0	3.382931	0.019249	0	0.000311
Santa Clara	2025	MH	Aggregate	Aggregate	Diesel	994.5437	9603.893	9603.893	0	99.45437	0	3.976372	0	0	0.086098	0	0	0.004	0.015675	0.08999	0	0	0.016	0.044785	1082.401	0	0	0.005421	0	0	0.170533	0	0	0.116701	0	0	0	0	0	0	0.132856	0	0	0	0	0.160635	0.385118	0	0	0.010256	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Gasoline	1412.263	72039.87	72039.87	0	28256.55	0	0.394798	0.086175	0.424333	0.001347	0	0.000513	0.003	0.015756	0.001465	0	0.000558	0.012	0.045017	1746.959	526.7233	45.37618	0.012585	0.261076	0.04598	0.019987	0.007219	0.032398	0.061949	1.015127	0.253154	0.030988	0.250472	2.558011	0.090397	1.481271	0.277172	0.030988	0.250472	2.558011	0.044991	1.276089	15.1444	5.531626	0.01727	0.005207	0.000449
Santa Clara	2025	MHDT	Aggregate	Aggregate	Diesel	10548.06	435100.6	435100.6	0	125915.2	0	1.128155	12.74108	1.646559	0.012461	0.024792	0	0.003	0.015941	0.013024	0.025912	0	0.012	0.045545	1141.328	2229.374	0	0.00131	0.010957	0	0.179817	0.351239	0	0.028195	0.235896	0	0	0	0	0	0.032098	0.268549	0	0	0	0	0.211891	0.109646	7.535393	0	0.010808	0.021111	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Electricity	90.80851	4838.906	0	4838.906	1182.343	5314.414	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	MHDT	Aggregate	Aggregate	Natural Ga	98.90628	4590.307	4590.307	0	911.9208	0	0.12435	6.45266	0	0.001226	0.018594	0	0.003	0.016009	0.001333	0.020223	0	0.012	0.045741	979.0142	5290.545	0	0.751438	16.97256	0	0.199578	1.078512	0	0.010737	0.242504	0	0	0	0	0	0.766898	17.32175	0	0	0	0	1.06	2.996166	35.80775	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Gasoline	430.7023	18962.49	18962.49	0	8617.491	0	0.460353	0.06398	0.405045	0.000939	0	0.000255	0.003	0.01568	0.001022	0	0.000278	0.012	0.044799	1744.286	377.0226	31.37018	0.012641	0.195762	0.035581	0.02242	0.005219	0.030806	0.061504	0.74652	0.188569	0.033827	0.158433	2.881145	0.089747	1.089321	0.206459	0.033827	0.158433	2.881145	0.044498	1.352776	5.776073	3.953891	0.017244	0.003727	0.00031
Santa Clara	2025	OBUS	Aggregate	Aggregate	Diesel	921.4116	62304.89	62304.89	0	9451.527	0	1.133246	7.151668	1.532624	0.018916	0.007596	0	0.003	0.018017	0.019772	0.007939	0	0.012	0.051478	1259.126	1532.11	0	0.001844	0.020685	0	0.198376	0.241385	0	0.039711	0.445333	0	0	0	0	0	0.045208	0.506978	0	0	0	0	0.216212	0.14449	7.587325	0	0.011923	0.014508	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Electricity	2.672031	221.771	0	221.771	53.46199	245.6884	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	OBUS	Aggregate	Aggregate	Natural Ga	8.125306	537.7468	537.7468	0	72.31523	0	0.164816	1.526623	0	0.001183	0.004157	0	0.003	0.016148	0.001287	0.004521	0	0.012	0.046137	987.912	1189.826	0	0.803903	4.103659	0	0.201392	0.242554	0	0.011486	0.058633	0	0	0	0	0	0.820442	4.188085	0	0	0	0	1.06	3.29233	7.933419	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Gasoline	178.2436	8812.851	8812.851	0	712.9742	0	0.487257	0.905562	0.722985	0.000866	0	0.000573	0.002	0.015721	0.000942	0	0.000623	0.008	0.044917	806.3455	2576.863	57.67146	0.010523	2.465929	0.074733	0.026439	0.084425	0.066434	0.051046	10.63602	0.42511	0.118631	0.292211	1.797789	0.074486	15.52005	0.465442	0.118631	0.292211	1.797789	0.045	1.308927	82.20747	10.20511	0.007972	0.025475	0.00057
Santa Clara	2025	SBUS	Aggregate	Aggregate	Diesel	673.2048	15283.75	15283.75	0	9748.005	0	3.614242	21.38359	0.496308	0.018677	0.018235	0	0.003	0.015721	0.019521	0.019059	0	0.012	0.044917	1139.829	2219.616	0	0.002583	0.007936	0	0.179581	0.349701	0	0.055601	0.170862	0	0	0	0	0	0.063298	0.194514	0	0	0	0	0.151888	0.17348	4.777291	0	0.010794	0.021018	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Electricity	4.481168	145.0761	0	145.0761	51.24766	152.8312	0	0	0	0	0	0	0.002	0.00556	0.00786	0	0	0	0.010226	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	SBUS	Aggregate	Aggregate	Natural Ga	25.28439	627.586	627.586	0	366.118	0	0.5494	5.260001	0	0.003378	0.011617	0	0.003	0.015721	0.003674	0.012635	0	0.012	0.044917	1252.115	4074.049	0	3.386209	15.12215	0	0.255252	0.830522	0	0.048382	0.216066	0	0	0	0	0	3.455875	15.43326	0	0	0	0	1.06	11.41153	21.33281	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Gasoline	46.21918	4826.658	4826.658	0	184.8767	0	0.027276	0	0.449893	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	925.8676	0	36.64281	0.001993	0	0.043054	0.004259	0	0.070843	0.005515	0	0.152699	0.04366	0.092112	0.471505	0.008047	0	0.167186	0.04366	0.092112	0.471505	0.045	0.586139	0	5.942314	0.009153	0	0.000362
Santa Clara	2025	UBUS	Aggregate	Aggregate	Diesel	405.3675	44987.37	44987.37	0	1621.47	0	0.382968	0	0	0.006962	0	0	0.008	0.03238	0.0385	0.007277	0	0	0.032951	0.11	1121.875	0	0	0.003193	0	0	0.176752	0	0	0.06875	0	0	0	0	0	0.078266	0	0	0	0	0.22	0.0787	0	0	0.01063	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Electricity	23.31202	2427.54	0	2427.54	93.24809	4231.795	0	0	0	0	0	0	0.008	0.00977	0.01925	0	0	0	0.035907	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2025	UBUS	Aggregate	Aggregate	Natural Ga	58.16247	6762.418	6762.418	0	232.6499	0	0.060506	0	0	0.000287	0	0	0.008	0.00408	0.0385	0.0003	0	0	0.033634	0.11	1317.877	0	0	4.320397	0	0	0.268658	0	0	0.06173	0	0	0	0	0	4.409282	0	0	0	0	0.97	50.3461	0	0	0	0	0

