

# ***TERRA BELLA PUBLIC STORAGE & HOUSING PROJECT AIR QUALITY & GREENHOUSE GAS ASSESSMENT***

***Mountain View, California***

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**I&R Project: #22-080**

## **Introduction**

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the proposed Terra Bella Public Storage and Housing project located at 1020-1040 Terra Bella Avenue in Mountain View, California. The air quality and GHG impacts from this project would be associated with the demolition of the existing land uses, construction of the new buildings and infrastructure, and operation of the project. Air pollutant and GHG 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 impacts 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).<sup>1</sup>

## **Project Description**

The existing project site includes a single-family residence, a paved parking lot, and 18 single-story storage and office buildings totaling 77,418 square feet (sf). The project proposes to demolish the existing land uses to construct a six-story, 108-unit, 100 percent affordable multi-family housing building, and six-story (Building 1) and four-story (Building 2) storage facility buildings totaling 408,964-sf. If it is infeasible to reserve one of the proposed apartment units for the on-site storage facility manager, Building 1 would include an 845 square foot manager's apartment. If the apartment in Building 1 is not needed, this area would be constructed as self-storage unit space. The first two levels of the residential building would include an above-grade parking garage with a total of 105 parking spaces, including 16 electric vehicle charging stations and 89 other stalls that would be pre-wired to be converted into electric vehicle charging stations in the future. The storage facility would provide a total of 75 parking lot spaces.<sup>2</sup> The proposed project would be constructed in two phases with three sections: Phase 1 would include the Residential Building and Storage Building 1 and then Phase 2 would include Storage Building 2.

## **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<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>).

## **Air Pollutants of Concern**

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>). 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

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<sup>1</sup> Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

<sup>2</sup> Since completion of this assessment, the project has been refined to reduce the storage facility parking to 66 spaces, however, the results identified in this assessment are not affected by this change.

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<sub>10</sub>) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM<sub>2.5</sub>). Elevated concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

### Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer). 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 complicated scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.<sup>3</sup> *Attachment 1* provides a detailed description of the OEHHA assessment methodology used in this analysis.

### 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, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Therefore, new and/or existing residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the single-family residences to the east and southeast of

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<sup>3</sup> 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.

the project site. There are more sensitive receptors located at farther distances to the west and south. The project would introduce new sensitive receptors (i.e., residents) to the area.

## **Regulatory Setting**

### Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide ambient air quality standards and 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.

In the past decade, the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO<sub>x</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO<sub>x</sub> 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.<sup>4</sup>

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 current standards have 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

The California Air Resources Board (CARB) has set statewide ambient air quality standards (CAAQS) and emission standards for on-road and off-road mobile sources that are more stringent than those adopted by the EPA. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a regulation to reduce emissions of DPM and NO<sub>x</sub> from on-road heavy-duty diesel fueled vehicles.<sup>5</sup> The

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<sup>4</sup> USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

<sup>5</sup> Available online: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>. Accessed: November 21, 2014.

regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

CARB has also adopted and implemented regulations to reduce DPM and NO<sub>x</sub> 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 DPM and NO<sub>x</sub> 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 the Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO<sub>x</sub>.

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*<sup>6</sup>. 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.

#### 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.<sup>7</sup> 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

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<sup>6</sup> California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

<sup>7</sup> See BAAQMD: <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program>.

California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.<sup>8</sup> The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within a CARE area and not within a BAAQMD overburdened area as identified by CalEnviroScreen as the Project site is scored at the 20<sup>th</sup> percentile.<sup>9</sup>

The BAAQMD California Environmental Quality Act (*CEQA*) *Air Quality Guidelines*<sup>10</sup> 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.

### City of Mountain View

#### *2030 General Plan*

The Mountain View 2030 General Plan includes goals, policies, and actions to reduce exposure of the City's sensitive population to exposure of air pollution, toxic air contaminants, and GHG emissions. The following goals, policies, and actions are applicable to the proposed project:

#### *Climate Change*

INC 12.1: Emissions reduction target. Maintain a greenhouse gas emissions reduction target.

INC 12.2: Emissions reduction strategies. Develop cost-effective strategies for reducing greenhouse gas emissions.

INC 12.3: Adaptation strategies. Develop strategies for adapting to climate change in partnership with local and regional agencies.

#### *Air Quality*

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<sup>8</sup> See BAAQMD: [https://www.baaqmd.gov/~/\\_media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722\\_01\\_appendixd\\_mapsofverburdenedcommunities-pdf.pdf?la=en](https://www.baaqmd.gov/~/_media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofverburdenedcommunities-pdf.pdf?la=en).

<sup>9</sup> OEHHA, CalEnviroScreen 4.0 Maps <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

<sup>10</sup> Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

INC 20.1: Pollution prevention. Discourage mobile and stationary sources of air pollution.

INC 20.2: Collaboration. Participate in state and regional planning efforts to improve air quality.

INC 20.6: Air quality standards. Protect the public and construction workers from construction exhaust and particulate emissions.

INC 20.7: Protect sensitive receptors. Protect the public from substantial pollutant concentrations.

INC 20.8: Offensive odors. Protect residents from offensive odors.

### 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 2011 thresholds were challenged in court and were mostly upheld. In 2017, BAAQMD updated its CEQA Air Quality Guidelines and included revised significance thresholds. In 2022, BAAQMD revised its GHG thresholds, eliminating quantified emissions limits. The current BAAQMD thresholds were used in this analysis and are summarized in Table 1. Air quality impacts and community health risks are considered potentially significant if they exceed these thresholds.

**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 <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	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	
<b>Health Risks and Hazards</b>	<b>Single Sources Within 1,000-foot Zone of Influence</b>	<b>Combined Sources (Cumulative from all sources within 1000-foot zone of influence)</b>	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual PM <sub>2.5</sub>	0.3 µg/m <sup>3</sup>	0.8 µg/m <sup>3</sup>	
<b>Greenhouse Gas Emissions</b>			
Land Use Projects – (Must Include A or B)	<p>A. Projects must include, at a minimum, the following project design elements:</p> <ol style="list-style-type: none"> <li>1. Buildings               <ol style="list-style-type: none"> <li>a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).</li> <li>b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.</li> </ol> </li> <li>2. Transportation               <ol style="list-style-type: none"> <li>a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA:                   <ol style="list-style-type: none"> <li>i. Residential projects: 15 percent below the existing VMT per capita</li> <li>ii. Office projects: 15 percent below the existing VMT per employee</li> <li>iii. Retail projects: no net increase in existing VMT</li> </ol> </li> <li>b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.</li> </ol> </li> </ol> <p>B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).</p>		
<p>Note: ROG = reactive organic gases, NO<sub>x</sub> = nitrogen oxides, PM<sub>10</sub> = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM<sub>2.5</sub> = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.</p>			

Source: Bay Area Air Quality Management District, 2017



## AIR QUALITY IMPACTS AND MITIGATION MEASURES

### **Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?**

BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), has prepared and implements specific plans to meet the applicable Federal and State laws, regulations, and programs. The most recent and comprehensive plan is the *Bay Area 2017 Clean Air Plan*.<sup>11</sup> The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have construction and operational emissions below the BAAQMD thresholds (see Impact 2 below), 2) the project would be considered urban infill, 3) the project would be located near employment centers, 4) the project would be located near transit with regional connections.

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

The Bay Area is considered a non-attainment area for ground-level O<sub>3</sub> and PM<sub>2.5</sub> under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM<sub>10</sub> under the California Clean Air Act, but not the federal act. The area has attained both the NAAQS and CAAQS for carbon monoxide (CO). As part of an effort to attain and maintain the NAAQS and CAAQS for O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub>, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O<sub>3</sub> precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> 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

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<sup>11</sup> Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan*.

emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.<sup>12</sup> The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

### CalEEMod Inputs

#### *Land Use Inputs*<sup>13</sup>

The proposed project would be constructed in two phases with three sections: Phase 1 would include the Residential Building and Storage Building 1 and Phase 2 would include Storage Building 2. Separate CalEEMod runs were conducted for each section as each section would construct new buildings over several years. The land uses for each construction section were entered into CalEEMod as described in Table 2.

**Table 2. Construction Land Uses Entered into CalEEMod**

Project Land Uses	Size	Units	Square Feet	Acreage
<b>Residential Building (2024-2025)*</b>				
Apartments Mid Rise	108	Dwelling Unit	107,896	1.04
Enclosed Parking Structure	105	Parking Spaces	31,802	
<b>Storage Building 1 (2025)</b>				
Unrefrigerated Warehouse-No Rail	285.01	1,000-sf	285,012	2.87
Parking Lot	27	Parking Spaces	10,800	
<b>Storage Building 2 (2026)</b>				
Unrefrigerated Warehouse-No Rail	123.95	1,000-sf	123,952	1.90
Parking Lot	48	Parking Spaces	19,200	

\* Includes 2023 (one month of construction)

#### *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 project-specific construction information provided by the project applicant.

The CalEEMod construction equipment worksheet provided by the applicant included the schedule for each phase (included in *Attachment 2*). Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays were provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest

<sup>12</sup> See CARB's EMFAC2021 Emissions Inventory at <https://arb.ca.gov/emfac/emissions-inventory>

<sup>13</sup> As discussed under the project description, if it is infeasible to reserve one of the proposed apartment units for the storage facility manager, the storage facility would include one manager's unit in the storage facility building, in place of a self-storage unit space. While the construction land use input includes 108 dwelling units, the potential extra dwelling unit would be built within the square footage of the proposed storage facility, and therefore, the results identified in this assessment addressed this scenario.

possible start date would be December 2023 and would be built out over a period of approximately 33 month, or 879 construction workdays. The earliest year of full operation was assumed to be 2027.

### *Construction Traffic Emissions*

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of concrete and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips were estimated from the provided demolition and grading volumes by assuming each truck could carry 10 tons per load. The number of concrete and asphalt total round haul trips were provided for the project and converted to total one-way trips, assuming two trips per delivery.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. The construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod defaults, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1 and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including concrete trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling (demolition material export and soil import/export). Since CalEEMod does not address concrete or asphalt trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates from the years 2024-2026 for Santa Clara County were used. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission database to compute vehicle emissions.

**Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs**

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker <sup>1</sup>	Total Vendor <sup>1</sup>	Total Haul <sup>2</sup>	
Vehicle mix <sup>1</sup>	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Cement/Asphalt)	CalEEMod default distance with 5-min truck idle time.
<b>Residential Building (2024-2025)</b>				
Demolition	160	-	205	30,544-sf existing building and 29,568-sf pavement demolition. CalEEMod default worker trips.
Site Preparation	64	-	-	CalEEMod default worker trips.
Grading	225	-	375	3,000-cy of export volume. CalEEMod default worker trips.
Trenching	550	-	-	CalEEMod default worker trips.
Building Construction	14,014	2,618	30	15 concrete truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	2,736	-	-	CalEEMod default worker trips.
Paving	450	-	20	8,845-sf asphalt hauling. CalEEMod default worker trips.
<b>Storage Building 1 (2025)</b>				
Demolition	200	-	472	4,700 tons existing building and 35 tons pavement demolition. CalEEMod default worker trips.
Site Preparation	325	-	-	CalEEMod default worker trips.
Grading	390	-	19	150-cy of export volume. CalEEMod default worker trips.
Trenching	56	-	-	CalEEMod default worker trips.
Building Construction	22,196	8,592	100	50 concrete truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	1,200	-	-	CalEEMod default worker trips.
Paving	220	-	350	1,460-cy asphalt hauling. CalEEMod default worker trips.
<b>Storage Building 2 (2026)</b>				
Demolition	288	-	281	2,800 tons existing building and 18 tons of pavement demolition. CalEEMod default worker trips.
Site Preparation	165	-	-	CalEEMod default worker trips.
Grading	414	-	16	130-cy of export volume. CalEEMod default worker trips.
Trenching	32	-	-	CalEEMod default worker trips.
Building Construction	9,960	3,818	80	40 concrete truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	372	-	-	CalEEMod default worker trips.
Paving	364	-	18	75-cy asphalt hauling. CalEEMod default worker trips.
Notes: <sup>1</sup> Based on 2024-2026 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.				
<sup>2</sup> Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Concrete and trips estimated based on data provided by the applicant.				

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> exhaust, and PM<sub>2.5</sub> exhaust during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

**Table 4. Construction Period Emissions**

Year	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
<i>Construction Emissions Per Year (Tons)</i>				
2024* (Residential Building)	0.56	0.66	0.03	0.02
2025 (Residential Building and Storage Building 1)	1.88	0.73	0.04	0.03
2026 (Storage Building 2)	0.69	0.35	0.02	0.01
<i>Average Daily Construction Emissions Per Year (pounds/day)</i>				
2024* (284 construction workdays)	3.94	4.61	0.22	0.17
2025 (316 construction workdays)	11.87	4.63	0.24	0.17
2026 (279 construction workdays)	4.98	2.49	0.12	0.09
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
<b>Exceed Threshold?</b>	No	No	No	No
* Includes 2023 (one month of construction)				

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM<sub>10</sub> and PM<sub>2.5</sub>. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices (BMPs) are implemented to reduce these emissions. *Mitigation Measure AQ-1* includes implementation of BAAQMD’s basic construction mitigation measures.

***Mitigation Measure AQ-1: Include measures to control dust and exhaust during construction.***

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

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

#### *Effectiveness of Mitigation Measure AQ-1*

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

#### **Operational Period Emissions**

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees, customers. 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*

All project land uses were combined and input to CalEEMod for the operational period modeling in the year 2027. Inputs are summarized in Table 5.

**Table 5. Operational Land Uses Entered into CalEEMod**

<b>Project Land Uses</b>	<b>Size</b>	<b>Units</b>	<b>Square Feet</b>	<b>Acreage</b>
Apartments Mid Rise	109	Dwelling Units	107,896	5.81
Unrefrigerated Warehouse-No Rail	408.96	1,000-sf	408,964	
Enclosed Parking Structure	105	Parking Spaces	31,802	
Parking Lot	75	Parking Spaces	30,000	

*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. Emissions associated with build-out later than 2027 would be lower.

*Traffic Information*

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.<sup>14</sup> The project would produce approximately 1,117 daily trips. When accounting for the existing use adjustments, the project would then produce 996 net daily trips. The daily trip generation was calculated using ITE trip generation rates, the size of the project, and the adjusted total automobile trips after reductions. 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 lengths and trip types specified by CalEEMod were used.

*EMFAC2021 Adjustment*

CalEEMod Version 2020.4.0 uses vehicle emission factors and fleet mix from CARB's EMFAC2017 model. EMFAC2021 became available for use in January 2021 and includes the latest emissions factors for California's car and truck fleets based on updated travel activity. It replaces EMFAC2017. Therefore, CalEEMod emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021. On-road emission factors from Santa Clara County in 2027 were used (see *Attachment 3*). More details about the updated emissions factors used can be found in the EMFAC2021 Technical Support Document.<sup>15</sup>

*Energy*

Silicon Valley Clean Energy (SVCE) is the default electricity provider for Mountain View. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Mountain View are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable

<sup>14</sup> Hexagon Transportation Consultants, Inc., 1020-1040 Terra Bella Avenue Transportation Analysis, August 26, 2022.

<sup>15</sup> See CARB 2021: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac>

sources.<sup>16</sup> The model has a default rate of 2 pounds of CO<sub>2</sub> per megawatt of electricity produced, which is based on SVCE 2019 emissions rate.

The City of Mountain View adopted the Mountain View Green Building Code and Reach Code amendments in November 2019 that prohibits the use of natural gas infrastructure in new residential, hotel, office, and most retail-type buildings.<sup>17</sup> This ordinance applies to any new construction starting January 1, 2020. Natural gas use for the project land uses were set to zero and assigned to electricity use in CalEEMod.

### *Wood-Burning Devices*

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.<sup>18</sup> Therefore, the number of woodstoves and woodburning fireplaces in CalEEMod were set to zero.

### *Other Inputs*

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Wastewater treatment was changed to 100 percent aerobic conditions to represent the use of city sewer services (i.e., project would not send wastewater to septic tanks or facultative lagoons).

### *Existing Uses*

The existing site consist of a single-family residence, a paved parking lot, and 18 single-story storage and office buildings. A CalEEMod model run was developed to compute emissions from use of the existing land uses in 2022. Inputs for the existing conditions scenario included 1 unit entered as “Single Family Housing”, 77,418-sf entered as “Unrefrigerated Warehouse-No Rail”, and 2.7 acres entered as “Parking Lot”. The existing trip generation rates and other inputs were applied to the existing modeling in the same manner described for the proposed project.

### Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 6 shows unmitigated net average daily operational emissions of ROG, NO<sub>x</sub>, total PM<sub>10</sub>, and total PM<sub>2.5</sub> during operation of the project. The unmitigated operational period emissions would not exceed the BAAQMD significance thresholds.

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<sup>16</sup> See: <https://www.svcleanenergy.org/choices/>

<sup>17</sup> City of Mountain View, 2019. Web: [https://www.mountainview.gov/depts/comdev/building/construction/2019\\_mountain\\_view\\_green\\_building\\_and\\_reach\\_codes.asp](https://www.mountainview.gov/depts/comdev/building/construction/2019_mountain_view_green_building_and_reach_codes.asp)

<sup>18</sup> 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](https://www.baaqmd.gov/~media/dotgov/files/rules/regulation-6-rule-3/documents/20191120_r0603_final-pdf.pdf?la=en)



**Table 6. Operational Period Emissions**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2027 Annual Project Operational Emissions ( <i>tons/year</i> )	2.94	0.43	0.99	0.25
2022 Existing Use Emissions ( <i>tons/year</i> )	0.46	0.09	0.12	0.03
Net Annual Emissions ( <i>tons/year</i> )	2.48	0.34	0.87	0.22
BAAQMD Thresholds ( <i>tons /year</i> )	10 tons	10 tons	15 tons	10 tons
<b>Exceed Threshold?</b>	No	No	No	No
2027 Daily Project Operational Emissions ( <i>pounds/day</i> ) <sup>1</sup>	13.61	1.89	4.74	1.21
BAAQMD Thresholds ( <i>pounds/day</i> )	54 lbs.	54 lbs.	82 lbs.	54 lbs.
<b>Exceed Threshold?</b>	No	No	No	No

Notes: <sup>1</sup>Assumes 365-day operation.

**Impact AIR-3: 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. The project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., stationary and mobile sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors and the project would generate some additional traffic consisting of mostly light-duty vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC 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 were addressed by predicting increased cancer risk, the increase in annual PM<sub>2.5</sub> 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,<sup>19</sup> 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<sub>2.5</sub> concentration and HI values are not additive but based on the annual maximum values for the

<sup>19</sup> BAAQMD, 2016. BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. December 2016.

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<sub>2.5</sub> 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 nearby existing residences to the east and southeast, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

### **Community Risks from Project Construction**

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust (i.e., DPM), 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 issue associated with construction emissions are cancer risk and exposure to PM<sub>2.5</sub>. 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<sub>2.5</sub>.<sup>20</sup> This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be evaluated.

#### Construction Emissions

The CalEEMod model and EMFAC2021 emissions provided total uncontrolled annual PM<sub>10</sub> exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with DPM emissions estimated to be 0.06 tons (114 pounds) and fugitive dust emissions (PM<sub>2.5</sub>) to be 0.18 tons (351 pounds) from all construction stages. 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 half a mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

#### Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and PM<sub>2.5</sub> concentrations at sensitive receptors (residences) 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

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<sup>20</sup> DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

of emission activities for CEQA projects.<sup>21,22</sup> Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM<sub>2.5</sub> dust emissions.