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

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNI	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2026	HHDT	Aggregate	Aggregate	Gasoline	1.890208	133.7551	133.7551	0	37.81927	0	3.912832	0	0.833967	0.00242	0	0.001119	0.005	0.0327	0.002632	0	0.001218	0.02	0.093428	2030.337	0	50.00574	0.151681	0	0.000277	0.138602	0	0.029726	0.841165	0	0.001504	0.124256	1.119044	7.839877	1.227426	0	0.001647	0.124256	1.119044	7.839877	0.044272	33.21272	0	2.727013	0.020072	0	0.000494
Santa Clara	2026	HHDT	Aggregate	Aggregate	Diesel	8867.795	1016012	1016012	0	130549	0	1.761105	62.0312	2.955473	0.025195	0.027767	0	0.008774	0.027513	0.026334	0.029023	0	0.035095	0.07861	1583.151	11526.41	0	0.000725	0.23528	0	0.249426	1.815991	0	0.015602	5.065515	0	0	0	0	0	0.017762	5.766703	0	0	0	0	0	0.215914	0.07407	73.94194	0	0.014991	0.109148	0
Santa Clara	2026	HHDT	Aggregate	Aggregate	Electricity	110.5302	11535.57	0	11535.57	1443.078	21268.51	0	0	0	0	0	0	0.008558	0.014729	0	0	0	0.034232	0.042083	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	HHDT	Aggregate	Aggregate	Natural Ga	863.4608	56635.39	56635.39	0	7769.707	0	0.976371	12.77067	0	0.001645	0.025604	0	0.0099	0.049192	0.001789	0.027847	0	0.036	0.140547	1365.074	10446.87	0	2.127999	33.90059	0	0.278279	2.129663	0	0.043949	0.508241	0	0	0	0	0	0.218721	34.62523	0	0	0	0	0	0.835034	12.62839	75.02016	0	0	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Gasoline	598869.8	22031466	22031466	0	2780456	0	0.034968	0	0.23463	0.001102	0	0.001828	0.002	0.002655	0.001199	0	0.001988	0.008	0.007585	268.3766	0	67.64288	0.001934	0	0.063951	0.004196	0	0.031426	0.007138	0	0.285908	0.083161	0.217573	1.338275	0.019415	0	0.313033	0.083161	0.217573	1.338275	0.036474	0.693808	0	2.884139	0.002653	0	0.000669
Santa Clara	2026	LDA	Aggregate	Aggregate	Diesel	1478.944	42434.32	42434.32	0	6277.405	0	0.163286	0	0	0.013397	0	0	0	0.002717	0.014003	0	0	0.008	0.007761	228.026	0	0	0.001079	0	0	0.035926	0	0	0.023239	0	0	0.026457	0	0	0	0	0	0	0	0	0	0.0031	0.307439	0	0	0.002161	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Electricity	64495.24	2739705	0	2739705	312996.4	1057752	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDA	Aggregate	Aggregate	Plug-in Hyb	20380.43	866414.1	412496.8	453917.3	84273.1	137096.6	0.003124	0	0.11551	0.000542	0	0.001902	0.002	0.001386	0.000589	0	0.002068	0.008	0.00396	132.7519	0	64.33622	0.000421	0	0.042044	0.000552	0	0.020392	0.001351	0	0.173285	0.040391	0.037456	0.436203	0.019017	0.204877	0	0.189725	0.040391	0.037456	0.436203	0.019017	0.204877	0	1.339893	0.001312	0	0.000636
Santa Clara	2026	LDT1	Aggregate	Aggregate	Gasoline	50750.47	1625960	1625960	0	225981.5	0	0.104002	0	0.340042	0.001548	0	0.002421	0.002	0.003241	0.001684	0	0.002633	0.008	0.009261	319.1884	0	83.2086	0.005058	0	0.092241	0.008041	0	0.036412	0.022051	0	0.461638	0.148727	0.41724	2.377298	0.032177	0	0.505436	0.148727	0.41724	2.377298	0.036833	1.219346	0	4.549174	0.003156	0	0.000823
Santa Clara	2026	LDT1	Aggregate	Aggregate	Diesel	18.47771	256.5587	256.5587	0	50.46	0	1.626008	0	0	0.235786	0	0	0	0.003714	0.246448	0	0	0.008	0.010612	414.3219	0	0	0.013655	0	0	0.065277	0	0	0.293995	0	0	0	0	0	0	0.334693	0	0	0	0	0	0.0031	1.580267	0	0	0.003926	0	0
Santa Clara	2026	LDT1	Aggregate	Aggregate	Electricity	263.5822	10628.88	0	10628.88	1254.204	4103.625	0	0	0	0	0	0	0.002	0.001536	0	0	0	0.008	0.004388	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDT1	Aggregate	Aggregate	Plug-in Hyb	130.6819	5898.082	2516.052	3382.03	540.3696	1021.474	0.002799	0	0.11551	0.000332	0	0.001311	0.002	0.001397	0.000362	0	0.001426	0.008	0.003992	118.9473	0	69.43161	0.000375	0	0.041793	0.000489	0	0.020158	0.00121	0	0.173285	0.023415	0.020044	0.275174	0.001766	0	0.189725	0.023415	0.020044	0.275174	0.017917	0.183572	0	1.339893	0.001176	0	0.000686
Santa Clara	2026	LDT2	Aggregate	Aggregate	Gasoline	296178.9	10561285	10561285	0	1383934	0	0.057197	0	0.297788	0.00115	0	0.001868	0.002	0.003134	0.00125	0	0.002032	0.008	0.008953	332.1248	0	84.47809	0.002453	0	0.074444	0.005294	0	0.035027	0.009395	0	0.338458	0.076755	0.212879	1.330363	0.013709	0	0.370569	0.076755	0.212879	1.330363	0.037798	0.757265	0	3.299571	0.003283	0	0.000835
Santa Clara	2026	LDT2	Aggregate	Aggregate	Diesel	1079.589	39200.14	39200.14	0	5104.36	0	0.037108	0	0	0.004598	0	0	0	0.002	0.00313	0.004806	0	0	0.008	0.008943	302.0718	0	0	0.000595	0	0	0.047592	0	0	0.012807	0	0	0	0	0	0	0.014558	0	0	0	0	0	0.0031	0.12935	0	0	0.002862	0	0
Santa Clara	2026	LDT2	Aggregate	Aggregate	Electricity	2705.079	90693.22	0	90693.22	13682.37	35015.07	0	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	LDT2	Aggregate	Aggregate	Plug-in Hyb	2986.353	127896.3	57308.29	70587.98	12348.57	21319.68	0.00294	0	0.11551	0.000411	0	0.00154	0.002	0.001392	0.000447	0	0.001675	0.008	0.003978	124.9411	0	76.35739	0.000394	0	0.041776	0.000513	0	0.020142	0.001271	0	0.173285	0.025698	0.023308	0.30414	0.001855	0	0.189725	0.025698	0.023308	0.30414	0.018799	0.192822	0	1.339893	0.001235	0	0.000755
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Gasoline	19567.35	734252.9	734252.9	0	291524.3	0	0.134825	0.034078	0.592259	0.00144	0	0.000258	0.002	0.0273	0.0015	0	0.00028	0.008	0.078	841.5517	116.9335	25.61185	0.00645	0.107779	0.030306	0.00767	0.002904	0.048837	0.03157	0.390607	0.14863	0.042429	0.244239	2.568634	0.046067	0.569973	0.162731	0.042429	0.244239	2.568634	0.044952	1.000325	3.761042	3.194844	0.00832	0.001156	0.000253
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Diesel	10635.31	416619.3	416619.3	0	133778.8	0	1.219281	1.732484	0	0.030022	0.026603	0	0.003	0.0273	0.031379	0.027806	0	0.012	0.078	625.228	128.0664	0	0.006994	0.005098	0	0.098505	0.020177	0	0.150578	0.10976	0	0	0	0	0	0.171423	0.124954	0	0	0	0	0.184377	0.40172	0.909745	0	0.005924	0.001213	0
Santa Clara	2026	LHDT1	Aggregate	Aggregate	Electricity	378.0593	23974.57	0	23974.57	5290.738	15701.21	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	2026	LHDT2	Aggregate	Aggregate	Gasoline	2513.651	91174.03	91174.03	0	37449.66	0	0.127191	0.033359	0.581518	0.001301	0	0.0002	0.002	0.03185	0.001415	0	0.000218	0.008	0.091	950.6797	135.3583	25.11699	0.00457	0.105616	0.029314	0.007823	0.002803	0.047205	0.020413	0.382638	0.142338	0.039798	0.221425	2.401547	0.029786	0.558345	0.155842	0.039798	0.221425	2.401547	0.04499	0.781956	3.768092	3.147796	0.009398	0.001338	0.000248
Santa Clara	2026	LHDT2	Aggregate	Aggregate	Diesel	4995.258	193100.7	193100.7	0	62834.06	0	1.030069	1.717944	0	0.028773	0.027014	0	0.003	0.03185	0.030074	0.028235	0	0.012	0.091	744.6842	205.1133	0	0.00672	0.005098	0	0.117325	0.032316	0	0.146681	0.10976	0	0	0	0	0	0.16471	0.124954	0	0	0	0	0.19232	0.367309	0.909745	0	0.007056	0.001944	0
Santa Clara	2026	LHDT2	Aggregate	Aggregate	Electricity	96.38373	5822.064	0	5822.064	1278.565	3755.595	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	2026	MCY	Aggregate	Aggregate	Gasoline	28797.04	167092.5	167092.5	0	57594.08	0	0.54585	0	0.123182	0.001818	0	0.003256	0.001	0.0042	0.001945	0	0.00347	0.004	0.012	186.8446	0	46.30646	0.154451	0	0.172746	0.038475	0	0.007381	0.991178	0	1.267526	3.558543	3.769688	3.854231	1.200425	0	1.378329	3.558543	3.769688	3.854231	0.008889	11.99329	0	7.931677	0.001847	0	0.000458
Santa Clara	2026	MDV	Aggregate	Aggregate	Gasoline	162557.9	5631323	5631323	0	753924.4	0	0.077249	0	0.361249	0.00113	0	0.001888	0.002	0.003182	0.001228	0	0.002053	0.008	0.00909	402.7076	0	102.7358	0.003084	0	0.087398	0.006351	0	0.037495	0.012544	0	0.424623	0.087977	0.255029	1.559913	0.018304	0	0.464909	0.087977	0.255029	1.559913	0.037518	0.838043	0	3.531694	0.003981	0	0.001016
Santa Clara	2026	MDV	Aggregate	Aggregate	Diesel	2430.299	84111.54	84111.54	0	11337.22	0	0.040802	0	0	0.004381	0	0	0.002	0.003241	0.004579	0	0	0.008	0.009261	399.673	0	0	0.000469	0	0	0.062969	0	0	0.010103	0	0	0	0	0	0	0.011502	0	0	0	0	0	0.0031	0.197458	0	0	0.003787	0	0
Santa Clara	2026	MDV	Aggregate	Aggregate	Electricity	2850.956	95858.35	0	95858.35	14435.41	37009.23	0	0	0	0	0	0	0.002	0.001528	0	0	0	0.008	0.004365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	MDV	Aggregate	Aggregate	Plug-in Hyb	1813.351	74577.72	33714.26	40863.46	7498.208	12341.98	0.002966	0	0.11551	0.000463	0	0.001713	0.002	0.001392	0.000504	0	0.001863	0.008	0.003977	126.0521	0	93.79299	0.000396	0	0.041612	0.000513	0	0.019989	0.001283	0	0.173285	0.029908	0.026996	0.337381	0.001872	0	0.189725	0.029908	0.026996	0.337381	0.018987	0.194537	0	1.339893	0.001246	0	0.000927
Santa Clara	2026	MH	Aggregate	Aggregate	Gasoline	2263.186	21108.38	21108.38	0	226.4092	0	0.335195	0	0.432131	0.001549	0	0.000374	0.003	0.015756	0.001685	0	0.000406	0.012	0.045017	1946.632	0	31.26805	0.012049	0	0.036404	0.022132	0	0.046519	0.050974	0	0.149854	10.64717	0.254614	4.131655	0.074381	0	0.164071	10.64717	0.254614	4.131655	0.044921	1.181993	0	3.275797	0.019244	0	0.000309
Santa Clara	2026	MH	Aggregate	Aggregate	Diesel	1010.774	9718.417	9718.417	0	101.0774	0	3.846579	0	0	0.08072	0	0	0.004	0.015675	0.084369	0	0	0.016	0.044785	1082.849	0	0	0.005293	0	0	0.170603	0	0	0.11395	0	0	0	0	0	0	0.129725	0	0	0	0	0	0.16529	0.373655	0	0	0.010261	0	0
Santa Clara	2026	MHDT	Aggregate	Aggregate	Gasoline	1410.726	72468.64	72468.64	0	28225.8	0	0.333028	0.083566	0.407845	0.001339	0	0.000499	0.003	0.015756	0.001457	0	0.000542	0.012	0.045017	1727.179	521.8124	44.55752	0.010627	0.263675	0.044579	0.017598	0.007127	0.032029	0.051634	1.01721	0.242322	0.028744	0.236552	2.400687	0.073545	1.48431	0.265312	0.028744	0.236552	2.400687	0.044997	1.050142	15.1686	5.262786	0.017075	0.005159	0.00044
Santa Clara	2026	MHDT	Aggregate	Aggregate	Diesel	10675.11	435455.4	435455.4	0	127504.2	0	1.02886	12.38939	1.644141	0.010796	0.020382	0	0.003	0.015941	0.011284	0.021304	0	0.012	0.045545	1134.952	2210.329	0	0.001134	0.010419	0	0.178812	0.348238	0	0.024422	0.224312	0	0	0	0	0	0.027803	0.255363	0	0	0	0	0.213113	0.099563	7.520816	0	0.010747	0.02093	0
Santa Clara	2026	MHDT	Aggregate	Aggregate	Electricity	167.5841	8816.663	0	8816.663	2173.174	9651.078	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	2026	MHDT	Aggregate	Aggregate	Natural Ga	107.6314	4901.771	4901.771	0	1001.682	0	0.116472	6.407029	0	0.001266	0.018977	0	0.003	0.01601	0.001377	0.020639	0	0.012	0.045743	973.703	5277.958	0	0.755705	16.66564	0	0.198496	1.075946	0	0.010798	0.238119	0	0	0	0	0	0.771252	17.00851	0	0	0	0	1.06	2.995274	36.69576	0	0	0	0
Santa Clara	2026	OBUS	Aggregate	Aggregate	Gasoline	419.1997	18162.11	18162.11	0	8387.348	0	0.418185	0.062602	0.399155	0.00097	0	0.000258	0.003	0.01568	0.001055	0	0.000281	0.012	0.044799	1724.911	374.6239	31.08783	0.011431	0.195819	0.035179	0.020728	0.005108	0.030453	0.055331	0.746751	0.186435	0.035194	0.177337	3.200029	0.080739	1.089657	0.204123	0.035194	0.177337	3.200029	0.044499	1.215872	5.777453	3.882011	0.017053	0.003704	0.000307
Santa Clara	2026	OBUS	Aggregate	Aggregate	Diesel	949.0452	62674.48	62674.48	0	9750.025	0	1.092349	6.912226	1.518478	0.018173	0.007147	0	0.003	0.018049	0.018995	0.00747	0	0.012	0.05157	1245.043	1523.794	0	0.001766	0.020826	0	0.196157	0.240074	0	0.038011	0.448385	0	0	0	0	0	0.043273	0.510453	0	0	0	0	0.216379	0.139488	7.649271	0	0.01179	0.014429	0
Santa Clara	2026	OBUS	Aggregate	Aggregate	Electricity	4.484159	364.7881	0	364.7881	89.71906	404.1294	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	2026	OBUS	Aggregate	Aggregate	Natural Ga	9.101244	599.9791	599.9791	0	81.00107	0	0.145347	1.518344	0	0.001276	0.004354	0	0.003	0.016148	0.001388	0.004735	0	0.012	0.046137	975.0003	1187.914	0	0.81456	4.001439	0	0.19876	0.242164	0	0.011638	0.057173	0	0	0	0	0	0.831318	4.083762	0	0	0	0	1.06	3.321042	8.378673	0	0	0	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Gasoline	183.7933	9054.551	9054.551	0	735.1732	0	0.474165	0.887577	0.73371	0.000873	0	0.00058	0.002	0.015721	0.00095	0	0.000631	0.008	0.044917	802.4349	2565.528	57.27504	0.01005	2.4667	0.074539	0.025921	0.082658	0.067212	0.048718	10.63718	0.423572	0.1241	0.322638	1.96833	0.07109	15.52175	0.463758	0.1241	0.322638	1.96833	0.045	1.246814	82.21455	10.07789	0.007933	0.025363	0.000566
Santa Clara	2026	SBUS	Aggregate	Aggregate	Diesel	674.9981	15210.89	15210.89	0	9773.973	0	3.406071	20.83077	0.509343	0.017715	0.016839	0	0.003	0.015721	0.018516	0.017601	0	0.012	0.044917	1135.538	2209.663	0	0.002498	0.007888	0	0.178905	0.348133	0	0.053781	0.169828	0	0	0	0	0	0.061225	0.193336	0	0	0	0	0.155771	0.169257	4.880858	0	0.010753	0.020924	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Electricity	7.587222	244.2395	0	244.2395	87.39442	257.2955	0	0	0	0	0	0	0.002	0.00786	0	0	0	0.01027	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	SBUS	Aggregate	Aggregate	Natural Ga	26.16468	642.5523	642.5523	0	378.8645	0	0.532059	5.249897	0	0.003378	0.011858	0	0.003	0.015721	0.003674	0.012897	0	0.012	0.044917	1243.421	4080.833	0	3.338467	14.99739	0	0.25348	0.831904	0	0.0477	0.214283	0	0	0	0	0	3.407151	15.30593	0	0	0	0	1.06	11.18687	21.87624	0	0	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Gasoline	46.35522	4840.865	4840.865	0	185.4209	0	0.026897	0	0.439741	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	925.6516	0	36.30949	0.001945	0	0.042807	0.004209	0	0.069602	0.005374	0	0.151507	0.043604	0.092107	0.471119	0.007841	0	0.165881	0.043604	0.092107	0.471119	0.045	0.590355	0	5.738214	0.009151	0	0.000359
Santa Clara	2026	UBUS	Aggregate	Aggregate	Diesel	396.77	44084.04	44084.04	0	1587.08	0	0.382074	0	0	0.006946	0	0	0.002	0.03185	0.008221	0.0385	0.00726	0	0.032883	0.11	1310.339	0	0.003187	0	0	0.174934	0	0	0.068625	0	0	0	0	0	0	0.078125	0	0	0	0	0	0.22	0.078518	0	0	0.010521	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Electricity	28.65959	2995.558	0	2995.558	114.6384	5221.989	0	0	0	0	0	0	0.008972	0.01925	0	0	0	0.035887	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2026	UBUS	Aggregate	Aggregate	Natural Ga	62.84535	7257.192	7257.192	0	251.3814	0	0.060787	0	0	0.000288	0	0	0.008445	0.0385	0.000301	0	0	0.033781	0.11	1320.935	0	0	4.332576	0	0	0.269281	0	0	0.061904	0	0	0	0	0	0	0.421712	0	0	0	0	0	0.97	50.5588	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_TIR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2027	HHDT	Aggregate	Aggregate	Gasoline	1.833105	147.0378	147.0378	0	36.67677	0	3.730042	0	0.773498	0.002199	0	0.001027	0.005	0.032692	0.002391	0	0.001117	0.02	0.093405	2000.505	0	49.66925	0.135639	0	0.000268	0.136273	0	0.02867	0.73131	0	0.001453	0.11326	1.019783	7.147336	1.067126	0	0.001591	0.11326	1.019783	7.147336	0.044505	30.82312	0	3.048179	0.019777	0	0.000491
Santa Clara	2027	HHDT	Aggregate	Aggregate	Diesel	9011.071	1021241	1021241	0	132754.8	0	1.704043	61.72079	2.958034	0.025062	0.026785	0	0.008776	0.027672	0.026195	0.027996	0	0.035105	0.079063	1556.123	11312.44	0	0.000701	0.234878	0	0.245168	1.782279	0	0.015102	5.056861	0	0	0	0	0	0.017193	5.756851	0	0	0	0	0.216628	0.070456	73.92424	0	0.014736	0.107122	0
Santa Clara	2027	HHDT	Aggregate	Aggregate	Electricity	177.8052	18594.17	0	18594.17	2312.242	34279.09	0	0	0	0	0	0	0.008561	0.015051	0	0	0	0.034243	0.043002	0	0	0	0	0	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	2027	HHDT	Aggregate	Aggregate	Natural Ga	889.1692	57261.81	57261.81	0	7941.659	0	0.907136	12.38898	0	0.001615	0.025966	0	0.009	0.049992	0.001756	0.028241	0	0.036	0.142836	1353.997	10371.37	0	2.019211	32.72582	0	0.276021	2.114271	0	0.040872	0.488388	0	0	0	0	0	0.827361	12.24575	75.28309	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2027	LDA	Aggregate	Aggregate	Gasoline	599340.5	21995339	21995339	0	2782742	0	0.032349	0	0.225312	0.001054	0	0.001765	0.002	0.002654	0.001146	0	0.001919	0.008	0.007584	263.8358	0	66.33426	0.001782	0	0.060463	0.004024	0	0.030664	0.009466	0	0.267784	0.080009	0.214602	1.316821	0.037295	0.628802	0	2.737589	0.002608	0	0.000656
Santa Clara	2027	LDA	Aggregate	Aggregate	Diesel	1347.748	38343.79	38343.79	0	5721.586	0	0.140881	0	0	0.011715	0	0	0.002	0.00272	0.012244	0	0	0.008	0.007772	225.3761	0	0	0.000974	0	0	0.035508	0	0	0.020977	0	0	0	0	0	0	0.023881	0	0	0	0	0	0.00231	0.295578	0	0	0.002136	0	0
Santa Clara	2027	LDA	Aggregate	Aggregate	Electricity	67294.12	2805164	0	2805164	324882.8	1083025	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004387	0	0	0	0	0	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	2027	LDA	Aggregate	Aggregate	Plug-in Hyb	21617.53	903738.3	422627.3	481111	89388.5	145309.9	0.003069	0	0.11551	0.000505	0	0.001811	0.002	0.001389	0.000549	0	0.00197	0.008	0.00397	130.3968	0	63.69406	0.000412	0	0.041864	0.000538	0	0.020225	0.001327	0	0.173285	0.041139	0.041737	0.463414	0.018819	0.201249	0	1.339893	0.001289	0	0.00063
Santa Clara	2027	LDT1	Aggregate	Aggregate	Gasoline	49888.15	1593479	1593479	0	222126.9	0	0.093626	0	0.322281	0.001455	0	0.002295	0.002	0.003241	0.001582	0	0.002496	0.008	0.009259	314.3854	0	81.55325	0.004547	0	0.086445	0.007451	0	0.035413	0.019635	0	0.427723	0.140959	0.397237	2.286124	0.028652	0	0.468303	0.140959	0.397237	2.286124	0.037251	1.12869	0	4.23978	0.003108	0	0.000806
Santa Clara	2027	LDT1	Aggregate	Aggregate	Diesel	6.227876	90.54084	90.54084	0	17.39549	0	1.298199	0	0	0.195794	0	0	0.002	0.003665	0.204647	0	0	0.008	0.010473	394.8653	0	0	0.011321	0	0	0.062211	0	0	0.243739	0	0	0	0	0	0	0.27748	0	0	0	0	0	0.0031	1.74279	0	0	0.003742	0	0
Santa Clara	2027	LDT1	Aggregate	Aggregate	Electricity	300.4983	12309.71	0	12309.71	1437.605	4752.566	0	0	0	0	0	0	0.002	0.001535	0	0	0	0.008	0.004385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2027	LDT1	Aggregate	Aggregate	Plug-in Hyb	168.315	7479.707	3153.075	4326.632	695.9826	1306.772	0.002766	0	0.11551	0.000305	0	0.001223	0.002	0.0014	0.000332	0	0.00133	0.008	0.003999	117.5444	0	68.77997	0.000369	0	0.041651	0.00048	0	0.020025	0.001196	0	0.173285	0.023215	0.020021	0.275602	0.001745	0	0.189725	0.023215	0.020021	0.275602	0.017705	0.181413	0	1.339893	0.001162	0	0.00068
Santa Clara	2027	LDT2	Aggregate	Aggregate	Gasoline	301290.3	10685987	10685987	0	1406457	0	0.052589	0	0.283866	0.001098	0	0.001802	0.002	0.003137	0.001194	0	0.00196	0.008	0.008963	326.5481	0	82.86482	0.002292	0	0.07083	0.005044	0	0.034203	0.008665	0	0.319239	0.07425	0.209956	1.308636	0.012643	0	0.349526	0.07425	0.209956	1.308636	0.038412	0.725393	0	3.150133	0.003228	0	0.000819
Santa Clara	2027	LDT2	Aggregate	Aggregate	Diesel	1103.123	39708.7	39708.7	0	5205.703	0	0.033914	0	0	0.004292	0	0	0.002	0.003135	0.004487	0	0	0.008	0.008958	297.5211	0	0	0.000577	0	0	0.046875	0	0	0.012423	0	0	0	0	0	0	0.014142	0	0	0	0	0	0.0031	0.127877	0	0	0.002819	0	0
Santa Clara	2027	LDT2	Aggregate	Aggregate	Electricity	3306.06	108939.5	0	108939.5	16647.44	42059.66	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.004368	0	0	0	0	0	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	2027	LDT2	Aggregate	Aggregate	Plug-in Hyb	3429.213	144081.9	63603.3	80478.56	14179.8	24306.92	0.002897	0	0.11551	0.000381	0	0.001463	0.002	0.001395	0.000414	0	0.001581	0.008	0.003987	123.0899	0	75.68447	0.000386	0	0.0416	0.000501	0	0.019977	0.001253	0	0.173285	0.025755	0.022981	0.300816	0.001828	0	0.189725	0.025755	0.022981	0.300816	0.018524	0.189972	0	1.339893	0.001217	0	0.000748
Santa Clara	2027	LHDT1	Aggregate	Aggregate	Gasoline	19670.43	736983.5	736983.5	0	293060.1	0	0.118942	0.033105	0.571033	0.001405	0	0.000239	0.002	0.0273	0.001528	0	0.00026	0.008	0.078	829.449	115.9534	25.51381	0.005601	0.105399	0.029155	0.00682	0.002869	0.047788	0.026962	0.379506	0.142236	0.03999	0.233145	2.457411	0.039343	0.553775	0.15573	0.03999	0.233145	2.457411	0.044981	0.93654	3.763109	3.224747	0.0082	0.001146	0.000252
Santa Clara	2027	LHDT1	Aggregate	Aggregate	Diesel	10848.44	422662.3	422662.3	0	136459.7	0	1.08439	1.64968	0	0.028062	0.026509	0	0.003	0.0273	0.029331	0.027708	0	0.012	0.078	622.7952	126.7206	0	0.006587	0.005098	0	0.098122	0.019965	0	0.141815	0.10976	0	0	0	0	0	0.161447	0.124954	0	0	0	0	0.188998	0.373722	0.909745	0	0.005901	0.001201	0	0
Santa Clara	2027	LHDT1	Aggregate	Aggregate	Electricity	649.0881	39875.83	0	39875.83	9086.427	26117.1	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	2027	LHDT2	Aggregate	Aggregate	Gasoline	2509.546	90648.2	90648.2	0	37388.49	0	0.111653	0.032331	0.561944	0.001268	0	0.000185	0.002	0.03185	0.00138	0	0.000201	0.008	0.091	938.4469	134.3401	24.9353	0.003988	0.102929	0.028094	0.007002	0.002754	0.046144	0.017533	0.370918	0.135504	0.037689	0.212342	2.320101	0.025583	0.541243	0.14836	0.037689	0.212342	2.320101	0.044994	0.742979	3.770326	3.155517	0.009278	0.001328	0.000247
Santa Clara	2027	LHDT2	Aggregate	Aggregate	Diesel	5135.734	196396.2	196396.2	0	64601.07	0	0.939745	1.642203	0	0.027496	0.027012	0	0.003	0.03185	0.028739	0.028234	0	0.012	0.091	739.7686	203.2066	0	0.006444	0.005098	0	0.116551	0.032015	0	0.13873	0.10976	0	0	0	0	0	0.157935	0.124954	0	0	0	0	0.195561	0.350532	0.909745	0	0.00701	0.001925	0	0
Santa Clara	2027	LHDT2	Aggregate	Aggregate	Electricity	164.9398	9665.772	0	9665.772	2187.868	6234.965	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	2027	MCY	Aggregate	Aggregate	Gasoline	29075.8	167761.7	167761.7	0	58151.6	0	0.535092	0	0.117492	0.00183	0	0.003236	0.001	0.0042	0.001959	0	0.003451	0.004	0.012	186.4654	0	45.31465	0.151026	0	0.168253	0.038022	0	0.007087	0.961131	0	1.228813	3.558844	3.781493	3.845178	1.168054	0	1.336388	3.558844	3.781493	3.845178	0.008923	11.71041	0	7.90164	0.001843	0	0.000448
Santa Clara	2027	MDV	Aggregate	Aggregate	Gasoline	165596	5720178	5720178	0	767968.9	0	0.06839	0	0.336026	0.001074	0	0.001805	0.002	0.003182	0.001168	0	0.001963	0.008	0.009092	395.7552	0	100.7218	0.002795	0	0.081565	0.005877	0	0.036232	0.011189	0	0.391	0.084223	0.248249	1.520956	0.016327	0	0.428096	0.084223	0.248249	1.520956	0.038107	0.790051	0	3.34381	0.003912	0	0.000996
Santa Clara	2027	MDV	Aggregate	Aggregate	Diesel	2435.715	83100.92	83100.92	0	11312.15	0	0.036863	0	0	0.004069	0	0	0.002	0.003253	0.004253	0	0	0.008	0.009296	394.7915	0	0	0.000446	0	0	0.0622	0	0	0.009604	0	0	0	0	0	0	0.010934	0	0	0	0	0	0.0031	0.194438	0	0	0.003741	0	0
Santa Clara	2027	MDV	Aggregate	Aggregate	Electricity	3455.571	113998.9	0	113998.9	17408.95	44012.98	0	0	0	0	0	0	0.002	0.001529	0	0	0	0.008	0.004368	0	0	0	0	0	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	2027	MDV	Aggregate	Aggregate	Plug-in Hyb	2094.107	84934.84	37715.29	47219.56	8659.133	14261.71	0.002914	0	0.11551	0.000422	0	0.001593	0.002	0.001395	0.000459	0	0.001732	0.008	0.003987	123.818	0	92.75106	0.000387	0	0.041448	0.0005	0	0.019836	0.00126	0	0.173285	0.029525	0.02765	0.340516	0.001839	0	0.189725	0.029525	0.02765	0.340516	0.01865	0.191096	0	1.339893	0.001224	0	0.000917
Santa Clara	2027	MH	Aggregate	Aggregate	Gasoline	2196.554	20762.47	20762.47	0	2192.7432	0	0.298167	0	0.437987	0.001494	0	0.00036	0.003	0.015756	0.001625	0	0.000392	0.012	0.045017	1946.251	0	31.10334	0.010537	0	0.035941	0.020581	0	0.047644	0.043279	0	0.146043	9.869053	0.237897	3.909775	0.063153	0	0.159898	9.869053	0.237897	3.909775	0.044964	0.962497	0	3.180054	0.019241	0	0.000307
Santa Clara	2027	MH	Aggregate	Aggregate	Diesel	1025.714	9821.237	9821.237	0	102.5714	0	3.725695	0	0	0.075744	0	0	0.004	0.015675	0.079169	0	0	0.016	0.044785	1083.28	0	0	0.005175	0	0	0.170671	0	0	0.111405	0	0	0	0	0	0	0.126828	0	0	0	0	0	0.169608	0.362991	0	0	0.010265	0	0
Santa Clara	2027	MHDT	Aggregate	Aggregate	Gasoline	1408.047	72579.6	72579.6	0	28178.21	0	0.283838	0.08115	0.393455	0.001336	0	0.000488	0.003	0.015756	0.001453	0	0.000531	0.012	0.045017	1709.11	517.1016	43.80548	0.009103	0.265767	0.043342	0.015723	0.007017	0.031676	0.04359	1.018957	0.232679	0.026764	0.221698	2.268825	0.063606	1.48686	0.254754	0.026764	0.221698	2.268825	0.045	0.873344	15.1889	5.024018	0.016896	0.005112	0.000433
Santa Clara	2027	MHDT	Aggregate	Aggregate	Diesel	10767.26	434295.5	434295.5	0	128657.2	0	0.939446	12.08814	1.635782	0.009401	0.016812	0	0.003	0.015941	0.009826	0.017572	0	0.012	0.045545	1128.563	2191.462	0	0.000987	0.009987	0	0.177806	0.345266	0	0.021244	0.215016	0	0	0	0	0	0.024185	0.244779	0	0	0	0	0.214146	0.090922	7.512068	0	0.010687	0.020752	0	0
Santa Clara	2027	MHDT	Aggregate	Aggregate	Electricity	282.6209	14714.25	0	14714.25	3656.161	16080.41	0	0	0	0	0	0	0.003	0.00795	0	0	0	0.012	0.022715	0	0	0	0	0	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	2027	MHDT	Aggregate	Aggregate	Natural Ga	116.0954	5192.025	5192.025	0	1091.191	0	0.109888	6.361962	0	0.001299	0.019267	0	0.003	0.016009	0.001413	0.020955	0	0.012	0.045741	968.913	5260.482	0	0.758684	16.39433	0	0.197519	1.072384	0	0.01084	0.234243	0	0	0	0	0	0.774293	16.73162	0	0	0	0	1.06	2.994053	37.37847	0	0	0	0
Santa Clara	2027	OBUS	Aggregate	Aggregate	Gasoline	407.8269	17375.97	17375.97	0	8159.8	0	0.387611	0.061312	0.399202	0.001003	0	0.000264	0.003	0.01568	0.001091	0	0.000287	0.012	0.044799	1706.278	372.2847	30.84881	0.010578	0.195621	0.034722	0.019382	0.004991	0.030332	0.051093	0.746785	0.184017	0.035247	0.182391	3.280727	0.074554	1.089707	0.201475	0.035247	0.182391	3.280727	0.04499	1.115566	5.777658	3.835425	0.016868	0.00368	0.000305
Santa Clara	2027	OBUS	Aggregate	Aggregate	Diesel	975.8726	63044.62	63044.62	0	10038.86	0	1.057611	6.690487	1.502438	0.017399	0.006668	0	0.003	0.018093	0.018186	0.006697	0	0.012	0.051694	1229.962	1514.616	0	0.001687	0.020933	0	0.193781	0.238628	0	0.036317	0.450692	0	0	0	0	0	0.041344	0.513079	0	0	0	0	0.216551	0.134702	7.701933	0	0.011647	0.014343	0	0
Santa Clara	2027	OBUS	Aggregate	Aggregate	Electricity	7.148004	573.2173	0	573.2173	143.0173	635.037	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	2027	OBUS	Aggregate	Aggregate	Natural Ga	10.00472	655.306	655.306	0	89.042	0	0.130414	1.511841	0	0.001347	0.004509	0	0.003	0.016148	0.001465	0.004904	0	0.012	0.046137	962.0387	1183.268	0	0.822734	3.921152	0	0.196118	0.241217	0	0.011755	0.056026	0	0	0	0	0	0.839661	4.001823	0	0	0	0	1.06	3.343066	8.72839	0	0	0	0
Santa Clara	2027	SBUS	Aggregate	Aggregate	Gasoline	188.5987	9259.272	9259.272	0	754.3948	0	0.450353	0.871777	0.740409	0.000875	0	0.000586	0.002	0.015721	0.000952	0	0.000637	0.008	0.044917	798.7707	2554.986	56.83783	0.009468	2.468092	0.07398	0.025075	0.081195	0.067806	0.045802	10.63953	0.419588	0.124616	0.336253	2.048577	0.066835	15.52518	0.459397	0.124616	0.336253	2.048577	0.045	1.177716	82.22881	9.921963	0.007897	0.025259	0.000562
Santa Clara	2027	SBUS	Aggregate	Aggregate	Diesel	674.8268	15110.62	15110.62	0	9771.491	0	3.20468	20.2361	0.521414	0.016822	0.015508	0	0.003	0.015721	0.017582	0.016209	0	0.012	0.044917	1131.356	2199.096	0	0.002413	0.007856	0	0.178246	0.346468	0	0.05196	0.169144	0	0	0	0	0	0.059153	0.192557	0	0	0	0	0.159585	0.164971	4.989511	0	0.010713	0.020824	0	0
Santa Clara	2027	SBUS	Aggregate	Aggregate	Electricity	12.30338	395.5247	0	395.5247	141.8818	416.6678	0	0	0	0	0	0	0.003	0.00257	0.00786	0	0	0	0.010282	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	2027	SBUS	Aggregate	Aggregate	Natural Ga	27.00068	655.8362	655.8362	0	390.9698	0	0.516279	5.240894	0	0.003378	0.012073	0	0.003	0.015721	0.003674	0.01313	0	0.012	0.044917	1235.508	4086.873	0	3.295023	14.88623	0	0.251866	0.833136	0	0.047079	0.212695	0	0	0	0	0	0.362812	15.19249	0	0	0	0	1.06	10.98242	22.36041	0	0	0	0
Santa Clara	2027	UBUS	Aggregate	Aggregate	Gasoline	46.49126	4855.072	4855.072	0	185.9651	0	0.026613	0	0.433152	0.001143	0	0.000128	0.002	0.03185	0.001244	0	0.00014	0.008	0.091	925.4384	0	36.07215	0.001903	0	0.042735	0.004171	0	0.068782	0.005254	0	0.151018	0.054894	0.139449	0.729049	0.007666	0	0.165346	0.054894	0.139449	0.729049	0.045	0.595487	0	5.593095	0.009149	0	0.000357
Santa Clara	2027	UBUS	Aggregate	Aggregate	Diesel	397.2804	44140.83	44140.83	0	1589.121	0	0.382078	0	0	0.006946	0	0	0.008	0.08221	0.0385	0.00726	0	0	0.032883	0.11	1110.45	0	0	0.003187	0	0	0.174952	0	0	0.068626	0	0	0	0	0	0.078125	0	0	0	0	0	0.22	0.078519	0	0	0.010522	0	0
Santa Clara	2027	UBUS	Aggregate	Aggregate	Electricity	29.37609	3075.292	0	3075.292	117.5043	5360.985	0	0	0	0	0	0	0.008	0.08954	0.01925	0	0	0	0.035816	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	2027	UBUS	Aggregate	Aggregate	Natural Ga	63.05154	7280.138	7280.138	0	252.2062	0	0.060784	0	0	0.000288	0	0	0.008445	0.0385	0.000301	0	0	0	0.03378	0.11	1320.896	0	0	4.332417	0	0	0.269273	0	0	0.061902	0	0	0	0	0	0.442149	0	0	0	0	0	0.97	50.55602	0	0	0	0	0