### *Construction Sources*

The AERMOD modeling utilized six area sources to represent the on-site construction emissions from the different construction phases (see Figure 1); three areas for exhaust emissions of DPM and three areas for fugitive PM<sub>2.5</sub> dust emissions. To represent the construction equipment DPM exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.<sup>23</sup> The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe. Emissions from vehicle travel on- and off-site were distributed among the exhaust emission area sources throughout the site. The locations of the area sources used for the modeling are identified in Figure 1.

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

### *AERMOD Inputs and Meteorological Data*

The modeling used a five-year meteorological data set (2013-2017) from Moffett Federal Airfield prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 6:00 p.m. per the project applicant's construction schedule. Annual DPM and PM<sub>2.5</sub> concentrations from construction activities during the 2024-2026 period were calculated using the model. DPM and PM<sub>2.5</sub> concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters) were used to represent

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<sup>21</sup> BAAQMD, 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>

<sup>22</sup> BAAQMD, 2020, *BAAQMD Health Risk Assessment Modeling Protocol*. December. Web: [https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd\\_hra\\_modeling\\_protocol-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/ab617-community-health/facility-risk-reduction/documents/baaqmd_hra_modeling_protocol-pdf.pdf?la=en)

<sup>23</sup> 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>

the breathing heights on the first floors of sensitive receptors in the single-family residences near the site.

### Summary of Construction Community Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the OEHHA guidance for age-sensitivity factors and exposure parameters as recommended by BAAQMD, as described in *Attachment 1*. Non-cancer health hazards and maximum PM<sub>2.5</sub> 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<sub>2.5</sub> concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation DPM reference exposure level of 5 µg/m<sup>3</sup>.

The maximum modeled annual DPM and PM<sub>2.5</sub> concentrations were identified at nearby sensitive receptors to find the MEI from construction activities. Results of this assessment indicated that the construction MEI for both cancer risk and PM<sub>2.5</sub> occurred at the same location and was located on the first floor (1.5 meters) of a single-family residence southeast of the project site.<sup>24</sup> The location of the MEI and nearby sensitive receptors are shown in Figure 1. Table 7 lists the community risks from construction at the location of the construction MEI. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

### **Community Risks from Project Operation**

Diesel stationary equipment that could emit substantial TACs (e.g., emergency generators or fire pumps) are not planned for this project. Diesel powered vehicles are the primary concern with local traffic-generated TAC impacts. Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicle per day is considered a low-impact source of TACs.<sup>25</sup> This project would generate 1,117 daily trips or 996 net daily trips when taking into account the existing use reductions.<sup>26</sup> The project traffic would be 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. In addition, projects with the potential to cause or contribute to increased cancer risk from traffic include those that have attract high numbers of diesel-powered on road trucks or use off-road diesel equipment on site, such as a warehouse distribution center, a quarry, or a manufacturing facility, may potentially expose existing or future planned receptors to substantial cancer risk levels and/or health hazards. This is not a project of concern for non-BAAQMD

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<sup>24</sup> The closest sensitive receptor to the project site is not the location of the construction MEI receptor, which is southeast of the site. This is due to the concentrations and timing of the phased construction activities and the north-northwest wind flow based on the Moffett Federal Airfield wind rose.

<sup>25</sup> BAAQMD, 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](https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en)

<sup>26</sup> Hexagon Transportation Consultants, Inc., *1020-1040 Terra Bella Avenue Transportation Analysis*, August 26, 2022.

permitted mobile sources. 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**

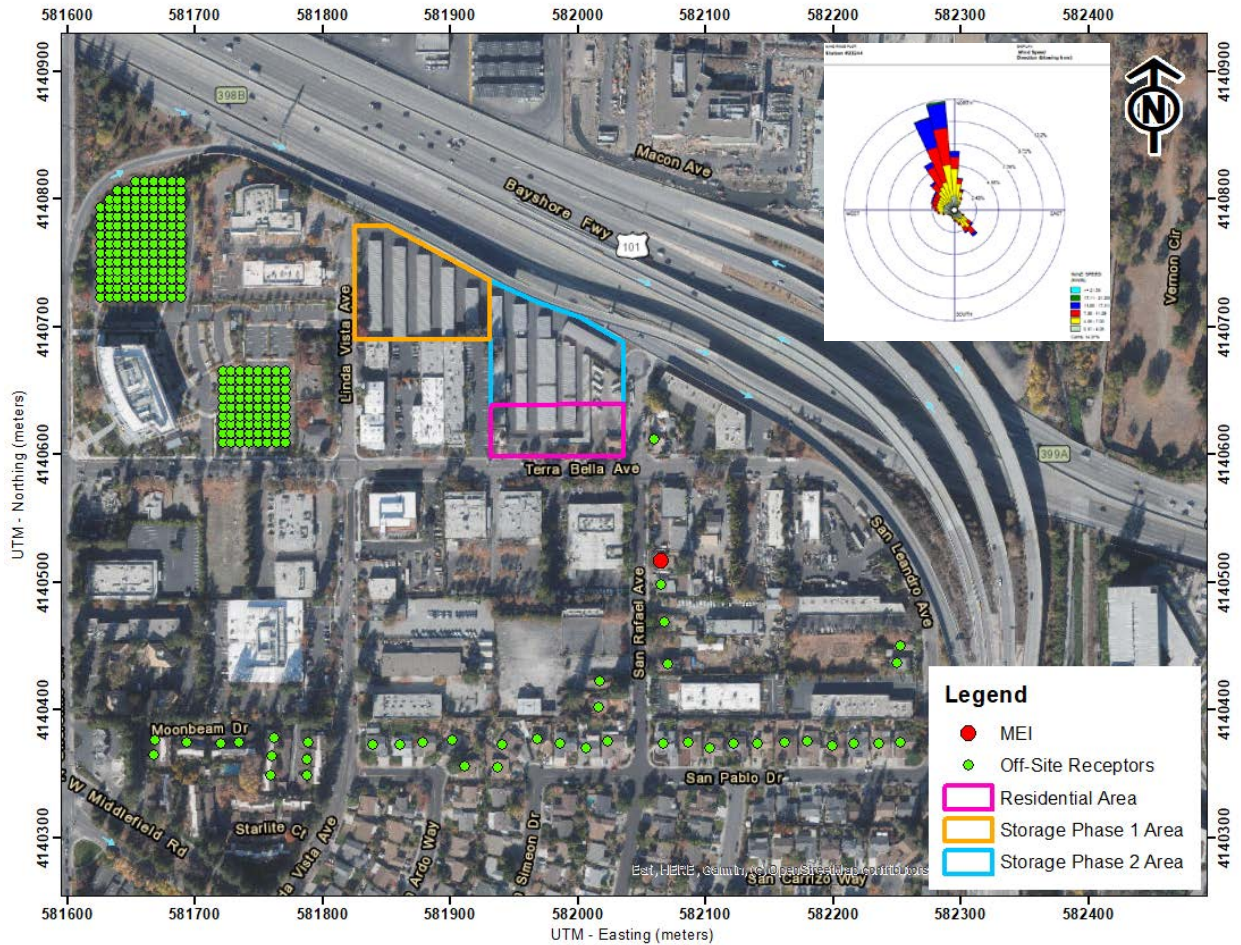
For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to three years of project construction. The annual PM<sub>2.5</sub> concentration and HI values are based on an annual maximum risk for the entirety of the project. As shown in Table 7, the unmitigated maximum cancer risks from construction activities at the MEI location would exceed the BAAQMD single-source significance threshold. However, with the incorporation of the *Mitigation Measure AQ-1 and AQ-2*, the mitigated risk and hazard values would reduce emissions such that cancer risk caused by construction would not exceed the BAAQMD single-source significance thresholds. In addition, *Mitigation Measure AQ-1 and AQ-2* would be required to reduce the project’s risk impacts to the future on-site project receptors, as discussed further in the report. The unmitigated PM<sub>2.5</sub> concentration and HI at the MEI do not exceed their respective BAAQMD single-source significance thresholds.

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

Source		Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
Project Construction	Unmitigated	<b>11.08 (infant)</b>	0.15	0.01
	Mitigated*	3.52 (infant)	0.06	<0.01
<b>BAAQMD Single-Source Threshold</b>		<b>10</b>	<b>0.3</b>	<b>1.0</b>
<i>Exceed Threshold?</i>	Unmitigated	<b>Yes</b>	<i>No</i>	<i>No</i>
	Mitigated*	<i>No</i>	<i>No</i>	<i>No</i>

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

**Figure 1. Locations of Project Construction Sites, Off-Site Sensitive Receptors, Moffett Federal Airfield Wind-Rose, and Maximum TAC Location (MEI)**

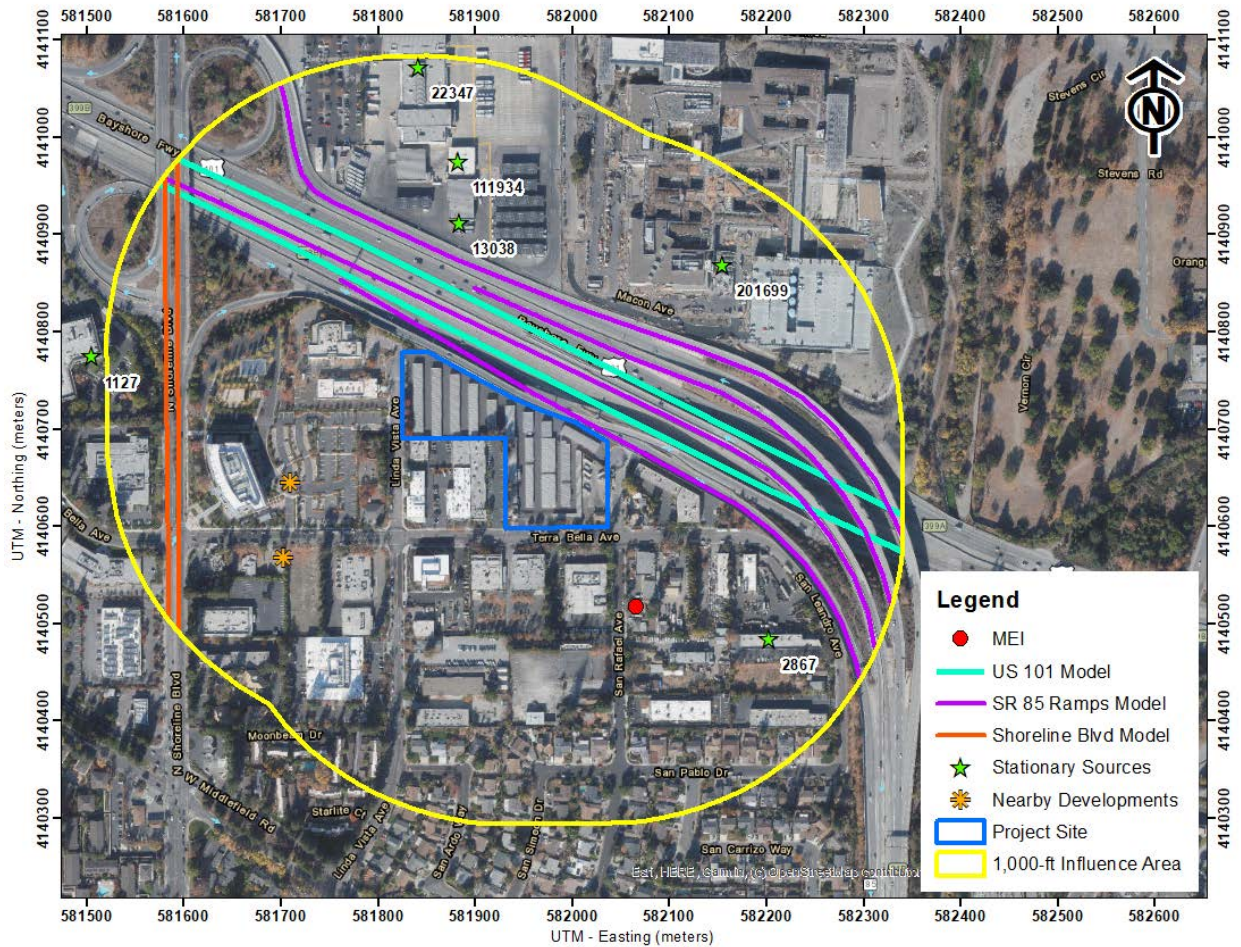


### Cumulative Community Risks of all TAC Sources at the Off-Site Project MEI

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

A review of the project area based on provided traffic information indicated that traffic on U.S. Highway 101 (U.S. 101), State Route 85 (S.R. 85) Ramps, and Shoreline Boulevard would exceed 10,000 vehicles per day. Other nearby streets would have less than 10,000 vehicles per day. A review of BAAQMD’s stationary source map website identified six stationary sources with the potential to affect the project MEI. In addition, there are several development projects whose construction would contribute to the cumulative risk. The risk impacts from these developments are included within the analysis. Figure 2 shows the location of the sources affecting the MEI. Community risk impacts from these sources upon the MEI are 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<sub>2.5</sub> Sources**



Highways and Local Roadways – U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard

A refined analysis of potential health impacts from vehicle traffic on U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard was conducted since the roadway was 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 roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs and PM<sub>2.5</sub>. The associated cancer risks and PM<sub>2.5</sub> are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

*Emission Rates*

This analysis involved the development of DPM, organic TACs, and PM<sub>2.5</sub> emissions for traffic on the U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM.<sup>27</sup> Emission processes

<sup>27</sup> The version CT-EMFAC2017 was used in the analysis because Caltrans has not yet release a CT-EMFAC version with the updated EMFAC2021 emissions that would provide TAC emission rates.

modeled include running exhaust for DPM, PM<sub>2.5</sub> and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for PM<sub>2.5</sub>. All PM<sub>2.5</sub> emissions from all vehicles were used, rather than just the PM<sub>2.5</sub> fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce PM<sub>2.5</sub>. Additionally, PM<sub>2.5</sub> emissions from vehicle tire and brake wear and from re-entrained roadway dust were included. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road (i.e., freeway and major/collector), Caltrans estimated local truck mix on U.S. 101 and S.R. 85 and truck percentage for non-state highways in Santa Clara County (3.51 percent),<sup>28</sup> traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2024 – construction start year), and season (annual).

In order to estimate TAC and PM<sub>2.5</sub> emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the project MEI, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2024 (project construction 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 CT-EMFAC2017. Year 2024 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

A review of the traffic information reported by Caltrans and adjusted to increase 1 percent per year indicates that U.S. 101 traffic includes 202,801 vehicles per day (based on an annual average)<sup>29</sup> that are about 4.5 percent trucks, of which 2.0 percent are considered diesel heavy duty trucks and 2.5 percent are medium duty trucks.<sup>30</sup> The S.R. 85 traffic includes 67,600 vehicles per day (based on an annual average) that are about 2.0 percent trucks, of which 1.3 percent are considered diesel heavy duty trucks and 0.7 percent are medium duty trucks. Hourly traffic distributions specific to these segments of U.S. 101 and S.R.85 were obtained from Caltrans Performance Measurement System (PeMS). PeMS data is collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.<sup>31</sup> The fraction of traffic volume each hour was calculated and applied to the 2022 ADT volumes estimate to estimate hourly traffic emission rates for U.S. 101 and S.R.85. For all hours of the day, an average speed of 60 mph was assumed for all vehicles.

The ADT for Shoreline Boulevard were based on AM and PM peak-hour background traffic volumes for the nearby roadway provided by the project's traffic data.<sup>32</sup> The calculated ADT on Shoreline Boulevard would be 29,045 vehicles. Average hourly traffic distributions for Santa Clara

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<sup>28</sup> BAAQMD, 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>

<sup>29</sup> Caltrans. 2022. *2020 Traffic Volumes California State Highways*. Web: <https://dot.ca.gov/programs/traffic-operations/census>

<sup>30</sup> Caltrans. 2022. *2020 Annual Average Daily Truck Traffic on the California State Highway System*. Web: <https://dot.ca.gov/programs/traffic-operations/census>.

<sup>31</sup> <https://dot.ca.gov/programs/traffic-operations/mpr/pems-source>

<sup>32</sup> Hexagon Transportation Consultants, Inc., *1020-1040 Terra Bella Avenue Transportation Analysis*, August 26, 2022.



County roadways were developed using the EMFAC model,<sup>33</sup> 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 average speeds of 30 mph on Shoreline Boulevard were assumed for all vehicles, 5 mph below the posted speed limit on the roadways to account for commute congestion and the amount of access in the area.

### *Dispersion Modeling*

Dispersion modeling of TAC and PM<sub>2.5</sub> emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.<sup>34</sup> TAC and PM<sub>2.5</sub> emissions from traffic on U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadways was modeled using a series of volume sources along a line (line volume sources); with line segments used for opposing travel directions on each roadway. The same meteorological data and off-site sensitive receptor MEI locations from the previous project impact dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations, elevations, and heights. Roadway elevations were based on USGS National Elevation Data (NED) with a 10-meter resolution. Annual TAC and PM<sub>2.5</sub> concentrations for 2024 from traffic on the roadways were calculated using the model. Concentrations were calculated at the project MEI with receptor heights of 5 feet (1.5 meters) to represent the breathing heights at the MEI receptor.

### *Computed Cancer and Non-Cancer Health Impacts*

This analysis involved the development of DPM, organic TACs, and PM<sub>2.5</sub> emissions for future traffic on U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard, and using these emissions with an air quality dispersion model to calculate TAC and PM<sub>2.5</sub> concentrations at the project MEI receptor locations. Maximum increased lifetime cancer risks and annual PM<sub>2.5</sub> concentrations for the receptors were then computed using modeled TAC and PM<sub>2.5</sub> concentrations and BAAQMD methods and exposure parameters described in *Attachment 1*.

The cancer risk, PM<sub>2.5</sub> concentration, and HI impacts from U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard 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 U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard traffic are provided in *Attachment 5*.

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<sup>33</sup> 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.

<sup>34</sup> BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

## BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2020* GIS website,<sup>35</sup> 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. Six sources were identified within 1,000 feet of the project site using this tool with three sources being diesel generators, one source being a gas dispensing facility, and two being other generic sources. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided updated emissions data and risk values.<sup>36</sup>

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

## Construction Risk Impacts from Nearby Developments

Based on the City's project website,<sup>37</sup> the following planned or approved projects are located within 1,000 feet of the proposed project:

- **1001 N. Shoreline Boulevard** – this residential project site is located at 1001 N. Shoreline Boulevard and is approximately 150 feet west of the proposed project site. The project consists of two residential buildings totaling 303 dwelling units and a parking structure. Construction for the 1001 N. Shoreline Boulevard project has started and is expected to continue through 2024, which means there could be overlapping periods with the proposed project. While the construction schedules may change for both projects, construction could occur simultaneously.
- **1155 & 1185 Terra Bella Avenue** – this office project site is located at • 1155 & 1185 Terra Bella Avenue and is approximately 400 feet southwest of the proposed project site. The project consists of a 3-story, 20,000 square foot office building with a surface parking lot. Construction for the 1155 & 1185 Terra Bella Avenue project is expected to occur from 2024-2025, which means there could be overlapping periods with the proposed project. While construction has not yet started, construction could occur simultaneously.

The mitigated construction risks and hazard impact values for some of the developments were available from their air quality technical reports either conducted by *Illingworth & Rodin, Inc.* or on the City's project website with associated EIRs. For developments that did not have available construction impact results at the time of this study, it was assumed the maximum construction risks at sensitive receptors would be less than the BAAQMD single-source thresholds for

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<sup>35</sup> BAAQMD, Web:

<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3>

<sup>36</sup> Correspondence with Matthew Hanson, Environmental Planner II, BAAQMD, June 9, 2022.