Attachment 4: Project Construction Emissions and Health Risk Calculations

Diridon DuPont Residential - San Jose Construction Emissions

Land Use	Year	Unmitigated DPM	DPM EMFAC2021	Unmitigated Emissions	Unmitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions
Building A	2023	0.108	0.003	0.110	0.108	0.003	0.111
	2024	0.036	0.001	0.037	0.000	0.002	0.002
Building B	2025	0.084	0.003	0.086	0.108	0.004	0.111
	2026	0.031	0.001	0.032	0.000	0.002	0.002

Land Use	Year	Mitigated DPM	DPM EMFAC2021	Mitigated Emissions	Mitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Mitigated Emissions
Building A	2023	0.011	0.003	0.014	0.049	0.003	0.052
	2024	0.005	0.001	0.006	0.000	0.002	0.002
Building B	2025	0.011	0.003	0.014	0.049	0.004	0.052
	2026	0.005	0.001	0.006	0.000	0.002	0.002

Diridon DuPont Residential, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2023	Building A Const	0.1104	DPM_A23	220.8	0.06720	8.47E-03	9773	8.66E-07
2024	Building A Const	0.0374	DPM_A24	74.8	0.02278	2.87E-03	9773	2.94E-07
2025	Building B Const	0.0865	DPM_B25	173.0	0.05265	6.63E-03	9716	6.83E-07
2026	Building B Const	0.0322	DPM_B26	64.3	0.01958	2.47E-03	9716	2.54E-07
Total		***0.2664***		***532.9***	***0.1622***	***0.0204***		

Modeled Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Diridon DuPont Residential, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2023	Building A Const	FUG_A23	0.1112	222.4	0.06772	8.53E-03	9,773	8.73E-07
2024	Building A Const	FUG_A24	0.0018	3.6	0.00111	1.40E-04	9,773	1.43E-08
2025	Building B Const	FUG_B25	0.1113	222.7	0.06779	8.54E-03	9,716	8.79E-07
2026	Building B Const	FUG_B26	0.0019	3.8	0.00115	1.45E-04	9,716	1.49E-08
Total			***0.2263***	***452.6***	***0.1378***	***0.0174***		

Modeled Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

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 ($g/s/m^2$)
2023	Building A Const	0.0136	DPM_A23	27.2	0.00827	1.04E-03	9773	1.07E-07
2024	Building A Const	0.0061	DPM_A24	12.1	0.00369	4.64E-04	9773	4.75E-08
2025	Building B Const	0.0136	DPM_B25	27.2	0.00827	1.04E-03	9716	1.07E-07
2026	Building B Const	0.0060	DPM_B26	11.9	0.00363	4.58E-04	9716	4.71E-08
Total		***0.0392***		***78.4***	***0.0239***	***0.0030***		

Modeled Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2023	Building A Const	FUG_A23	0.0519	103.8	0.03161	3.98E-03	9,773	4.08E-07
2024	Building A Const	FUG_A24	0.0018	3.6	0.00111	1.40E-04	9,773	1.43E-08
2025	Building B Const	FUG_B25	0.0520	104.1	0.03168	3.99E-03	9,716	4.11E-07
2026	Building B Const	FUG_B26	0.0019	3.8	0.00115	1.45E-04	9,716	1.49E-08
Total			***0.1077***	***215.4***	***0.0656***	***0.0083***		

Modeled Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Diridon DuPont Residential, San Jose, CA - Construction Health Impact Sum

Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year	Maximum Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Cancer Risk (per million) Infant/Child	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2023	0.0268	*	0.005	0.264
2024	0.0091	*	0.002	0.043
2025	0.2266	40.31	0.045	0.455
2026	0.0843	13.84	0.017	0.088
Total	-	**54.15**	-	-
Maximum	0.2266	**-**	**0.05**	**0.45**

* Maximum cancer risk occurs when exposure begins in 2025.

Maximum Impacts at MEI Residential Location - With Mitigation

Emissions Year	Maximum Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Cancer Risk (per million) Infant/Child	Hazard Index (-)	Maximum Annual PM2.5 Concentration* ($\mu g/m^3$)
2023	0.0033	*	0.001	0.082
2024	0.0015	*	0.000	0.009
2025	0.0355	6.32	0.007	0.142
2026	0.0156	2.57	0.003	0.019
Total	-	**8.88**	-	-
Maximum	0.0355	**-**	**0.01**	**0.14**

* Maximum cancer risk occurs when exposure begins in 2025.

Diridon DuPont Residential - Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated
Off-Site Residential Receptors (1st residential level receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

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

10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	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

				Maximum - Exposure Information			Maximum	
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Hazard Index	Total PM2.5
0	2023	0	-	-	0.0268	-	0.0054	0.26426
0	2024	0	-	-	0.0091	-	0.0018	0.04314
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.2266	3.08	0.0453	0.45459
1	2025	1	1	10	0.2266	37.22	0.0453	0.45459
2	2026	1	2	10	0.0843	13.84	0.0169	0.08815
3	2027	1	3	3	0.0000	0.00		
4	2028	1	4	3	0.0000	0.00		
5	2029	1	5	3	0.0000	0.00		
6	2030	1	6	3	0.0000	0.00		
7	2031	1	7	3	0.0000	0.00		
8	2032	1	8	3	0.0000	0.00		
9	2033	1	9	3	0.0000	0.00		
10	2034	1	10	3	0.0000	0.00		
11	2035	1	11	3	0.0000	0.00		
12	2036	1	12	3	0.0000	0.00		
13	2037	1	13	3	0.0000	0.00		
14	2038	1	14	3	0.0000	0.00		
15	2039	1	15	3	0.0000	0.00		
16	2040	1	16	3	0.0000	0.00		
17	2041	1	17	1	0.0000	0.000		
18	2042	1	18	1	0.0000	0.000		
19	2043	1	19	1	0.0000	0.000		
20	2044	1	20	1	0.0000	0.000		
21	2045	1	22	1	0.0000	0.000		
22	2046	1	23	1	0.0000	0.000		
23	2047	1	24	1	0.0000	0.000		
24	2048	1	25	1	0.0000	0.000		
25	2049	1	26	1	0.0000	0.000		
26	2050	1	27	1	0.0000	0.000		
27	2051	1	28	1	0.0000	0.000		
28	2052	1	29	1	0.0000	0.000		
29	2053	1	29	1	0.0000	0.000		
30	2054	1	29	1	0.0000	0.000		
Total Increased Cancer Risk						**54.15**		

* Third trimester of pregnancy

Diridon DuPont Residential - Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction - Mitigated
Off-Site Residential Receptors (1st residential level receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

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

10^{-6} = Conversion factor

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	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

				Maximum - Exposure Information			Maximum	
Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Hazard Index	Total PM2.5
0	2023	0	-	-	0.0033	-	0.0007	0.08220
0	2024	0	-	-	0.0015	-	0.0003	0.00895
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0355	0.48	0.0071	0.14209
1	2025	1	1	10	0.0355	5.83	0.0071	0.14209
2	2026	1	2	10	0.0156	2.57	0.0031	0.01949
3	2027	1	3	3	0.0000	0.00		
4	2028	1	4	3	0.0000	0.00		
5	2029	1	5	3	0.0000	0.00		
6	2030	1	6	3	0.0000	0.00		
7	2031	1	7	3	0.0000	0.00		
8	2032	1	8	3	0.0000	0.00		
9	2033	1	9	3	0.0000	0.00		
10	2034	1	10	3	0.0000	0.00		
11	2035	1	11	3	0.0000	0.00		
12	2036	1	12	3	0.0000	0.00		
13	2037	1	13	3	0.0000	0.00		
14	2038	1	14	3	0.0000	0.00		
15	2039	1	15	3	0.0000	0.00		
16	2040	1	16	3	0.0000	0.00		
17	2041	1	17	1	0.0000	0.000		
18	2042	1	18	1	0.0000	0.000		
19	2043	1	19	1	0.0000	0.000		
20	2044	1	20	1	0.0000	0.000		
21	2045	1	22	1	0.0000	0.000		
22	2046	1	23	1	0.0000	0.000		
23	2047	1	24	1	0.0000	0.000		
24	2048	1	25	1	0.0000	0.000		
25	2049	1	26	1	0.0000	0.000		
26	2050	1	27	1	0.0000	0.000		
27	2051	1	28	1	0.0000	0.000		
28	2052	1	29	1	0.0000	0.000		
29	2053	1	29	1	0.0000	0.000		
30	2054	1	29	1	0.0000	0.000		
Total Increased Cancer Risk						**8.88**		

* Third trimester of pregnancy

Attachment 5: Community Risk Modeling Information and Calculations

CT-EMFAC2017 Emissions Factors for 2025 Local Roadways

File Name: Dupont - Santa Clara (SF) - 2025 - Annual.EF
CT-EMFAC2017 Version: 1.0.2.27401
Run Date: 9/9/2021 15:55
Area: Santa Clara (SF)
Analysis Year: 2025
Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.015	0.502	0.498
Truck 2	0.02	0.936	0.048
Non-Truck	0.965	0.015	0.951

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph
PM2.5	0.008489	0.005501	0.00373	0.002665	0.00202	0.001628	0.001397	0.001277
TOG	0.172619	0.113109	0.076066	0.0539	0.040836	0.03264	0.027389	0.02411
Diesel PM	0.000788	0.00065	0.000505	0.000405	0.00035	0.000326	0.000328	0.000351

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

Pollutant Name	Emission Factor
TOG	1.255395

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

Pollutant Name	Emission Factor
PM2.5	0.002108

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

Pollutant Name	Emission Factor
PM2.5	0.016801

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

Pollutant Name	Emission Factor
PM2.5	0.014826

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

Local Roadways Traffic Emissions and Health Risk Calculations

W. San Carlos Street

Analysis Year = ***2025***

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2025 Vehicles (veh/day)
Total	**16,470**	**17,294**

Increase From 2020	1.05
Vehicles/Direction	**8,647**
Avg Vehicles/Hour/Direction	360

Traffic Data Year = ***2020***

Project Traffic Background Plus Project ADT	AADT Total	Total Truck
McEvoy Street and W. San Carlos Street	16,470	578
	Percent of Total Vehicles	3.51%

Traffic Increase per Year (%) = *1.00%*

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - W. San Carlos Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_EB_WSC	W. San Carlos St Eastbound	EB	2	737.7	0.46	13.3	43.7	3.4	35	8,647
DPM_WB_WSC	W. San Carlos St Westbound	WB	2	741.8	0.46	13.3	43.7	3.4	35	8,647
									Total	17,294

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00033			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	340	1.42E-05	9	6.41%	554	2.31E-05	17	5.55%	480	2.00E-05
2	2.62%	227	9.46E-06	10	7.36%	636	2.66E-05	18	3.16%	273	1.14E-05
3	2.85%	246	1.03E-05	11	6.34%	548	2.29E-05	19	2.36%	204	8.52E-06
4	3.31%	286	1.20E-05	12	6.92%	598	2.50E-05	20	0.87%	75	3.14E-06
5	2.17%	188	7.84E-06	13	6.29%	544	2.27E-05	21	3.09%	267	1.12E-05
6	3.36%	291	1.21E-05	14	6.23%	539	2.25E-05	22	4.12%	356	1.49E-05
7	6.00%	519	2.17E-05	15	5.15%	445	1.86E-05	23	2.58%	223	9.32E-06
8	4.58%	396	1.65E-05	16	3.84%	332	1.39E-05	24	0.92%	80	3.32E-06
								Total		8,648	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	340	1.43E-05	9	6.41%	554	2.33E-05	17	5.55%	480	2.02E-05
2	2.62%	227	9.51E-06	10	7.36%	636	2.67E-05	18	3.16%	273	1.15E-05
3	2.85%	246	1.03E-05	11	6.34%	548	2.30E-05	19	2.36%	204	8.57E-06
4	3.31%	286	1.20E-05	12	6.92%	598	2.51E-05	20	0.87%	75	3.16E-06
5	2.17%	188	7.88E-06	13	6.29%	544	2.28E-05	21	3.09%	267	1.12E-05
6	3.36%	291	1.22E-05	14	6.23%	539	2.26E-05	22	4.12%	356	1.50E-05
7	6.00%	519	2.18E-05	15	5.15%	445	1.87E-05	23	2.58%	223	9.37E-06
8	4.58%	396	1.66E-05	16	3.84%	332	1.39E-05	24	0.92%	80	3.34E-06
								Total		8,648	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - W. San Carlos Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM25_EB_WSV	W. San Carlos St Eastbound	EB	2	737.7	0.46	13.3	44	1.3	35	8,647
PM25_WB_WSC	W. San Carlos St Westbound	WB	2	741.8	0.46	13.3	44	1.3	35	8,647
									Total	17,294

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001397			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_EB_WSV

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	99	1.77E-05	9	7.11%	615	1.09E-04	17	7.39%	639	1.14E-04
2	0.42%	36	6.46E-06	10	4.39%	380	6.75E-05	18	8.18%	707	1.26E-04
3	0.41%	35	6.31E-06	11	4.66%	403	7.17E-05	19	5.69%	492	8.75E-05
4	0.26%	22	4.00E-06	12	5.89%	509	9.06E-05	20	4.28%	370	6.58E-05
5	0.50%	43	7.69E-06	13	6.15%	532	9.46E-05	21	3.25%	281	5.00E-05
6	0.91%	79	1.40E-05	14	6.04%	522	9.29E-05	22	3.30%	285	5.08E-05
7	3.79%	328	5.83E-05	15	7.01%	606	1.08E-04	23	2.46%	213	3.78E-05
8	7.77%	672	1.20E-04	16	7.14%	617	1.10E-04	24	1.86%	161	2.86E-05
								Total		8,648	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	99	1.78E-05	9	7.11%	615	1.10E-04	17	7.39%	639	1.14E-04
2	0.42%	36	6.50E-06	10	4.39%	380	6.79E-05	18	8.18%	707	1.27E-04
3	0.41%	35	6.34E-06	11	4.66%	403	7.21E-05	19	5.69%	492	8.80E-05
4	0.26%	22	4.02E-06	12	5.89%	509	9.11E-05	20	4.28%	370	6.62E-05
5	0.50%	43	7.73E-06	13	6.15%	532	9.51E-05	21	3.25%	281	5.03E-05
6	0.91%	79	1.41E-05	14	6.04%	522	9.34E-05	22	3.30%	285	5.10E-05
7	3.79%	328	5.86E-05	15	7.01%	606	1.08E-04	23	2.46%	213	3.80E-05
8	7.77%	672	1.20E-04	16	7.14%	617	1.10E-04	24	1.86%	161	2.88E-05
								Total		8,648	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - W. San Carlos Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_EB_WSC	W. San Carlos St Eastbound	EB	2	737.7	0.46	13.3	44	1.3	35	8,647
TEXH_WB_WSC	W. San Carlos St Westbound	WB	2	741.8	0.46	13.3	44	1.3	35	8,647
									Total	17,294

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.02739			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	99	3.47E-04	9	7.11%	615	2.14E-03	17	7.39%	639	2.23E-03
2	0.42%	36	1.27E-04	10	4.39%	380	1.32E-03	18	8.18%	707	2.47E-03
3	0.41%	35	1.24E-04	11	4.66%	403	1.41E-03	19	5.69%	492	1.72E-03
4	0.26%	22	7.84E-05	12	5.89%	509	1.78E-03	20	4.28%	370	1.29E-03
5	0.50%	43	1.51E-04	13	6.15%	532	1.85E-03	21	3.25%	281	9.80E-04
6	0.91%	79	2.74E-04	14	6.04%	522	1.82E-03	22	3.30%	285	9.95E-04
7	3.79%	328	1.14E-03	15	7.01%	606	2.11E-03	23	2.46%	213	7.42E-04
8	7.77%	672	2.34E-03	16	7.14%	617	2.15E-03	24	1.86%	161	5.61E-04
								Total		8,648	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	99	3.49E-04	9	7.11%	615	2.16E-03	17	7.39%	639	2.24E-03
2	0.42%	36	1.27E-04	10	4.39%	380	1.33E-03	18	8.18%	707	2.48E-03
3	0.41%	35	1.24E-04	11	4.66%	403	1.41E-03	19	5.69%	492	1.73E-03
4	0.26%	22	7.88E-05	12	5.89%	509	1.79E-03	20	4.28%	370	1.30E-03
5	0.50%	43	1.52E-04	13	6.15%	532	1.86E-03	21	3.25%	281	9.85E-04
6	0.91%	79	2.76E-04	14	6.04%	522	1.83E-03	22	3.30%	285	1.00E-03
7	3.79%	328	1.15E-03	15	7.01%	606	2.13E-03	23	2.46%	213	7.46E-04
8	7.77%	672	2.36E-03	16	7.14%	617	2.17E-03	24	1.86%	161	5.64E-04
								Total		8,648	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - W. San Carlos Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_EB_WSC	W. San Carlos St Eastbound	EB	2	737.7	0.46	13.3	44	1.3	35	8,647
TEVAP_WB_WSC	W. San Carlos St Westbound	WB	2	741.8	0.46	13.3	44	1.3	35	8,647
									Total	17,294

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.25540			
Emissions per Vehicle per Mile (g/VMT)	0.03587			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	99	4.54E-04	9	7.11%	615	2.81E-03	17	7.39%	639	2.92E-03
2	0.42%	36	1.66E-04	10	4.39%	380	1.73E-03	18	8.18%	707	3.23E-03
3	0.41%	35	1.62E-04	11	4.66%	403	1.84E-03	19	5.69%	492	2.25E-03
4	0.26%	22	1.03E-04	12	5.89%	509	2.33E-03	20	4.28%	370	1.69E-03
5	0.50%	43	1.97E-04	13	6.15%	532	2.43E-03	21	3.25%	281	1.28E-03
6	0.91%	79	3.59E-04	14	6.04%	522	2.39E-03	22	3.30%	285	1.30E-03
7	3.79%	328	1.50E-03	15	7.01%	606	2.77E-03	23	2.46%	213	9.71E-04
8	7.77%	672	3.07E-03	16	7.14%	617	2.82E-03	24	1.86%	161	7.35E-04
								Total		8,648	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	99	4.57E-04	9	7.11%	615	2.82E-03	17	7.39%	639	2.93E-03
2	0.42%	36	1.67E-04	10	4.39%	380	1.74E-03	18	8.18%	707	3.25E-03
3	0.41%	35	1.63E-04	11	4.66%	403	1.85E-03	19	5.69%	492	2.26E-03
4	0.26%	22	1.03E-04	12	5.89%	509	2.34E-03	20	4.28%	370	1.70E-03
5	0.50%	43	1.99E-04	13	6.15%	532	2.44E-03	21	3.25%	281	1.29E-03
6	0.91%	79	3.61E-04	14	6.04%	522	2.40E-03	22	3.30%	285	1.31E-03
7	3.79%	328	1.51E-03	15	7.01%	606	2.78E-03	23	2.46%	213	9.77E-04
8	7.77%	672	3.09E-03	16	7.14%	617	2.84E-03	24	1.86%	161	7.39E-04
								Total		8,648	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - W. San Carlos Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_EB_WSC	W. San Carlos St Eastbound	EB	2	737.7	0.46	13.3	44	1.3	35	8,647
FUG_WB_WSC	W. San Carlos St Westbound	WB	2	741.8	0.46	13.3	44	1.3	35	8,647
									Total	17,294