<sup>37</sup> City of Mountain View, *Current Project List*, August 2022. Web:  
<https://www.mountainview.gov/depts/comdev/planning/activeprojects/list.asp>

community risks and hazards. 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 Risks at the Project MEI**

Table 8 reports both the project and cumulative community risk impacts at the sensitive receptor most affected by project construction (i.e., the MEI). The project would have an exceedance with respect to community risk caused by project construction activities, since the maximum unmitigated cancer risk exceeds the BAAQMD single-source threshold. With the implementation of *Mitigation Measure AQ-1 and AQ-2*, the project's cancer risks would be lowered to a level below the single-source thresholds. In addition, *Mitigation Measure AQ-1 and AQ-2* would be required to reduce the project's risk impacts to the future on-site project receptors, as discussed further in the report. The combined annual PM<sub>2.5</sub> concentration, which includes unmitigated and mitigated impacts, would exceed its cumulative thresholds due to the concentration from the existing TAC sources and simultaneous construction of nearby developments. The cumulative threshold would be exceeded in the case where all construction activity occurs simultaneously. The combined cancer risk and HI, unmitigated and mitigated, would not exceed the cumulative thresholds.

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

Source		Cancer Ris (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
<b>Project Impacts</b>				
Project Construction	Unmitigated	<b>11.08 (infant)</b>	0.15	0.01
	Mitigated	3.52 (infant)	0.06	<0.01
<b>BAAQMD Single-Source Threshold</b>		<b>10</b>	<b>0.3</b>	<b>1.0</b>
<i>Exceed Threshold?</i>	Unmitigated	<i>Yes</i>	<i>No</i>	<i>No</i>
	Mitigated	<i>No</i>	<i>No</i>	<i>No</i>
<b>Cumulative Sources</b>				
U.S. 101, ADT 202,801		11.83	0.54	<0.01
S.R. 85, ADT 67,600		2.44	0.15	<0.01
Shoreline Blvd, ADT 29,045		0.14	0.01	<0.01
Teledyne Microwave (Facility ID #1127, Manufacturing), MEI at +1,000 feet.		-	-	-
Sankt Andreas Backhaus (Facility ID #2867, Oven), MEI at 330 feet.		<0.01	-	-
Santa Clara Valley Transportation Authority (Facility ID #13038, Generator), MEI at +1,000 feet.		0.24	-	<0.01
New Cingular Wireless PCS LLC dba AT&T Mobility (Facility ID #22347, Generators), MEI at +1,000 feet.		0.05	-	-
Santa Clara VTA. (Facility ID #111934, Gas Dispensing Facility), MEI at +1,000 feet.		<0.01	-	-
Microsoft Corporation (Facility ID #201699, Generator), MEI at 960 feet.		1.13	<0.01	<0.01
1001 N. Shoreline Boulevard Mitigated Construction Emissions – 150 feet west		<5.40	<0.08	<0.01
1155 & 1185 Terra Bella Avenue Mitigated Construction Emissions – 400 feet southwest		<10.0	<0.30	<1.00
<i>Combined Sources</i>	Unmitigated	<42.33	<b>&lt;1.24</b>	<1.07
	Mitigated	<34.77	<b>&lt;1.15</b>	<1.07
<b>BAAQMD Cumulative Source Threshold</b>		<b>100</b>	<b>0.8</b>	<b>10.0</b>
<i>Exceed Threshold?</i>	Unmitigated	<i>No</i>	<i>Yes</i>	<i>No</i>
	Mitigated	<i>No</i>	<i>Yes</i>	<i>No</i>

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

Implement a feasible plan to reduce DPM emissions by 60 percent such that increased cancer risk from construction would be reduced below TAC significance level 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 PM (PM<sub>10</sub> and PM<sub>2.5</sub>), 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 a 60 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

- b. Use of electrical or non-diesel fueled equipment.
2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 60 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

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

#### *Effectiveness of Mitigation Measure AQ-1 and AQ-2*

CalEEMod was used to compute emissions associated with this mitigation measure assuming that all equipment met U.S. EPA Tier 4 Interim engines standards were used along with standard BAAQMD best management practices for construction were included. With these measures implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 68 percent to 3.52 chances per million and would no longer exceed the single-source threshold. The mitigated combined PM<sub>2.5</sub> concentration would be reduced to less than 1.15 µg/m<sup>3</sup> but would still exceed the cumulative threshold due to the overwhelming contribution of non-project sources.

*Mitigation Measure AQ-1 and AQ-2* represent the best available measures to reduce project construction period emissions. The PM<sub>2.5</sub> concentration from existing sources and potential simultaneous nearby developments alone exceed the cumulative threshold at 1.09 µg/m<sup>3</sup>. Cumulative risks exceed the PM<sub>2.5</sub> concentration threshold because of the influence from local roadways and the potentially simultaneous nearby developments at the MEI. The project's mitigated PM<sub>2.5</sub> concentration represents 5 percent of the total mitigated cumulative concentration. In addition, according to BAAQMD, health risks would be less-than-significant to the MEI if the risks from the project are reduced below the single-source thresholds.<sup>38</sup> Therefore, the project would not substantially contribute to the total cumulative PM<sub>2.5</sub> concentration. The project would not be cumulatively considerable and additional mitigation would not be required on the part of the project to mitigate the exceedance of the cumulative source threshold for annual PM<sub>2.5</sub>

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<sup>38</sup> Correspondence with Areana Flores, MSc, Environmental Planner, BAAQMD, February 23, 2021.

concentration. Note that the project would apply best practices in reducing construction emissions, including those of PM<sub>2.5</sub>.

### **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 that the phased construction emissions from the proposed project and the existing TAC sources would have on the new proposed sensitive receptors (residents) that the project would introduce. The same TAC sources identified above were used in this health risk assessment.<sup>39</sup> BAAQMD's recommended thresholds for health risks and hazards, shown in Table 1, are used to evaluate on-site exposure. Figure 3 shows the on-site sensitive receptors in relation to the project's phased construction and nearby TAC sources. All on-site community risk results are listed in Table 9. *Attachment 5* includes the dispersion modeling and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

#### Project Phased Construction

Project residents could occupy a building once it has completed construction. Therefore, it was assumed that the Residential Building and the one unit in Storage Building 1 would have sensitive receptors during the construction of the Storage Building 2. The construction analysis for the project residents was conducted in the same manner as described above for the off-site MEI. Receptors were placed within each affected residential area and were spaced every 23 feet (7 meter). Project impacts were modeled at receptor heights of 5 feet (1.5 meters), 21 feet (6.4 meters), and 34 feet (10.4 meters) representing sensitive receptors on the first through third residential levels of the respective buildings. 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 residential areas for 24 hours per day for 350 days per year. Maximum construction impacts would occur at the second-floor level of the Residential Building, as shown in Figure 3. The project construction 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*.

#### Highways and Local Roadways – U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard

The roadway analysis for the project residents was conducted in the same manner as described above for the off-site MEI. However, year 2027 (operational year) emission factors were conservatively assumed as being representative of future conditions, instead of 2024 (construction year). An analysis based on 2027 resulted in an increased ADT on U.S. 101 of 208,651 vehicles, on S.R. 85 Ramps of 69,550 vehicles, and on Shoreline Boulevard of 29,899 vehicles. Roadway

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<sup>39</sup> 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.

cancer risk calculations were conducted in the same manner as described above for the on-site construction risk. The highest impacts from the highways/roadways occurred at single-unit in the Storage Building on first-floor receptor. The portions of U.S. 101, S.R. 85 Ramps, and Shoreline Boulevard included in the modeling are shown in Figure 3. 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*.

### 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

Construction of the nearby developments would be completed by the time the residential portion of the proposed project is operational, based on construction schedules. Therefore, construction impacts from the nearby developments on the proposed project sensitive receptors were not evaluated.

### Summary of Cumulative Community Risks at the Project Site

Community risk impacts from both project construction scenarios and existing TAC sources upon the project sites' Residential Building receptors and manager's unit in Storage Building 1 are reported in Tables 9a and 9b, respectively. 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 project construction sources' unmitigated cancer risk impacts exceed the single-source thresholds at the Residential Building receptors, but not the cumulative-source thresholds. Implementation of *Mitigation Measures AQ-1 and AQ-2* would reduce cancer risks below the single-source thresholds. In addition, the maximum cancer risk and annual PM<sub>2.5</sub> concentration exceeds the BAAQMD single-source thresholds at both the Residential Building receptors and the Manager's Unit in Storage Building 1 due to traffic on the highways and causes the combined annual PM<sub>2.5</sub> concentration exceeds the BAAQMD cumulative-source thresholds. The annual HI from the project's unmitigated and mitigated impacts, as well as the impacts from the other nearby sources, do not exceed the single- and cumulative-source thresholds.

**Table 9a. Cumulative Community Risk Impacts Upon the Residential Building Sensitive Receptors**

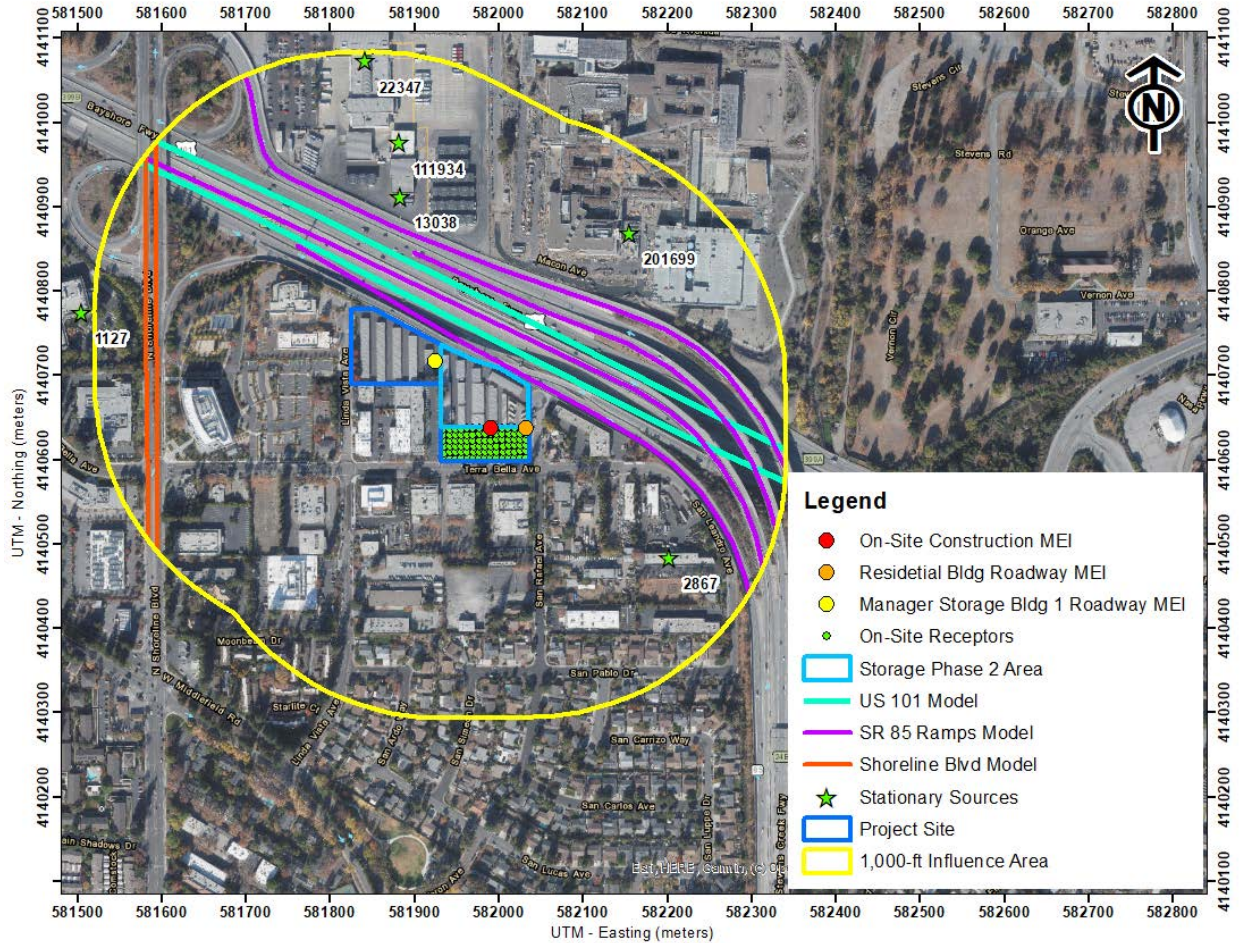
Source		Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
<b>Project Sources</b>				
Construction Impacts	Unmitigated	<b>21.84</b>	0.27	0.02
	Mitigated	4.67	0.09	0.01
<b>Cumulative Sources</b>				
U.S. 101, ADT 208,651	Without MERV16	<b>22.46</b>	<b>1.14</b>	<0.01
	With MERV16	7.59	0.23	<0.01
S.R. 85, ADT 69,550	Without MERV16	4.78	<b>0.34</b>	<0.01
	With MERV16	1.91	0.07	<0.01
Shoreline Blvd, ADT 29,899	Without MERV16	0.22	0.02	<0.01
	With MERV16	0.11	<0.01	<0.01
Teledyne Microwave (Facility ID #1127, Manufacturing), Project Site at +1,000 feet.		-	-	-
Sankt Andreas Backhaus (Facility ID #2867, Oven), Project Site at +1,000 feet.		<0.01	-	-
Santa Clara Valley Transportation Authority (Facility ID #13038, Generator), Project Site at 630 feet.		0.49	-	<0.01
New Cingular Wireless PCS LLC dba AT&T Mobility (Facility ID #22347, Generators), Project Site at 900 feet.		0.05	-	-
Santa Clara VTA. (Facility ID #111934, Gas Dispensing Facility), Project Site at 800 feet.		<0.01	-	-
Microsoft Corporation (Facility ID #201699, Generator), Project Site at 600 feet.		2.55	<0.01	<0.01
<b>BAAQMD Single-Source Threshold</b>		<b>10</b>	<b>0.3</b>	<b>1.0</b>
<b>Exceed Threshold?</b>	Unmitigated/Without MERV16	<b>Yes</b>	<b>Yes</b>	<b>No</b>
	Mitigated/With MERV16	<b>No</b>	<b>No</b>	<b>No</b>
Combined Sources	Unmitigated/Without MERV16	<52.41	<b>&lt;1.78</b>	<0.07
	Mitigated/With MERV16	<17.39	<0.41	<0.06
<b>BAAQMD Cumulative Source Threshold</b>		<b>100</b>	<b>0.8</b>	<b>10.0</b>
<b>Exceed Threshold?</b>	Unmitigated/Without MERV16	<b>No</b>	<b>Yes</b>	<b>No</b>
	Mitigated/With MERV16	<b>No</b>	<b>No</b>	<b>No</b>



**Table 9b. Cumulative Community Risk Impacts Upon the Manager's Unit in Storage Building 1**

Source		Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
<b>Project Sources</b>				
Construction Impacts	Unmitigated	2.24	0.11	<0.01
	Mitigated	0.48	0.05	<0.01
<b>Cumulative Sources</b>				
U.S. 101, ADT 208,651	Without MERV16	<b>28.69</b>	<b>1.50</b>	0.01
	With MERV16	9.82	0.30*	<0.01
S.R. 85, ADT 69,550	Without MERV16	5.78	<b>0.42</b>	<0.01
	With MERV16	2.35	0.08	<0.01
Shoreline Blvd, ADT 29,899	Without MERV16	0.21	0.02	<0.01
	With MERV16	0.10	<0.01	<0.01
Teledyne Microwave (Facility ID #1127, Manufacturing), Project Site at +1,000 feet.		-	-	-
Sankt Andreas Backhaus (Facility ID #2867, Oven), Project Site at +1,000 feet.		<0.01	-	-
Santa Clara Valley Transportation Authority (Facility ID #13038, Generator), Project Site at 630 feet.		0.49	-	<0.01
New Cingular Wireless PCS LLC dba AT&T Mobility (Facility ID #22347, Generators), Project Site at 900 feet.		0.05	-	-
Santa Clara VTA. (Facility ID #111934, Gas Dispensing Facility), Project Site at 800 feet.		<0.01	-	-
Microsoft Corporation (Facility ID #201699, Generator), Project Site at 600 feet.		2.55	<0.01	<0.01
<b>BAAQMD Single-Source Threshold</b>		<b>10</b>	<b>0.3</b>	<b>1.0</b>
<b>Exceed Threshold?</b>	Unmitigated/Without MERV16	<b>Yes</b>	<b>Yes</b>	<b>No</b>
	Mitigated/With MERV16	<b>No</b>	<b>No*</b>	<b>No</b>
Combined Sources	Unmitigated/Without MERV16	<40.03	<b>&lt;2.06</b>	<0.06
	Mitigated/With MERV16	<15.86	<0.45	<0.06
<b>BAAQMD Cumulative Source Threshold</b>		<b>100</b>	<b>0.8</b>	<b>10.0</b>
<b>Exceed Threshold?</b>	Unmitigated/Without MERV16	<b>No</b>	<b>Yes</b>	<b>No</b>
	Mitigated/With MERV16	<b>No</b>	<b>No</b>	<b>No</b>
* Mitigated PM <sub>2.5</sub> concentration from U.S. 101 is at, but not exceeding, the single-source threshold.				

**Figure 3. Locations of Project Site, On-Site Residential Receptors, Roadway Segments Evaluated, Nearby TAC and PM<sub>2.5</sub> Sources, and Maximum TAC Impacts**



### Recommended Design Features to Reduce Project Receptor Exposure

Filtration in ventilation systems at the project site are recommended to reduce the level of harmful contaminants and pollutants to below the thresholds. The significant exposure for new project receptors is judged by two effects: (1) increased cancer risk, and (2) annual PM<sub>2.5</sub> concentration. Exposure to maximum cancer risk and annual PM<sub>2.5</sub> concentrations from U.S. 101 and S.R. 85 Ramps are above the BAAQMD single-source thresholds for both increased cancer risk and annual PM<sub>2.5</sub> concentrations. Cancer risk is mostly the result of exposure to diesel particulate matter, although, gasoline vehicle exhaust contributes to this effect. Annual PM<sub>2.5</sub> concentrations are based on the exposure to PM<sub>2.5</sub> 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<sub>2.5</sub> exposure to future residents drives the recommended design features to reduce project receptor exposure. Reducing particulate matter exposure would reduce both annual PM<sub>2.5</sub> exposures and cancer risk.

The project shall include the following measures to minimize long-term increased cancer risk and annual PM<sub>2.5</sub> exposure for new project occupants:

1. Install air filtration for the Residential Building and at the manager's unit if included in Storage Building 1. Air filtration devices shall be rated MERV16 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 MERV16 would achieve a 90-percent reduction for small particulates.<sup>40</sup> 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 90-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 MERV16 filtration system would be about 80-percent for PM<sub>2.5</sub> exposure. At the Residential Building receptors, this would reduce the cancer risk to 7.59 chances per million and the maximum annual PM<sub>2.5</sub> concentration to 0.23 µg/m<sup>3</sup> from U.S. 101. For S.R. 85 Ramps, this would reduce the maximum annual PM<sub>2.5</sub> concentration to 0.07 µg/m<sup>3</sup>. At the Manager's Unit in Storage Building 1, this would reduce the cancer risk to 9.82 chances per million and the maximum annual PM<sub>2.5</sub> concentration to 0.30 µg/m<sup>3</sup> from U.S. 101. For S.R. 85 Ramps, this would reduce the maximum annual PM<sub>2.5</sub> concentration to 0.08 µg/m<sup>3</sup>.