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01483			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03374			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_WSC

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	99	4.27E-04	9	7.11%	615	2.64E-03	17	7.39%	639	2.74E-03
2	0.42%	36	1.56E-04	10	4.39%	380	1.63E-03	18	8.18%	707	3.04E-03
3	0.41%	35	1.52E-04	11	4.66%	403	1.73E-03	19	5.69%	492	2.11E-03
4	0.26%	22	9.66E-05	12	5.89%	509	2.19E-03	20	4.28%	370	1.59E-03
5	0.50%	43	1.86E-04	13	6.15%	532	2.28E-03	21	3.25%	281	1.21E-03
6	0.91%	79	3.38E-04	14	6.04%	522	2.24E-03	22	3.30%	285	1.23E-03
7	3.79%	328	1.41E-03	15	7.01%	606	2.60E-03	23	2.46%	213	9.14E-04
8	7.77%	672	2.89E-03	16	7.14%	617	2.65E-03	24	1.86%	161	6.91E-04
								Total		8,648	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	99	4.30E-04	9	7.11%	615	2.66E-03	17	7.39%	639	2.76E-03
2	0.42%	36	1.57E-04	10	4.39%	380	1.64E-03	18	8.18%	707	3.06E-03
3	0.41%	35	1.53E-04	11	4.66%	403	1.74E-03	19	5.69%	492	2.13E-03
4	0.26%	22	9.71E-05	12	5.89%	509	2.20E-03	20	4.28%	370	1.60E-03
5	0.50%	43	1.87E-04	13	6.15%	532	2.30E-03	21	3.25%	281	1.21E-03
6	0.91%	79	3.40E-04	14	6.04%	522	2.26E-03	22	3.30%	285	1.23E-03
7	3.79%	328	1.42E-03	15	7.01%	606	2.62E-03	23	2.46%	213	9.19E-04
8	7.77%	672	2.90E-03	16	7.14%	617	2.67E-03	24	1.86%	161	6.95E-04
								Total		8,648	

Diridon Dupont, San Jose - W. San Carlos Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor, 7m receptor height (2nd floor)

Emission Year	2025
Receptor Information	Construction MEI receptor
Number of Receptors	1
Receptor Height	2nd Floor, 7 meters
Receptor Distances	At Construction MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0008	0.0470	0.0615

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0604	0.0580	0.0024

Diridon Dupont, San Jose, CA - W. San Carlos Street Cancer Risk & PM2.5
Impacts at Construction MEI - 7 meter receptor height (2nd floor)
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2023	10	0.0008	0.0470	0.0615	0.010	0.004	0.0003	0.01
1	1	0 - 1	2023	10	0.0008	0.0470	0.0615	0.125	0.044	0.0034	0.17
2	1	1 - 2	2024	10	0.0008	0.0470	0.0615	0.125	0.044	0.0034	0.17
3	1	2 - 3	2025	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
4	1	3 - 4	2026	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
5	1	4 - 5	2027	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
6	1	5 - 6	2028	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
7	1	6 - 7	2029	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
8	1	7 - 8	2030	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
9	1	8 - 9	2031	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
10	1	9 - 10	2032	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
11	1	10 - 11	2033	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
12	1	11 - 12	2034	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
13	1	12 - 13	2035	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
14	1	13 - 14	2036	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
15	1	14 - 15	2037	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
16	1	15 - 16	2038	3	0.0008	0.0470	0.0615	0.020	0.007	0.0005	0.03
17	1	16-17	2039	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
18	1	17-18	2040	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
19	1	18-19	2041	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
20	1	19-20	2042	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
21	1	20-21	2043	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
22	1	21-22	2044	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
23	1	22-23	2045	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
24	1	23-24	2046	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
25	1	24-25	2047	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
26	1	25-26	2048	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
27	1	26-27	2049	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
28	1	27-28	2050	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
29	1	28-29	2051	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
30	1	29-30	2052	1	0.0008	0.0470	0.0615	0.002	0.001	0.0001	0.00
Total Increased Cancer Risk								0.57	0.200	0.015	**0.78**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0002	0.06	0.06

* Third trimester of pregnancy

Diridon Dupont, San Jose - W. San Carlos Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 1st & 2nd Levels of Residential Receptors
- Bld A 8.8m (3rd Fl) and 12.2m (4th Fl) receptor heights
- Bld B 5.2m (2nd Fl) and 8.5m (3rd Fl) receptor heights

Emission Year	2025
Receptor Information	Maximum On-Site Receptor
Number of Receptors	233
Receptor Height	1st & 2nd Level of Residential Receptors
Receptor Distances	8 meter grid spacing in residential areas

Meteorological Conditions

BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0016	0.0880	0.1152	1st Level of Res Receps
2013-2017	0.0009	0.0410	0.0537	2nd Level of Res Receps

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.1131	0.1086	0.0045	1st Level of Res Receps
2013-2017	0.0527	0.0506	0.0021	2nd Level of Res Receps

Diridon Dupont, San Jose, CA - W. San Carlos Street Cancer Risk
Impacts at On-Site 1 Level of Residential Receptors - Bld A 8.8 meter (3rd Fl), Bld B 5.2 meter (2nd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2026	10	0.0016	0.0880	0.1152	0.022	0.007	0.0005	0.03
1	1	0 - 1	2026	10	0.0016	0.0880	0.1152	0.263	0.082	0.0064	0.35
2	1	1 - 2	2027	10	0.0016	0.0880	0.1152	0.263	0.082	0.0064	0.35
3	1	2 - 3	2028	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
4	1	3 - 4	2029	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
5	1	4 - 5	2030	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
6	1	5 - 6	2031	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
7	1	6 - 7	2032	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
8	1	7 - 8	2033	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
9	1	8 - 9	2034	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
10	1	9 - 10	2035	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
11	1	10 - 11	2036	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
12	1	11 - 12	2037	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
13	1	12 - 13	2038	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
14	1	13 - 14	2039	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
15	1	14 - 15	2040	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
16	1	15 - 16	2041	3	0.0016	0.0880	0.1152	0.041	0.013	0.0010	0.06
17	1	16-17	2042	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
18	1	17-18	2043	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
19	1	18-19	2044	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
20	1	19-20	2045	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
21	1	20-21	2046	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
22	1	21-22	2047	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
23	1	22-23	2048	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
24	1	23-24	2049	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
25	1	24-25	2050	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
26	1	25-26	2051	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
27	1	26-27	2052	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
28	1	27-28	2053	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
29	1	28-29	2054	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
30	1	29-30	2055	1	0.0016	0.0880	0.1152	0.005	0.001	0.0001	0.01
Total Increased Cancer Risk								1.19	0.374	0.029	**1.59**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0003	0.11	0.11

* Third trimester of pregnancy

Diridon Dupont, San Jose, CA - W. San Carlos Street Cancer Risk
Impacts at On-Site 2 Level of Residential Receptors - Bld A 12.2 meter (4th Fl), Bld B 8.5 meter (3rd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2026	10	0.0009	0.0410	0.0537	0.012	0.003	0.0002	0.02
1	1	0 - 1	2026	10	0.0009	0.0410	0.0537	0.145	0.038	0.0030	0.19
2	1	1 - 2	2027	10	0.0009	0.0410	0.0537	0.145	0.038	0.0030	0.19
3	1	2 - 3	2028	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
4	1	3 - 4	2029	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
5	1	4 - 5	2030	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
6	1	5 - 6	2031	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
7	1	6 - 7	2032	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
8	1	7 - 8	2033	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
9	1	8 - 9	2034	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
10	1	9 - 10	2035	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
11	1	10 - 11	2036	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
12	1	11 - 12	2037	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
13	1	12 - 13	2038	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
14	1	13 - 14	2039	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
15	1	14 - 15	2040	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
16	1	15 - 16	2041	3	0.0009	0.0410	0.0537	0.023	0.006	0.0005	0.03
17	1	16-17	2042	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
18	1	17-18	2043	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
19	1	18-19	2044	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
20	1	19-20	2045	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
21	1	20-21	2046	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
22	1	21-22	2047	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
23	1	22-23	2048	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
24	1	23-24	2049	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
25	1	24-25	2050	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
26	1	25-26	2051	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
27	1	26-27	2052	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
28	1	27-28	2053	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
29	1	28-29	2054	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
30	1	29-30	2055	1	0.0009	0.0410	0.0537	0.003	0.001	0.0001	0.00
Total Increased Cancer Risk								0.65	0.174	0.013	**0.84**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0002	0.05	0.05

* Third trimester of pregnancy

Montgomery Street/Bird Avenue

Analysis Year = ***2025***

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2025 Vehicles (veh/day)
Total	**21,490**	**22,565**

Increase From 2020	1.05
Vehicles/Direction	**11,282**
Avg Vehicles/Hour/Direction	470

Traffic Data Year = ***2020***

Project Traffic Background Plus Project ADT	AADT Total	Total Truck
Montgomery Street and Park Avenue	21,490	754
	Percent of Total Vehicles	3.51%

Traffic Increase per Year (%) = *1.00%*

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Montgomery St / Bird Ave
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2025**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_NB_MON	Montgomery St / Bird Ave Northbound	NB	2	456.3	0.28	13.3	43.7	3.4	35	11,282
DPM_SB_MON	Montgomery St / Bird Ave Southbound	SB	3	534.5	0.33	17.0	55.7	3.4	35	11,282
									Total	22,565

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00033			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_NB_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	443	1.15E-05	9	6.41%	723	1.87E-05	17	5.55%	626	1.62E-05
2	2.62%	296	7.64E-06	10	7.36%	830	2.15E-05	18	3.16%	357	9.21E-06
3	2.85%	322	8.31E-06	11	6.34%	715	1.85E-05	19	2.36%	266	6.88E-06
4	3.31%	373	9.65E-06	12	6.92%	781	2.02E-05	20	0.87%	98	2.54E-06
5	2.17%	245	6.32E-06	13	6.29%	710	1.83E-05	21	3.09%	349	9.01E-06
6	3.36%	379	9.79E-06	14	6.23%	703	1.82E-05	22	4.12%	465	1.20E-05
7	6.00%	677	1.75E-05	15	5.15%	581	1.50E-05	23	2.58%	291	7.52E-06
8	4.58%	517	1.33E-05	16	3.84%	433	1.12E-05	24	0.92%	104	2.68E-06
								Total		11,283	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	443	1.34E-05	9	6.41%	723	2.19E-05	17	5.55%	626	1.89E-05
2	2.62%	296	8.94E-06	10	7.36%	830	2.51E-05	18	3.16%	357	1.08E-05
3	2.85%	322	9.73E-06	11	6.34%	715	2.16E-05	19	2.36%	266	8.06E-06
4	3.31%	373	1.13E-05	12	6.92%	781	2.36E-05	20	0.87%	98	2.97E-06
5	2.17%	245	7.41E-06	13	6.29%	710	2.15E-05	21	3.09%	349	1.05E-05
6	3.36%	379	1.15E-05	14	6.23%	703	2.13E-05	22	4.12%	465	1.41E-05
7	6.00%	677	2.05E-05	15	5.15%	581	1.76E-05	23	2.58%	291	8.81E-06
8	4.58%	517	1.56E-05	16	3.84%	433	1.31E-05	24	0.92%	104	3.14E-06
								Total		11,283	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Montgomery St / Bird Ave
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM25_NB_MON	Montgomery St / Bird Ave Northbound	NB	2	456.3	0.28	13.3	44	1.3	35	11,282
PM25_SB_MON	Montgomery St / Bird Ave Southbound	SB	3	534.5	0.33	17.0	56	1.3	35	11,282
									Total	22,565

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001397			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	130	1.43E-05	9	7.11%	802	8.83E-05	17	7.39%	834	9.17E-05
2	0.42%	47	5.21E-06	10	4.39%	495	5.45E-05	18	8.18%	923	1.02E-04
3	0.41%	46	5.09E-06	11	4.66%	526	5.78E-05	19	5.69%	642	7.06E-05
4	0.26%	29	3.23E-06	12	5.89%	665	7.31E-05	20	4.28%	483	5.31E-05
5	0.50%	56	6.21E-06	13	6.15%	694	7.63E-05	21	3.25%	367	4.03E-05
6	0.91%	103	1.13E-05	14	6.04%	681	7.50E-05	22	3.30%	372	4.10E-05
7	3.79%	428	4.70E-05	15	7.01%	791	8.70E-05	23	2.46%	278	3.05E-05
8	7.77%	877	9.65E-05	16	7.14%	806	8.86E-05	24	1.86%	210	2.31E-05
								Total		11,283	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	130	1.67E-05	9	7.11%	802	1.03E-04	17	7.39%	834	1.07E-04
2	0.42%	47	6.11E-06	10	4.39%	495	6.38E-05	18	8.18%	923	1.19E-04
3	0.41%	46	5.96E-06	11	4.66%	526	6.78E-05	19	5.69%	642	8.27E-05
4	0.26%	29	3.78E-06	12	5.89%	665	8.56E-05	20	4.28%	483	6.22E-05
5	0.50%	56	7.27E-06	13	6.15%	694	8.94E-05	21	3.25%	367	4.73E-05
6	0.91%	103	1.32E-05	14	6.04%	681	8.78E-05	22	3.30%	372	4.80E-05
7	3.79%	428	5.51E-05	15	7.01%	791	1.02E-04	23	2.46%	278	3.58E-05
8	7.77%	877	1.13E-04	16	7.14%	806	1.04E-04	24	1.86%	210	2.70E-05
								Total		11,283	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Montgomery St / Bird Ave
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_NB_MON	Montgomery St / Bird Ave Northbound	NB	2	456.3	0.28	13.3	44	1.3	35	11,282
TEXH_SB_MON	Montgomery St / Bird Ave Southbound	SB	3	534.5	0.33	17.0	56	1.3	35	11,282
									Total	22,565

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.02739			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	130	2.80E-04	9	7.11%	802	1.73E-03	17	7.39%	834	1.80E-03
2	0.42%	47	1.02E-04	10	4.39%	495	1.07E-03	18	8.18%	923	1.99E-03
3	0.41%	46	9.98E-05	11	4.66%	526	1.13E-03	19	5.69%	642	1.38E-03
4	0.26%	29	6.33E-05	12	5.89%	665	1.43E-03	20	4.28%	483	1.04E-03
5	0.50%	56	1.22E-04	13	6.15%	694	1.50E-03	21	3.25%	367	7.91E-04
6	0.91%	103	2.21E-04	14	6.04%	681	1.47E-03	22	3.30%	372	8.03E-04
7	3.79%	428	9.22E-04	15	7.01%	791	1.71E-03	23	2.46%	278	5.99E-04
8	7.77%	877	1.89E-03	16	7.14%	806	1.74E-03	24	1.86%	210	4.53E-04
								Total		11,283	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	130	3.28E-04	9	7.11%	802	2.03E-03	17	7.39%	834	2.11E-03
2	0.42%	47	1.20E-04	10	4.39%	495	1.25E-03	18	8.18%	923	2.33E-03
3	0.41%	46	1.17E-04	11	4.66%	526	1.33E-03	19	5.69%	642	1.62E-03
4	0.26%	29	7.41E-05	12	5.89%	665	1.68E-03	20	4.28%	483	1.22E-03
5	0.50%	56	1.43E-04	13	6.15%	694	1.75E-03	21	3.25%	367	9.27E-04
6	0.91%	103	2.59E-04	14	6.04%	681	1.72E-03	22	3.30%	372	9.41E-04
7	3.79%	428	1.08E-03	15	7.01%	791	2.00E-03	23	2.46%	278	7.01E-04
8	7.77%	877	2.22E-03	16	7.14%	806	2.04E-03	24	1.86%	210	5.30E-04
								Total		11,283	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Montgomery St / Bird Ave
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_NB_MON	Montgomery St / Bird Ave Northbound	NB	2	456.3	0.28	13.3	44	1.3	35	11,282
TEVAP_SB_MON	Montgomery St / Bird Ave Southbound	SB	3	534.5	0.33	17.0	56	1.3	35	11,282
									Total	22,565