With this recommended design feature, impacts from U.S. 101 and S.R. 85 Ramps would be below its respective single-source threshold and the combined PM<sub>2.5</sub> concentration would be below the cumulative-source threshold at the Residential Building receptors. At the Manager's Unit in Storage Building 1, impacts from S.R. 85 Ramps would be below its respective single-source threshold and the combined PM<sub>2.5</sub> concentration would be below the cumulative-source threshold.

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<sup>40</sup> 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](http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en)

# GREENHOUSE GAS EMISSIONS

## Setting

Greenhouse gases (GHGs) are chemical compounds that trap heat in the earth's atmosphere, raising its temperature. The most common GHGs are carbon dioxide (CO<sub>2</sub>) and water vapor but there are also several others, most importantly methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are byproducts of fossil fuel combustion.
- N<sub>2</sub>O is associated with agricultural operations such as fertilization of crops.
- CH<sub>4</sub> is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO<sub>2</sub> being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO<sub>2</sub> equivalents (CO<sub>2</sub>e).

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

## Federal and State Regulatory Actions for GHG Emissions

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

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

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

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

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

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO<sub>2</sub>e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, due to the economic downturn, to 545 MMT of CO<sub>2</sub>e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO<sub>2</sub>e. Thus, an estimated reduction of 80 MMT of CO<sub>2</sub>e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

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

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California’s 2017 Climate Change Scoping Plan*.<sup>41</sup> While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB has drafted a 2022 Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2022 draft plan:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at

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<sup>41</sup> California Air Resource Board, 2017. *California’s 2017 Climate Change Scoping Plan: The Strategy for Achieving California’s 2030 Greenhouse Gas Targets*. November. Web: [https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf)

least 40 percent below 1990 emissions by 2030.

- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 or earlier.
- Focuses on strategies for reducing California’s dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California’s most impacted communities as a driving principle.
- Incorporates the contribution of natural and working lands to the state’s GHG emissions, as well as its role in achieving carbon neutrality.
- Relies on the most up to date science, including the need to deploy all viable tools, including carbon capture and sequestration as well a direct air capture.
- Evaluates multiple options for achieving our GHG and carbon neutrality targets, as well as the public health benefits and economic impacts associated with each.

The draft Scoping Plan Update was published on May 10, 2022 and, once final, will lay out how the state can get to carbon neutrality by 2045 or earlier. It is also the first Scoping Plan that adds carbon neutrality as a science-based guide and touchstone beyond statutorily established emission reduction targets.<sup>42</sup>

The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The 2022 Draft Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and to not only obtain the statewide goals, but cost-effectively achieve carbon-neutrality by 2045 or earlier. In the draft 2022 Scoping Plan, CARB recommends:

- VMT per capita reduced 12% below 2019 levels by 2030 and 22% below 2019 levels by 2045.
- 100% of Light-duty vehicle sales are zero emissions vehicles (ZEV) by 2035.
- 100% of medium duty/heavy duty vehicle sales are ZEV by 2040.
- 100% of passenger and other locomotive sales are ZEV by 2030.
- 100% of line haul locomotive sales are ZEV by 2035.
- All electric appliances in new residential and commercial building beginning 2026 (residential) and 2029 (commercial).
- 80% of residential appliance sales are electric by 2030 and 100% of residential appliance sales are electric by 2035.
- 80% of commercial appliance sales are electric by 2030 and 100% of commercial appliance sales are electric by 2045.

### *Executive Order B-55-18 – Carbon Neutrality*

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant

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<sup>42</sup> <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal. The Draft 2022 Scoping Plan Update addresses EO B-55-18 and would cost-effectively achieve carbon-neutrality by 2045 or earlier.

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

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g., Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

#### *Senate Bill 350 - Renewable Portfolio Standards*

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

#### *Senate Bill 100 – Current Renewable Portfolio Standards*

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

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

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.<sup>43</sup> The CALGreen Code encourages sustainable

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<sup>43</sup> See: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020>.

construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1, 2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.<sup>44</sup>

CEC studies have identified the most aggressive electrification scenario as putting the building sector on track to reach the carbon neutrality goal by 2045.<sup>45</sup> Installing new natural gas infrastructure in new buildings will interfere with this goal. To meet the State's goal, communities have been adopting "Reach" codes that prohibit natural gas connections in new and remodeled buildings.

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations and are regularly updated on a 3-year cycle. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CalGreen standards have recently been updated (2022 version) to require deployment of additional EV chargers in various building types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness and the actual installation of EV chargers. The 2022 CALGreen standards include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions. Providing EV charging infrastructure that meets current CALGreen requirements will not be sufficient to power the anticipated more extensive level of EV penetration in the future that is needed to meet SB 30 climate goals.

### *SB 743 Transportation Impacts*

Senate Bill 743 required lead agencies to abandon the old "level of service" metric for evaluating a project's transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. In response, the Governor's Office of Planning and Research (OPR) developed a VMT metric that considered other factors such as reducing GHG emissions and developing

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<sup>44</sup> See: [https://www.energy.ca.gov/sites/default/files/2020-03/Title\\_24\\_2019\\_Building\\_Standards\\_FAQ\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf)

<sup>45</sup> California Energy Commission. 2021. *Final Commission Report: California Building Decarbonization Assessment*. Publication Number CEC-400-2021-006-CMF. August



multimodal transportation<sup>46</sup>. A VMT-per-capita metric was adopted into the CEQA Guidelines Section 15064.3 in November 2017. Given current baseline per-capita VMT levels computed by CARB in the 2030 Scoping Plan of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 climate goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. *Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per capita VMT as an appropriate threshold of significance for evaluating transportation impacts.*

## Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2022, total gross nationwide GHG emissions were 5,215.6 million metric tons (MMT) carbon dioxide equivalent (CO<sub>2</sub>e).<sup>47</sup> These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2019 emissions.<sup>48</sup> In 2019, GHG emissions from statewide emitting activities were 418.2 MMT CO<sub>2</sub>e. The 2019 emissions have decreased by 30 percent since peak levels in 2007 and are 7.2 MMT CO<sub>2</sub>e lower than 2018 emissions level and almost 13 MMT CO<sub>2</sub>e below the State's 2020 GHG limit of 431 MMT CO<sub>2</sub>e. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 MT CO<sub>2</sub>e per person to 10.5 MT CO<sub>2</sub>e per person in 2019. The most recent Bay Area emission inventory was computed for the year 2011.<sup>49</sup> The Bay Area GHG emissions were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011.

## City of Mountain View

### *GHG Reduction Program*

The City of Mountain View adopted a qualified GHG reduction program (GGRP) in August 2012.<sup>50</sup> This program meets the requirements of a GHG Reduction Strategy under State CEQA Guidelines Section 15183.5. The program includes 5 strategies and 20 measures that will enable the City to achieve a communitywide emissions efficiency (per-service population – residents and full-time employees) of 15 to 20 percent over 2005 levels by 2020 and of 30 percent over 2005 levels by 2030. The GGRP goals are updated every three to five years using sustainability action plans (SAPs) to augment the 2030 General Plan Action Plan actions, to assess if it is achieving its goal of reducing GHG emissions, and to review the City's overall strategy for GHG emission reductions. The most current SAP is from 2019.

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<sup>46</sup> Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December.

<sup>47</sup> United States Environmental Protection Agency, 2022. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020*. February. Web: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

<sup>48</sup> CARB. 2021. *California Greenhouse Gas Emission for 2000 to 2019*. Web: [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2019/ghg\\_inventory\\_trends\\_00-19.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf)

<sup>49</sup> BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: [http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011\\_ghgsummary.pdf](http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf).

<sup>50</sup> AECOM. 2012. *City of Mountain View Greenhouse Gas Reduction Program*. August. Web: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10700>

## *Climate Protection Roadmap*

The 2015 Climate Protection Roadmap (CPR)<sup>51</sup> identifies strategies and mechanisms to reduce community-wide greenhouse gas emissions 80% by 2050. Their CAP from 2012 did not contain actions strong enough to achieve the City's adopted absolute targets (5% below 2005 baseline levels by 2012, 10% below 2005 baseline levels by 2015, 15–20% below 2005 baseline levels by 2020, 80% below 2005 baseline levels by 2050). The City recognized the incongruence of the efficiency targets used within their CAP and sought to resolve the issue by conducting a study to evaluate the feasibility of achieving the adopted targets. The City initiated the CPR for this purpose. The CPR is not a plan in and of itself, but an analysis that may be used by City officials to evaluate the potential for long-term communitywide emission reduction initiatives moving forward. Due to the high-level nature of the analysis, the CPR does not explicitly direct implementation of any specific city actions. However, it outlines viable options for future city programs, policies, and actions that could be pursued following additional feasibility analysis.

## *2019 Mountain View Green Building and Reach Codes*

On November 12, 2019, the City adopted the Mountain View Green Building Code amendments,<sup>52</sup> which includes a Reach Codes for new construction. Reach Codes exceed the State's minimum energy code requirements. Included in the City's Reach Codes is a requirement that new buildings be all-electric. Natural gas use in buildings is one of the largest sources of GHG emissions in Mountain View, so meeting their GHG reduction goals requires reducing this source of emissions. The City provides a worksheet to help new construction projects meet their new building code amendments and reach code.

## *Carbon Neutrality Resolution*

In April 2020, the City Council passed a resolution for Mountain View to become a carbon neutral city by 2045.<sup>53</sup> This means that in addition to achieving the adopted 2045 GHG reduction target of 75% below 2005 levels, Mountain View has committed to balancing any remaining GHG emissions with carbon sequestration projects and/or carbon offsets.