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.25540			
Emissions per Vehicle per Mile (g/VMT)	0.03587			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	130	3.67E-04	9	7.11%	802	2.27E-03	17	7.39%	834	2.36E-03
2	0.42%	47	1.34E-04	10	4.39%	495	1.40E-03	18	8.18%	923	2.61E-03
3	0.41%	46	1.31E-04	11	4.66%	526	1.49E-03	19	5.69%	642	1.81E-03
4	0.26%	29	8.29E-05	12	5.89%	665	1.88E-03	20	4.28%	483	1.36E-03
5	0.50%	56	1.59E-04	13	6.15%	694	1.96E-03	21	3.25%	367	1.04E-03
6	0.91%	103	2.90E-04	14	6.04%	681	1.93E-03	22	3.30%	372	1.05E-03
7	3.79%	428	1.21E-03	15	7.01%	791	2.23E-03	23	2.46%	278	7.84E-04
8	7.77%	877	2.48E-03	16	7.14%	806	2.28E-03	24	1.86%	210	5.93E-04
								Total		11,283	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	130	4.29E-04	9	7.11%	802	2.65E-03	17	7.39%	834	2.76E-03
2	0.42%	47	1.57E-04	10	4.39%	495	1.64E-03	18	8.18%	923	3.05E-03
3	0.41%	46	1.53E-04	11	4.66%	526	1.74E-03	19	5.69%	642	2.12E-03
4	0.26%	29	9.71E-05	12	5.89%	665	2.20E-03	20	4.28%	483	1.60E-03
5	0.50%	56	1.87E-04	13	6.15%	694	2.30E-03	21	3.25%	367	1.21E-03
6	0.91%	103	3.40E-04	14	6.04%	681	2.25E-03	22	3.30%	372	1.23E-03
7	3.79%	428	1.41E-03	15	7.01%	791	2.62E-03	23	2.46%	278	9.18E-04
8	7.77%	877	2.90E-03	16	7.14%	806	2.67E-03	24	1.86%	210	6.94E-04
								Total		11,283	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Montgomery St / Bird Ave
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_NB_MON	Montgomery St / Bird Ave Northbound	NB	2	456.3	0.28	13.3	44	1.3	35	11,282
FUG_SB_MON	Montgomery St / Bird Ave Southbound	SB	3	534.5	0.33	17.0	56	1.3	35	11,282
									Total	22,565

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01483			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03374			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	130	3.45E-04	9	7.11%	802	2.13E-03	17	7.39%	834	2.22E-03
2	0.42%	47	1.26E-04	10	4.39%	495	1.32E-03	18	8.18%	923	2.45E-03
3	0.41%	46	1.23E-04	11	4.66%	526	1.40E-03	19	5.69%	642	1.71E-03
4	0.26%	29	7.79E-05	12	5.89%	665	1.77E-03	20	4.28%	483	1.28E-03
5	0.50%	56	1.50E-04	13	6.15%	694	1.84E-03	21	3.25%	367	9.74E-04
6	0.91%	103	2.73E-04	14	6.04%	681	1.81E-03	22	3.30%	372	9.89E-04
7	3.79%	428	1.14E-03	15	7.01%	791	2.10E-03	23	2.46%	278	7.37E-04
8	7.77%	877	2.33E-03	16	7.14%	806	2.14E-03	24	1.86%	210	5.58E-04
								Total		11,283	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	130	4.04E-04	9	7.11%	802	2.50E-03	17	7.39%	834	2.59E-03
2	0.42%	47	1.47E-04	10	4.39%	495	1.54E-03	18	8.18%	923	2.87E-03
3	0.41%	46	1.44E-04	11	4.66%	526	1.64E-03	19	5.69%	642	2.00E-03
4	0.26%	29	9.13E-05	12	5.89%	665	2.07E-03	20	4.28%	483	1.50E-03
5	0.50%	56	1.76E-04	13	6.15%	694	2.16E-03	21	3.25%	367	1.14E-03
6	0.91%	103	3.20E-04	14	6.04%	681	2.12E-03	22	3.30%	372	1.16E-03
7	3.79%	428	1.33E-03	15	7.01%	791	2.46E-03	23	2.46%	278	8.64E-04
8	7.77%	877	2.73E-03	16	7.14%	806	2.51E-03	24	1.86%	210	6.53E-04
								Total		11,283	

Diridon Dupont, San Jose - Montgomery Street/Bird Ave Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor, 7m receptor height (2nd floor)

Emission Year	2025
Receptor Information	Construction MEI receptor
Number of Receptors	1
Receptor Height	2nd Floor, 7 meters
Receptor Distances	At Construction MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0057	0.0075

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0073	0.0070	0.0003

Diridon Dupont, San Jose, CA - Montgomery Street/Bird Ave Cancer Risk & PM2.5
Impacts at Construction MEI - 7 meter receptor height (2nd floor)
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2023	10	0.0001	0.0057	0.0075	0.001	0.000	0.0000	0.00
1	1	0 - 1	2023	10	0.0001	0.0057	0.0075	0.015	0.005	0.0004	0.02
2	1	1 - 2	2024	10	0.0001	0.0057	0.0075	0.015	0.005	0.0004	0.02
3	1	2 - 3	2025	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
4	1	3 - 4	2026	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
5	1	4 - 5	2027	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
6	1	5 - 6	2028	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
7	1	6 - 7	2029	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
8	1	7 - 8	2030	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
9	1	8 - 9	2031	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
10	1	9 - 10	2032	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
11	1	10 - 11	2033	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
12	1	11 - 12	2034	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
13	1	12 - 13	2035	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
14	1	13 - 14	2036	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
15	1	14 - 15	2037	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
16	1	15 - 16	2038	3	0.0001	0.0057	0.0075	0.002	0.001	0.0001	0.00
17	1	16-17	2039	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
18	1	17-18	2040	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
19	1	18-19	2041	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
20	1	19-20	2042	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
21	1	20-21	2043	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
22	1	21-22	2044	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
23	1	22-23	2045	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
24	1	23-24	2046	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
25	1	24-25	2047	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
26	1	25-26	2048	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
27	1	26-27	2049	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
28	1	27-28	2050	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
29	1	28-29	2051	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
30	1	29-30	2052	1	0.0001	0.0057	0.0075	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.07	0.024	0.002	**0.09**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00002	0.01	0.01

* Third trimester of pregnancy

Diridon Dupont, San Jose - Montgomery Street/Bird Ave Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 1st & 2nd Levels of Residential Receptors
- Bld A 8.8m (3rd Fl) and 12.2m (4th Fl) receptor heights
- Bld B 5.2m (2nd Fl) and 8.5m (3rd Fl) receptor heights

Emission Year	2025
Receptor Information	Maximum On-Site Receptor
Number of Receptors	233
Receptor Height	1st & 2nd Level of Residential Receptors
Receptor Distances	8 meter grid spacing in residential areas

Meteorological Conditions

BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0002	0.0136	0.0178	1st Level of Res Receps
2013-2017	0.0002	0.0107	0.0141	2nd Level of Res Receps

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0174	0.0167	0.0007	1st Level of Res Receps
2013-2017	0.0137	0.0132	0.0005	2nd Level of Res Receps

Diridon Dupont, San Jose, CA - Montgomery Street/Bird Ave Cancer Risk
Impacts at On-Site 1 Level of Residential Receptors - Bld A 8.8 meter (3rd Fl), Bld B 5.2 meter (2nd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2026	10	0.0002	0.0136	0.0178	0.003	0.001	0.0001	0.00
1	1	0 - 1	2026	10	0.0002	0.0136	0.0178	0.039	0.013	0.0010	0.05
2	1	1 - 2	2027	10	0.0002	0.0136	0.0178	0.039	0.013	0.0010	0.05
3	1	2 - 3	2028	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
4	1	3 - 4	2029	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
5	1	4 - 5	2030	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
6	1	5 - 6	2031	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
7	1	6 - 7	2032	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
8	1	7 - 8	2033	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
9	1	8 - 9	2034	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
10	1	9 - 10	2035	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
11	1	10 - 11	2036	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
12	1	11 - 12	2037	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
13	1	12 - 13	2038	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
14	1	13 - 14	2039	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
15	1	14 - 15	2040	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
16	1	15 - 16	2041	3	0.0002	0.0136	0.0178	0.006	0.002	0.0002	0.01
17	1	16-17	2042	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
18	1	17-18	2043	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
19	1	18-19	2044	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
20	1	19-20	2045	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
21	1	20-21	2046	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
22	1	21-22	2047	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
23	1	22-23	2048	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
24	1	23-24	2049	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
25	1	24-25	2050	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
26	1	25-26	2051	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
27	1	26-27	2052	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
28	1	27-28	2053	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
29	1	28-29	2054	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
30	1	29-30	2055	1	0.0002	0.0136	0.0178	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.18	0.058	0.004	**0.24**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00005	0.02	0.02

* Third trimester of pregnancy

Diridon Dupont, San Jose, CA - Montgomery Street/Bird Ave Cancer Risk
Impacts at On-Site 2 Level of Residential Receptors - Bld A 12.2 meter (4th Fl), Bld B 8.5 meter (3rd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2026	10	0.0002	0.0107	0.0141	0.003	0.001	0.0001	0.00
1	1	0 - 1	2026	10	0.0002	0.0107	0.0141	0.031	0.010	0.0008	0.04
2	1	1 - 2	2027	10	0.0002	0.0107	0.0141	0.031	0.010	0.0008	0.04
3	1	2 - 3	2028	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
4	1	3 - 4	2029	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
5	1	4 - 5	2030	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
6	1	5 - 6	2031	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
7	1	6 - 7	2032	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
8	1	7 - 8	2033	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
9	1	8 - 9	2034	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
10	1	9 - 10	2035	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
11	1	10 - 11	2036	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
12	1	11 - 12	2037	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
13	1	12 - 13	2038	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
14	1	13 - 14	2039	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
15	1	14 - 15	2040	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
16	1	15 - 16	2041	3	0.0002	0.0107	0.0141	0.005	0.002	0.0001	0.01
17	1	16-17	2042	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
18	1	17-18	2043	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
19	1	18-19	2044	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
20	1	19-20	2045	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
21	1	20-21	2046	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
22	1	21-22	2047	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
23	1	22-23	2048	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
24	1	23-24	2049	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
25	1	24-25	2050	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
26	1	25-26	2051	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
27	1	26-27	2052	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
28	1	27-28	2053	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
29	1	28-29	2054	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
30	1	29-30	2055	1	0.0002	0.0107	0.0141	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.14	0.045	0.004	**0.19**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00004	0.01	0.01

* Third trimester of pregnancy

Park Avenue

Analysis Year = ***2025***

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2025 Vehicles (veh/day)
Total	**14,190**	**14,900**

Increase From 2020	1.05
Vehicles/Direction	**7,450**
Avg Vehicles/Hour/Direction	310

Traffic Data Year = ***2020***

Project Traffic Background Plus Project ADT	AADT Total	Total Truck
McEvoy Street and Park Avenue	14,190	498
	Percent of Total Vehicles	3.51%

Traffic Increase per Year (%) = *1.00%*

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Park Ave
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2025**

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_EB_PAR	Park Ave Eastbound	EB	1	720.4	0.45	9.7	31.7	3.4	30	7,450
DPM_WB_PAR	Park Ave Westbound	WB	1	714.1	0.44	9.7	31.7	3.4	30	7,450
									Total	14,900

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00033			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and DPM Emissions - DPM_EB_PAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.93%	293	1.19E-05	9	6.41%	478	1.94E-05	17	5.55%	413	1.68E-05
2	2.62%	195	7.91E-06	10	7.36%	548	2.22E-05	18	3.16%	235	9.54E-06
3	2.85%	212	8.61E-06	11	6.34%	472	1.91E-05	19	2.36%	176	7.13E-06
4	3.31%	247	1.00E-05	12	6.92%	516	2.09E-05	20	0.87%	65	2.63E-06
5	2.17%	162	6.55E-06	13	6.29%	469	1.90E-05	21	3.09%	230	9.33E-06
6	3.36%	250	1.01E-05	14	6.23%	464	1.88E-05	22	4.12%	307	1.24E-05
7	6.00%	447	1.81E-05	15	5.15%	384	1.56E-05	23	2.58%	192	7.79E-06
8	4.58%	341	1.38E-05	16	3.84%	286	1.16E-05	24	0.92%	69	2.78E-06
								Total		7,450	

2025 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_PAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.93%	293	1.18E-05	9	6.41%	478	1.92E-05	17	5.55%	413	1.66E-05
2	2.62%	195	7.84E-06	10	7.36%	548	2.20E-05	18	3.16%	235	9.46E-06
3	2.85%	212	8.53E-06	11	6.34%	472	1.90E-05	19	2.36%	176	7.06E-06
4	3.31%	247	9.91E-06	12	6.92%	516	2.07E-05	20	0.87%	65	2.60E-06
5	2.17%	162	6.50E-06	13	6.29%	469	1.88E-05	21	3.09%	230	9.25E-06
6	3.36%	250	1.01E-05	14	6.23%	464	1.86E-05	22	4.12%	307	1.23E-05
7	6.00%	447	1.80E-05	15	5.15%	384	1.54E-05	23	2.58%	192	7.72E-06
8	4.58%	341	1.37E-05	16	3.84%	286	1.15E-05	24	0.92%	69	2.75E-06
								Total		7,450	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Park Ave
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM25_EB_PAR	Park Ave Eastbound	EB	1	720.4	0.45	9.7	32	1.3	30	7,450
PM25_WB_PAR	Park Ave Westbound	WB	1	714.1	0.44	9.7	32	1.3	30	7,450
									Total	14,900

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001628			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and PM2.5 Emissions - PM25_EB_PAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	1.73E-05	9	7.11%	530	1.07E-04	17	7.39%	551	1.11E-04
2	0.42%	31	6.33E-06	10	4.39%	327	6.62E-05	18	8.18%	609	1.23E-04
3	0.41%	31	6.18E-06	11	4.66%	347	7.03E-05	19	5.69%	424	8.58E-05
4	0.26%	19	3.92E-06	12	5.89%	439	8.88E-05	20	4.28%	319	6.45E-05
5	0.50%	37	7.54E-06	13	6.15%	458	9.27E-05	21	3.25%	242	4.90E-05
6	0.91%	68	1.37E-05	14	6.04%	450	9.11E-05	22	3.30%	246	4.98E-05
7	3.79%	282	5.72E-05	15	7.01%	522	1.06E-04	23	2.46%	183	3.71E-05
8	7.77%	579	1.17E-04	16	7.14%	532	1.08E-04	24	1.86%	139	2.80E-05
								Total		7,450	

2025 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_WB_PAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	1.72E-05	9	7.11%	530	1.06E-04	17	7.39%	551	1.10E-04
2	0.42%	31	6.28E-06	10	4.39%	327	6.56E-05	18	8.18%	609	1.22E-04
3	0.41%	31	6.13E-06	11	4.66%	347	6.97E-05	19	5.69%	424	8.51E-05
4	0.26%	19	3.89E-06	12	5.89%	439	8.80E-05	20	4.28%	319	6.40E-05
5	0.50%	37	7.47E-06	13	6.15%	458	9.19E-05	21	3.25%	242	4.86E-05
6	0.91%	68	1.36E-05	14	6.04%	450	9.03E-05	22	3.30%	246	4.93E-05
7	3.79%	282	5.67E-05	15	7.01%	522	1.05E-04	23	2.46%	183	3.68E-05
8	7.77%	579	1.16E-04	16	7.14%	532	1.07E-04	24	1.86%	139	2.78E-05
								Total		7,450	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Park Ave
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_EB_PAR	Park Ave Eastbound	EB	1	720.4	0.45	9.7	32	1.3	30	7,450
TEXH_WB_PAR	Park Ave Westbound	WB	1	714.1	0.44	9.7	32	1.3	30	7,450
									Total	14,900

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.03264			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_EB_PAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	3.48E-04	9	7.11%	530	2.15E-03	17	7.39%	551	2.23E-03
2	0.42%	31	1.27E-04	10	4.39%	327	1.33E-03	18	8.18%	609	2.47E-03
3	0.41%	31	1.24E-04	11	4.66%	347	1.41E-03	19	5.69%	424	1.72E-03
4	0.26%	19	7.86E-05	12	5.89%	439	1.78E-03	20	4.28%	319	1.29E-03
5	0.50%	37	1.51E-04	13	6.15%	458	1.86E-03	21	3.25%	242	9.83E-04
6	0.91%	68	2.75E-04	14	6.04%	450	1.83E-03	22	3.30%	246	9.98E-04
7	3.79%	282	1.15E-03	15	7.01%	522	2.12E-03	23	2.46%	183	7.44E-04
8	7.77%	579	2.35E-03	16	7.14%	532	2.16E-03	24	1.86%	139	5.62E-04
								Total		7,450	

2025 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_PAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	3.45E-04	9	7.11%	530	2.13E-03	17	7.39%	551	2.21E-03
2	0.42%	31	1.26E-04	10	4.39%	327	1.32E-03	18	8.18%	609	2.45E-03
3	0.41%	31	1.23E-04	11	4.66%	347	1.40E-03	19	5.69%	424	1.71E-03
4	0.26%	19	7.79E-05	12	5.89%	439	1.77E-03	20	4.28%	319	1.28E-03
5	0.50%	37	1.50E-04	13	6.15%	458	1.84E-03	21	3.25%	242	9.74E-04
6	0.91%	68	2.73E-04	14	6.04%	450	1.81E-03	22	3.30%	246	9.89E-04
7	3.79%	282	1.14E-03	15	7.01%	522	2.10E-03	23	2.46%	183	7.37E-04
8	7.77%	579	2.33E-03	16	7.14%	532	2.14E-03	24	1.86%	139	5.57E-04
								Total		7,450	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Park Ave
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_EB_PAR	Park Ave Eastbound	EB	1	720.4	0.45	9.7	32	1.3	30	7,450
TEVAP_WB_PAR	Park Ave Westbound	WB	1	714.1	0.44	9.7	32	1.3	30	7,450
									Total	14,900

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.25540			
Emissions per Vehicle per Mile (g/VMT)	0.04185			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_EB_PAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	4.46E-04	9	7.11%	530	2.76E-03	17	7.39%	551	2.86E-03
2	0.42%	31	1.63E-04	10	4.39%	327	1.70E-03	18	8.18%	609	3.17E-03
3	0.41%	31	1.59E-04	11	4.66%	347	1.81E-03	19	5.69%	424	2.21E-03
4	0.26%	19	1.01E-04	12	5.89%	439	2.28E-03	20	4.28%	319	1.66E-03
5	0.50%	37	1.94E-04	13	6.15%	458	2.38E-03	21	3.25%	242	1.26E-03
6	0.91%	68	3.53E-04	14	6.04%	450	2.34E-03	22	3.30%	246	1.28E-03
7	3.79%	282	1.47E-03	15	7.01%	522	2.72E-03	23	2.46%	183	9.54E-04
8	7.77%	579	3.01E-03	16	7.14%	532	2.77E-03	24	1.86%	139	7.21E-04
								Total		7,450	

2025 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_PAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	4.42E-04	9	7.11%	530	2.73E-03	17	7.39%	551	2.84E-03
2	0.42%	31	1.61E-04	10	4.39%	327	1.69E-03	18	8.18%	609	3.14E-03
3	0.41%	31	1.58E-04	11	4.66%	347	1.79E-03	19	5.69%	424	2.19E-03
4	0.26%	19	9.99E-05	12	5.89%	439	2.26E-03	20	4.28%	319	1.64E-03
5	0.50%	37	1.92E-04	13	6.15%	458	2.36E-03	21	3.25%	242	1.25E-03
6	0.91%	68	3.50E-04	14	6.04%	450	2.32E-03	22	3.30%	246	1.27E-03
7	3.79%	282	1.46E-03	15	7.01%	522	2.69E-03	23	2.46%	183	9.45E-04
8	7.77%	579	2.99E-03	16	7.14%	532	2.74E-03	24	1.86%	139	7.15E-04
								Total		7,450	

Diridon Dupont, San Jose, CA - Offsite and Onsite Residential Roadway Modeling
Cumulative Operation - Park Ave
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2025

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_EB_PAR	Park Ave Eastbound	EB	1	720.4	0.45	9.7	32	1.3	30	7,450
FUG_WB_PAR	Park Ave Westbound	WB	1	714.1	0.44	9.7	32	1.3	30	7,450
									Total	14,900

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01680			
Road Dust - Emissions per Vehicle (g/VMT)	0.01483			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03374			

Emisson Factors from CT-EMFAC2017

2025 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_EB_PAR

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	86	3.59E-04	9	7.11%	530	2.22E-03	17	7.39%	551	2.31E-03
2	0.42%	31	1.31E-04	10	4.39%	327	1.37E-03	18	8.18%	609	2.56E-03
3	0.41%	31	1.28E-04	11	4.66%	347	1.46E-03	19	5.69%	424	1.78E-03
4	0.26%	19	8.12E-05	12	5.89%	439	1.84E-03	20	4.28%	319	1.34E-03
5	0.50%	37	1.56E-04	13	6.15%	458	1.92E-03	21	3.25%	242	1.02E-03
6	0.91%	68	2.84E-04	14	6.04%	450	1.89E-03	22	3.30%	246	1.03E-03
7	3.79%	282	1.18E-03	15	7.01%	522	2.19E-03	23	2.46%	183	7.69E-04
8	7.77%	579	2.43E-03	16	7.14%	532	2.23E-03	24	1.86%	139	5.81E-04
								Total		7,450	

2025 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_PAR

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	86	3.56E-04	9	7.11%	530	2.20E-03	17	7.39%	551	2.29E-03
2	0.42%	31	1.30E-04	10	4.39%	327	1.36E-03	18	8.18%	609	2.53E-03
3	0.41%	31	1.27E-04	11	4.66%	347	1.44E-03	19	5.69%	424	1.76E-03
4	0.26%	19	8.05E-05	12	5.89%	439	1.82E-03	20	4.28%	319	1.33E-03
5	0.50%	37	1.55E-04	13	6.15%	458	1.91E-03	21	3.25%	242	1.01E-03
6	0.91%	68	2.82E-04	14	6.04%	450	1.87E-03	22	3.30%	246	1.02E-03
7	3.79%	282	1.17E-03	15	7.01%	522	2.17E-03	23	2.46%	183	7.62E-04
8	7.77%	579	2.41E-03	16	7.14%	532	2.21E-03	24	1.86%	139	5.76E-04
								Total		7,450	

Diridon Dupont, San Jose - Park Ave Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor, 7m receptor height (2nd floor)

Emission Year	2025
Receptor Information	Construction MEI receptor
Number of Receptors	1
Receptor Height	2nd Floor, 7 meters
Receptor Distances	At Construction MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0002	0.0247	0.0317

Construction MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0267	0.0255	0.0012

Diridon Dupont, San Jose, CA - Park Ave Cancer Risk & PM2.5
Impacts at Construction MEI - 7 meter receptor height (2nd floor)
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2023	10	0.0002	0.0247	0.0317	0.003	0.002	0.0001	0.01
1	1	0 - 1	2023	10	0.0002	0.0247	0.0317	0.039	0.023	0.0018	0.06
2	1	1 - 2	2024	10	0.0002	0.0247	0.0317	0.039	0.023	0.0018	0.06
3	1	2 - 3	2025	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
4	1	3 - 4	2026	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
5	1	4 - 5	2027	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
6	1	5 - 6	2028	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
7	1	6 - 7	2029	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
8	1	7 - 8	2030	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
9	1	8 - 9	2031	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
10	1	9 - 10	2032	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
11	1	10 - 11	2033	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
12	1	11 - 12	2034	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
13	1	12 - 13	2035	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
14	1	13 - 14	2036	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
15	1	14 - 15	2037	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
16	1	15 - 16	2038	3	0.0002	0.0247	0.0317	0.006	0.004	0.0003	0.01
17	1	16-17	2039	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
18	1	17-18	2040	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
19	1	18-19	2041	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
20	1	19-20	2042	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
21	1	20-21	2043	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
22	1	21-22	2044	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
23	1	22-23	2045	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
24	1	23-24	2046	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
25	1	24-25	2047	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
26	1	25-26	2048	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
27	1	26-27	2049	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
28	1	27-28	2050	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
29	1	28-29	2051	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
30	1	29-30	2052	1	0.0002	0.0247	0.0317	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.18	0.105	0.008	**0.29**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00005	0.03	0.03

* Third trimester of pregnancy

Diridon Dupont, San Jose - Park Ave Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 1st & 2nd Levels of Residential Receptors
- Bld A 8.8m (3rd Fl) and 12.2m (4th Fl) receptor heights
- Bld B 5.2m (2nd Fl) and 8.5m (3rd Fl) receptor heights

Emission Year	2025
Receptor Information	Maximum On-Site Receptor
Number of Receptors	233
Receptor Height	1st & 2nd Level of Residential Receptors
Receptor Distances	8 meter grid spacing in residential areas

Meteorological Conditions

BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0007	0.0574	0.0737	1st Level of Res Receps
2013-2017	0.0004	0.0391	0.0502	2nd Level of Res Receps

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0621	0.0593	0.0029	1st Level of Res Receps
2013-2017	0.0423	0.0403	0.0020	2nd Level of Res Receps

Diridon Dupont, San Jose, CA - Park Ave Cancer Risk
Impacts at On-Site 1 Level of Residential Receptors - Bld A 8.8 meter (3rd Fl), Bld B 5.2 meter (2nd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2026	10	0.0007	0.0574	0.0737	0.010	0.004	0.0003	0.01
1	1	0 - 1	2026	10	0.0007	0.0574	0.0737	0.122	0.054	0.0041	0.18
2	1	1 - 2	2027	10	0.0007	0.0574	0.0737	0.122	0.054	0.0041	0.18
3	1	2 - 3	2028	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
4	1	3 - 4	2029	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
5	1	4 - 5	2030	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
6	1	5 - 6	2031	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
7	1	6 - 7	2032	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
8	1	7 - 8	2033	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
9	1	8 - 9	2034	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
10	1	9 - 10	2035	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
11	1	10 - 11	2036	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
12	1	11 - 12	2037	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
13	1	12 - 13	2038	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
14	1	13 - 14	2039	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
15	1	14 - 15	2040	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
16	1	15 - 16	2041	3	0.0007	0.0574	0.0737	0.019	0.008	0.0006	0.03
17	1	16-17	2042	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
18	1	17-18	2043	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
19	1	18-19	2044	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
20	1	19-20	2045	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
21	1	20-21	2046	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
22	1	21-22	2047	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
23	1	22-23	2048	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
24	1	23-24	2049	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
25	1	24-25	2050	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
26	1	25-26	2051	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
27	1	26-27	2052	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
28	1	27-28	2053	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
29	1	28-29	2054	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
30	1	29-30	2055	1	0.0007	0.0574	0.0737	0.002	0.001	0.0001	0.00
Total Increased Cancer Risk								0.55	0.244	0.018	**0.81**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.06	0.06

* Third trimester of pregnancy

Diridon Dupont, San Jose, CA - Park Ave Cancer Risk
Impacts at On-Site 2 Level of Residential Receptors - Bld A 12.2 meter (4th Fl), Bld B 8.5 meter (3rd Fl) receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

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

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2026	10	0.0004	0.0391	0.0502	0.005	0.003	0.0002	0.01
1	1	0 - 1	2026	10	0.0004	0.0391	0.0502	0.066	0.037	0.0028	0.11
2	1	1 - 2	2027	10	0.0004	0.0391	0.0502	0.066	0.037	0.0028	0.11
3	1	2 - 3	2028	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
4	1	3 - 4	2029	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
5	1	4 - 5	2030	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
6	1	5 - 6	2031	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
7	1	6 - 7	2032	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
8	1	7 - 8	2033	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
9	1	8 - 9	2034	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
10	1	9 - 10	2035	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
11	1	10 - 11	2036	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
12	1	11 - 12	2037	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
13	1	12 - 13	2038	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
14	1	13 - 14	2039	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
15	1	14 - 15	2040	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
16	1	15 - 16	2041	3	0.0004	0.0391	0.0502	0.010	0.006	0.0004	0.02
17	1	16-17	2042	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
18	1	17-18	2043	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
19	1	18-19	2044	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
20	1	19-20	2045	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
21	1	20-21	2046	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
22	1	21-22	2047	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
23	1	22-23	2048	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
24	1	23-24	2049	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
25	1	24-25	2050	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
26	1	25-26	2051	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
27	1	26-27	2052	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
28	1	27-28	2053	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
29	1	28-29	2054	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
30	1	29-30	2055	1	0.0004	0.0391	0.0502	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.30	0.166	0.013	**0.48**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.04	0.04

* Third trimester of pregnancy

Rail Line Emissions and Health Risk Calculations

Diridon DuPont Residential, San Jose, CA
DPM Modeling - Rail Line Information and DPM Emission Rates
Diesel-Powered Caltrain, Freight and Passenger Trains

Year	Source Description	Modeled No. Lines	Link Width (ft)	Link Width (m)	Link Length (ft)	Link Length (miles)	Link Length (m)	Release Height (m)	No. Trains per Day	Train Travel Speed (mph)	DPM Emission Rates: Average Daily Emission Rate (g/mi/day)	Average Daily Emission Rate (g/day)	Link Emission Rate (g/s)	Link Emission Rate (lb/hr)
2025	Caltrain near station	1	12	3.7	704	0.13	215	5.0	41	10	445.6	59.4	6.88E-04	5.46E-03
	Caltrain south of station	1	12	3.7	1,954	0.37	595	5.0	41	35	127.3	47.1	5.45E-04	4.33E-03
	Amtrak near station	1	12	3.7	716	0.14	218	5.0	2	10	21.3	2.9	3.34E-05	2.65E-04
	Amtrak south of station	1	12	3.7	1919	0.36	585	5.0	2	35	6.1	2.2	2.56E-05	2.03E-04
	Freight Trains	1	12	3.7	2,635	0.50	803	5.0	6	40	31.2	15.6	1.80E-04	1.43E-03
	Total	-	-	-	**2,379**	**0.45**	**725**	-	**91**	-	**631.5**	**127.2**	**1.47E -03**	**1.17E -02**

Notes: Emission based on Emission Factors for Locomotives, USEPA 2009 (EPA-420-F-09-025)
Emissions calculated for locomotives operating in 2025
Fuel correction factors from Offroad Modeling Change Technical memo, Changes to the Locomotive Inventory, CARB July 2006.
Passenger trains assumed to operate for 24 hours per day Caltrain
Passenger trains assumed to operate for 24 hours per day Amtrak
Freight trains assumed to operate for 24 hours per day

Caltrain	*2025*
Trains Passing Project Site	*Diesel*
Passenger trains - weekday =	49
Passenger trains - weekend =	20
Passenger trains - Sat only =	0
Total Trains =	69
Annual average daily trains =	41
Locomotive horsepower =	3285
Locomotives per train =	1
Engine load =	0.7
Freight Trains	
Freight trains per day =	6
Locomotive horsepower =	2300
Locomotives per train =	2
Total horsepower =	4600
Locomotive engine load =	0.7

Amtrak Passenger Trains	2025
Trains Passing Project Site	*Diesel*
Passenger trains - weekday =	2
Passenger trains - weekend =	2
Passenger trains - Sat only =	0
Total Trains =	4
Annual average daily trains =	2
Locomotive horsepower =	3200
Locomotives per train =	1
Locomotive engine load =	0.7

PM Locomotive Emission Factors (g/hp-hr)

Train Type	2025
Passenger	0.067
Freight	0.077

PM2.5 to PM ratio = 1

	CARB Fuel Adj Factor	
	2010	2011+
Passenger	0.717	0.709
Freight	0.851	0.840

Diridon DuPont Residential - Rail Line DPM & PM2.5 Concentrations
On Site Receptors at 1st Residential Level (Buildings A & B)
AERMOD Risk Modeling Parameters and Maximum Concentrations
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Receptor Information	1st Residential Level (Building A & B)
Number of Receptors	233
Receptor Height =	Building A - 8.8 meters & Building B - 5.2 meters
Receptor distances =	8 meter spacing in project residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)
2013-2017	0.03842

Diridon DuPont Residential - Rail Line DPM & PM2.5 Concentrations
On Site Receptors at 2nd Residential Level (Buildings A & B)
AERMOD Risk Modeling Parameters and Maximum Concentrations
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Receptor Information	2nd Residential Level (Building A & B)
Number of Receptors	233
Receptor Height =	Building A - 12.2 meters & Building B - 8.5 meters
Receptor distances =	8 meter spacing in project residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)
2013-2017	0.02818

Diridon DuPont Residential - Rail Line DPM & PM2.5 Concentrations
OnSite Receptors at 3rd Residential Level (Buildings A & B)
AERMOD Risk Modeling Parameters and Maximum Concentrations
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Receptor Information	3rd Residential Level (Building A & B)
Number of Receptors	233
Receptor Height =	Building A - 15.5 meters & Building B - 11.9 meters
Receptor distances =	8 meter spacing in project residential areas

Meteorological Conditions

BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)
2013-2017	0.01667

Diridon DuPont Residential, San Jose- 1st Residential Level Receptors (Buildings A & B)
AERMOD Railroad DPM Risk Modeling- Maximum Cancer Risk at Project Site
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factor: $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age ⇒ / Parameter	3rd Trimester	0 - <2	2 - <16	16 - 30
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
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

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2025	0.25	-0.25 - 0*	10	0.0384	0.522
1	2025	1	1	10	0.0384	6.310
2	2026	1	2	10	0.0384	6.310
3	2027	1	3	3	0.0384	0.993
4	2028	1	4	3	0.0384	0.993
5	2029	1	5	3	0.0384	0.993
6	2030	1	6	3	0.0384	0.993
7	2031	1	7	3	0.0384	0.993
8	2032	1	8	3	0.0384	0.993
9	2033	1	9	3	0.0384	0.993
10	2034	1	10	3	0.0384	0.993
11	2035	1	11	3	0.0384	0.993
12	2036	1	12	3	0.0384	0.993
13	2037	1	13	3	0.0384	0.993
14	2038	1	14	3	0.0384	0.993
15	2039	1	15	3	0.0384	0.993
16	2040	1	16	3	0.0384	0.993
17	2041	1	17	1	0.0384	0.110
18	2042	1	18	1	0.0384	0.110
19	2043	1	19	1	0.0384	0.110
20	2044	1	20	1	0.0384	0.110
21	2045	1	21	1	0.0384	0.110
22	2046	1	22	1	0.0384	0.110
23	2047	1	23	1	0.0384	0.110
24	2048	1	24	1	0.0384	0.110
25	2049	1	25	1	0.0384	0.110
26	2050	1	26	1	0.0384	0.110
27	2051	1	27	1	0.0384	0.110
28	2052	1	28	1	0.0384	0.110
29	2053	1	29	1	0.0384	0.110
30	2054	1	30	1	0.0384	0.110
Total Increased Cancer Risk						**25.60**

* Third trimester of pregnancy

Diridon DuPont Residential, San Jose- 2nd Residential Level Receptors (Buildings A & B)
AERMOD Railroad DPM Risk Modeling - Maximum Cancer Risk at Project Site
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factor: $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age ⇒ / Parameter	3rd Trimester	0 - <2	2 - <16	16 - 30
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
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

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2025	0.25	-0.25 - 0*	10	0.0282	0.383
1	2025	1	1	10	0.0282	4.628
2	2026	1	2	10	0.0282	4.628
3	2027	1	3	3	0.0282	0.729
4	2028	1	4	3	0.0282	0.729
5	2029	1	5	3	0.0282	0.729
6	2030	1	6	3	0.0282	0.729
7	2031	1	7	3	0.0282	0.729
8	2032	1	8	3	0.0282	0.729
9	2033	1	9	3	0.0282	0.729
10	2034	1	10	3	0.0282	0.729
11	2035	1	11	3	0.0282	0.729
12	2036	1	12	3	0.0282	0.729
13	2037	1	13	3	0.0282	0.729
14	2038	1	14	3	0.0282	0.729
15	2039	1	15	3	0.0282	0.729
16	2040	1	16	3	0.0282	0.729
17	2041	1	17	1	0.0282	0.081
18	2042	1	18	1	0.0282	0.081
19	2043	1	19	1	0.0282	0.081
20	2044	1	20	1	0.0282	0.081
21	2045	1	21	1	0.0282	0.081
22	2046	1	22	1	0.0282	0.081
23	2047	1	23	1	0.0282	0.081
24	2048	1	24	1	0.0282	0.081
25	2049	1	25	1	0.0282	0.081
26	2050	1	26	1	0.0282	0.081
27	2051	1	27	1	0.0282	0.081
28	2052	1	28	1	0.0282	0.081
29	2053	1	29	1	0.0282	0.081
30	2054	1	30	1	0.0282	0.081
Total Increased Cancer Risk						**20.97**

* Third trimester of pregnancy

Diridon DuPont Residential, San Jose- 3rd Residential Level Receptors (Buildings A & B)
AERMOD Railroad DPM Risk Modeling - Maximum Cancer Risk at Project Site
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
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

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2025	0.25	-0.25 - 0*	10	0.0167	0.227
1	2025	1	1	10	0.0167	2.738
2	2026	1	2	10	0.0167	2.738
3	2027	1	3	3	0.0167	0.431
4	2028	1	4	3	0.0167	0.431
5	2029	1	5	3	0.0167	0.431
6	2030	1	6	3	0.0167	0.431
7	2031	1	7	3	0.0167	0.431
8	2032	1	8	3	0.0167	0.431
9	2033	1	9	3	0.0167	0.431
10	2034	1	10	3	0.0167	0.431
11	2035	1	11	3	0.0167	0.431
12	2036	1	12	3	0.0167	0.431
13	2037	1	13	3	0.0167	0.431
14	2038	1	14	3	0.0167	0.431
15	2039	1	15	3	0.0167	0.431
16	2040	1	16	3	0.0167	0.431
17	2041	1	17	1	0.0167	0.048
18	2042	1	18	1	0.0167	0.048
19	2043	1	19	1	0.0167	0.048
20	2044	1	20	1	0.0167	0.048
21	2045	1	21	1	0.0167	0.048
22	2046	1	22	1	0.0167	0.048
23	2047	1	23	1	0.0167	0.048
24	2048	1	24	1	0.0167	0.048
25	2049	1	25	1	0.0167	0.048
26	2050	1	26	1	0.0167	0.048
27	2051	1	27	1	0.0167	0.048
28	2052	1	28	1	0.0167	0.048
29	2053	1	29	1	0.0167	0.048
30	2054	1	30	1	0.0167	0.048
Total Increased Cancer Risk						**12.41**

* Third trimester of pregnancy

Diridon DuPont Residential - Rail Line DPM & PM2.5 Concentrations
OffSite Construction MEI Receptor
AERMOD Risk Modeling Parameters and Maximum Concentrations
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Receptor Information	MEI Receptor
Number of Receptors	1
Receptor Height =	1.5 meters
Receptor distances =	at construction MEI receptor

Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	urban
Wind speed =	variable
Wind direction =	variable

MEI Maximum Concentrations

Meteorological Data Years	Period Average DPM Concentration ($\mu g/m^3$)
2013-2017	0.02034

Diridon DuPont Residential, San Jose- Construction MEI
AERMOD Railroad DPM Risk Modeling - Maximum Cancer Risk at Construction MEI
2025 Diesel-Powered Caltrain, Amtrak, and Freight Trains

Cancer Risk Calculation Method

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

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

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

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

Values

Cancer Potency Factors (mg/kg-day)$^{-1}$

TAC	CPF
DPM	1.10E+00

	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
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

Rail Locomotive Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Age Sensitivity Factor	DPM Annual Conc (ug/m3)	DPM Cancer Risk (per million)
0	2025	0.25	-0.25 - 0*	10	0.0203	0.277
1	2025	1	1	10	0.0203	3.341
2	2026	1	2	10	0.0203	3.341
3	2027	1	3	3	0.0203	0.526
4	2028	1	4	3	0.0203	0.526
5	2029	1	5	3	0.0203	0.526
6	2030	1	6	3	0.0203	0.526
7	2031	1	7	3	0.0203	0.526
8	2032	1	8	3	0.0203	0.526
9	2033	1	9	3	0.0203	0.526
10	2034	1	10	3	0.0203	0.526
11	2035	1	11	3	0.0203	0.526
12	2036	1	12	3	0.0203	0.526
13	2037	1	13	3	0.0203	0.526
14	2038	1	14	3	0.0203	0.526
15	2039	1	15	3	0.0203	0.526
16	2040	1	16	3	0.0203	0.526
17	2041	1	17	1	0.0203	0.058
18	2042	1	18	1	0.0203	0.058
19	2043	1	19	1	0.0203	0.058
20	2044	1	20	1	0.0203	0.058
21	2045	1	21	1	0.0203	0.058
22	2046	1	22	1	0.0203	0.058
23	2047	1	23	1	0.0203	0.058
24	2048	1	24	1	0.0203	0.058
25	2049	1	25	1	0.0203	0.058
26	2050	1	26	1	0.0203	0.058
27	2051	1	27	1	0.0203	0.058
28	2052	1	28	1	0.0203	0.058
29	2053	1	29	1	0.0203	0.058
30	2054	1	30	1	0.0203	0.058
Total Increased Cancer Risk						**15.14**

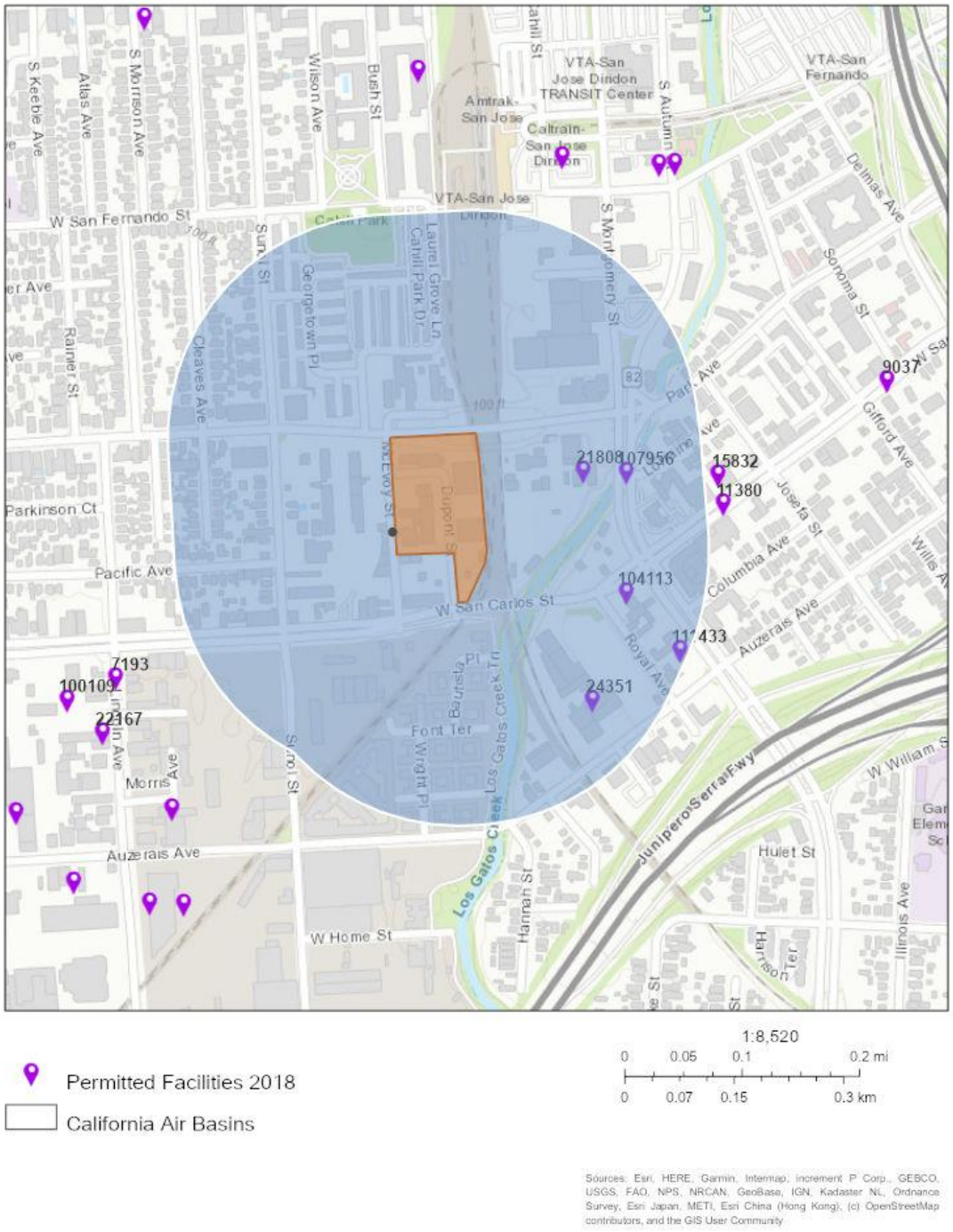
* Third trimester of pregnancy

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 5,472,980.76 ft²

May 7 2020 10:55:19 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	5	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	21808	San Jose Fire Dept / Accts Payable	255 So Montgomery St	San Jose	CA
2	24351	TC Agoge Associates LLC	377 Royal Avenue	San Jose	CA
3	104113	San Carlos 76	602 W San Carlos St	San Jose	CA
4	107956	City of San Jose Fire Training Center	245 S Montgomery St	San Jose	CA
5	111433	Bird Ave Chevron Inc	395 Bird Ave	San Jose	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95110	Santa Clara	3.140	0.000	0.000	Generators	1
2	95126	Santa Clara	0.320	0.000	0.000	Generators	1
3	95126	Santa Clara	15.380	0.070	0.000	Gas Dispensing Facility	1
4	95110	Santa Clara	7.340	0.030	0.000	Gas Dispensing Facility	1
5	95126	Santa Clara	38.640	0.170	0.000	Gas Dispensing Facility	1

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

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

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**8/9/2021**
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	Diridon Dupont Res
Address	244 McEvot St
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Residential
Project Size (# of units or building square feet)	748 du, 4ksf retail
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Table B: Google Earth data

Construction MEI

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
700	21808	San Jose Fire Dept / Accts Payable	255 So Montgomery St	3.14	--	--		Generators		2018 dataset	0.07	0.22	#VALUE!	#VALUE!
805	24351	TC Agoge Associates LLC	377 Royal Avenue	0.32	--	--		Generators		2018 dataset	0.06	0.02	#VALUE!	#VALUE!
815	104113	San Carlos 76	602 W San Carlos St	15.38	0.07	--		Gas Dispensing Facility		2018 dataset	0.02	0.32	0.001	#VALUE!
550	107956	City of San Jose Fire Training Center	245 S Montgomery St	7.34	0.03	--		Gas Dispensing Facility		2018 dataset	0.04	0.28	0.001	#VALUE!
+1000	111433	Bird Ave Chevron Inc	395 Bird Ave	38.64	0.17	--		Gas Dispensing Facility		2018 dataset	0.01	0.58	0.003	#VALUE!

Footnotes:

1. Maximally exposed individual

Project Site

Distance from Receptor (feet) or MEI[1]	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
415	21808	0.16	0.50	#VALUE!	#VALUE!
630	24351	0.09	0.03	#VALUE!	#VALUE!
600	104113	0.03	0.51	0.002	#VALUE!
320	107956	0.10	0.70	0.003	#VALUE!
900	111433	0.02	0.67	0.003	#VALUE!

2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

Date last updated:
03/13/2018