## BAAQMD GHG Significance Thresholds

On April 20, 2022, BAAQMD adopted new thresholds of significance for operational GHG emissions from land use projects for projects beginning the CEQA process. The following framework is how BAAQMD will determine GHG significance moving forward.<sup>54</sup> Note BAAQMD intends that the thresholds apply to projects that begin the CEQA process after adoption

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<sup>51</sup> City of Mountain View, [Climate Protection Roadmap](https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=19516), September 2015. Web: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=19516>

<sup>52</sup> City of Mountain View, *2019 MOUNTAIN VIEW GREEN BUILDING AND REACH CODES*, 2019. Web: [https://www.mountainview.gov/depts/comdev/building/construction/2019\\_mountain\\_view\\_green\\_building\\_and\\_reach\\_codes.asp](https://www.mountainview.gov/depts/comdev/building/construction/2019_mountain_view_green_building_and_reach_codes.asp)

<sup>53</sup> City of Mountain View, *Carbon Neutrality Resolution*, April 2020. Web: <file:///C:/Users/cdivine/Downloads/ATT%201%20-%20Resolution.pdf>

<sup>54</sup> Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. Web: [https://www.baaqmd.gov/~/\\_media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en](https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en)

of the thresholds, unless otherwise directed by the lead agency. The new thresholds of significance are:

- A. Projects must include, at a minimum, the following project design elements:
  - a. Buildings
    - i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
    - ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
  - b. Transportation
    - i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
      - 1. Residential Projects: 15 percent (16.8 percent in Petaluma) below the existing VMT per capita
      - 2. Office Projects: 15 percent below the existing VMT per employee
      - 3. Retail Projects: no net increase in existing VMT
    - ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Any new land use project would have to include either section A or B from the above list, not both, to be considered in compliance with BAAQMD's GHG thresholds of significance.

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

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

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Although the City of Mountain View has adopted a qualified GHG reduction strategy that meets the State CEQA Guidelines Section 15183.5 and BAAQMD GHG Threshold B, this project involves a General Plan Amendment. Therefore, the GHG impacts of the proposed project were analyzed using the new BAAQMD GHG Threshold A.

The proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. To avoid interference with statewide GHG reduction measures identified in CARB's Scoping Plan and SB 100 goals, the project would include the following standard requirements:

1. Avoid construction of new natural gas connections for the residential building,
  - Conforms – compliance with City Reach Code would prohibit natural gas infrastructure in new buildings and be 100 percent electric.
2. Avoid wasteful or inefficient use of electricity,
  - Conforms – would meet CALGreen Building Standards Code requirements that are considered to be energy efficient.
3. Include electric vehicle charging infrastructure that meets current Building Code CALGreen Tier 2 compliance, and
  - Conforms – project would include 16 electric vehicle charging stations and 89 other stalls that would be pre-wired to be converted into electric vehicle charging stations in the future, also meeting the City's Green Building Code EV requirement, which requires a minimum of 15% of parking spaces for residential and non-residential projects.
4. Reduce VMT per service population by 15 percent over regional average.
  - Conforms – The project would meet the City of Mountain View's VMT screening criteria, since the residential portion would be 100% affordable and the storage facility portion is assumed to be local-serving and below equivalent land-use screening sizes. The traffic analysis concluded that the project would result in a less than significant impact on VMT and therefore the project conforms to this measure.

## **Supporting Documentation**

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

*Attachment 2* includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for existing and 2030 uses are also included in this attachment. Also included are any modeling assumptions.

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

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

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

## Attachment 1: Health Risk Calculation Methodology

### 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.<sup>53</sup> 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.<sup>54</sup> 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.<sup>55</sup> 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, 95<sup>th</sup> percentile breathing rates are used for the third trimester and infant exposures, and 80<sup>th</sup> percentile breathing rates for child and adult exposures. For children at schools

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<sup>53</sup> 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.

<sup>54</sup> CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

<sup>55</sup> BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

and daycare facilities, BAAQMD recommends using the 95<sup>th</sup> percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

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:

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

Where:

CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

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)

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

Where:

C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

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<sup>-6</sup> = Conversion factor

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

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

Parameter	Exposure Type →	Infant		Child	Adult
	Age Range →	3 <sup>rd</sup> Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day) <sup>-1</sup>		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80 <sup>th</sup> Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95 <sup>th</sup> Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95 <sup>th</sup> 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*

\* For worker exposures (adult) the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

### Non-Cancer Hazards

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

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

### Annual PM<sub>2.5</sub> Concentrations

While not a TAC, fine particulate matter (PM<sub>2.5</sub>) 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<sub>2.5</sub> (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM<sub>2.5</sub> impacts, the contribution from all sources of PM<sub>2.5</sub> emissions should be included. For projects with potential impacts from nearby local roadways, the PM<sub>2.5</sub> impacts should include those from vehicle exhaust emissions, PM<sub>2.5</sub> generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.



**Attachment 2: CalEEMod Input Assumptions and Outputs**

## Air Quality/Noise Construction Information Data Request

<b>Project Name:</b> 1020 Terra Bella		Complete ALL Portions in Yellow
See Equipment Type TAB for type, horsepower and load factor		
Project Size	108 Dwelling Units	1.04 total project acres disturbed
	84,181 s.f. residential	
	0 s.f. retail	
	s.f. office/commercial	
	23,715 s.f. other, specify: _____	Circulation/Common
	31,802 s.f. parking garage	105 spaces
	0 s.f. parking lot	0 spaces
Construction Hours	am to	pm
		Pile Driving? Y/N? NO
		Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? _Y_
		IF YES (if BOTH separate values) -->
		Kilowatts/Horsepower: _____
		Fuel Type: ___ Electric _____
		Location in project (Plans Desired if Available): (Obtain from Architect)
DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT		

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
<b>Demolition</b>		<b>Start Date:</b>	<b>12/1/2023</b>	<b>Total phase:</b>	<b>15</b>			<b>Overall Import/Export Volumes</b>
		<b>End Date:</b>	<b>12/23/2023</b>					<b>Demolition Volume</b>
2	Concrete/Industrial Saws	81	0.73			0.0	0	Square footage of buildings to be demolished
1	Excavators	158	0.38	8	15	8.0	240	(or total tons to be hauled)
1	Rubber-Tired Dozers	247	0.4	8	15	8.0	120	<b>30544</b> square feet or
1	Tractors/Loaders/Backhoes	97	0.37	8	15	8.0	120	<b>7</b> Hauling volume (tons)
								Any pavement demolished and hauled? <b>29,568 square feet</b>
<b>Site Preparation</b>		<b>Start Date:</b>	<b>12/27/2023</b>	<b>Total phase:</b>	<b>10</b>			
		<b>End Date:</b>	<b>1/6/2024</b>					
1	Graders	187	0.41	8	10	8.0	80	
1	Rubber Tired Dozers	247	0.4	8	10	8.0	80	
1	Tractors/Loaders/Backhoes	97	0.37	8	10	8.0	80	
<b>Grading / Excavation</b>		<b>Start Date:</b>	<b>1/1/2024</b>	<b>Total phase:</b>	<b>14</b>			<b>Soil Hauling Volume</b>
		<b>End Date:</b>	<b>1/20/2024</b>					Export volume = <b>3000</b> cubic yards
2	Excavators	158	0.38	8	14	8.0	224	Import volume = _____ cubic yards?
1	Graders	187	0.41	8	14	8.0	112	
1	Rubber Tired Dozers	247	0.4	8	14	8.0	112	
1	Concrete/Industrial Saws	81	0.73	4	14	4.0	56	
1	Tractors/Loaders/Backhoes	97	0.37	8	14	8.0	112	
	Other Equipment?							
<b>Trenching/Foundation</b>		<b>Start Date:</b>	<b>1/21/2024</b>	<b>Total phase:</b>	<b>106</b>			*Concrete Foundation Operations
		<b>End Date:</b>	<b>6/21/2024</b>					
1	Tractor/Loader/Backhoe	97	0.37			0.0	0	
1	Excavators	158	0.38	8	10	0.8	80	
1	Other Equipment? Concrete Pump			8	2			
<b>Building - Exterior</b>		<b>Start Date:</b>	<b>6/23/2024</b>	<b>Total phase:</b>	<b>144</b>			<b>Cement Trucks? <u>15</u> Total Round-Trips Yea</b>
		<b>End Date:</b>	<b>1/23/2025</b>					
1	Cranes	231	0.29	8	80	4.4	640	Electric? (Y/N) Yes _____ Otherwise assumed diesel
2	Forklifts	89	0.2	8	40	2.2	640	Liquid Propane (LPG)? (Y/N) _____ Otherwise Assumed diesel
1	Generator Sets	84	0.74			0.0	0	Or temporary line power? (Y/N) Y
1	Tractors/Loaders/Backhoes	97	0.37	8	80	4.4	640	
1	Welders	46	0.45	8	20	1.1	160	
1	Other Equipment? Man Lift			8	80	4.4	640	
<b>Building - Interior/Architectural Coating</b>		<b>Start Date:</b>	<b>8/22/2024</b>	<b>Total phase:</b>	<b>142</b>			
		<b>End Date:</b>	<b>3/22/2025</b>					
	Air Compressors	78	0.48			0.0	0	
2	Aerial Lift	62	0.31	8	80	4.5	1280	
	Other Equipment?							
<b>Paving</b>		<b>Start Date:</b>	<b>3/23/2025</b>	<b>Total phase:</b>	<b>44</b>			<b>Asphalt? <u>8,845</u> sf</b>
		<b>Start Date:</b>	<b>5/23/2025</b>					
	Cement and Mortar Mixers	9	0.56			0.0	0	
1	Pavers	130	0.42	8	2	0.4	16	
1	Paving Equipment	132	0.36	8	10	1.8	80	
1	Rollers	80	0.38	8	2	0.4	16	
1	Tractors/Loaders/Backhoes	97	0.37	8	20	3.6	160	
	Other Equipment?							
<b>Additional Phases</b>		<b>Start Date:</b>		<b>Total phase:</b>				
		<b>Start Date:</b>						

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:** CA16098 - Mountain View 1040 Terra Bella Ave CA 94043 Phase 1

**Complete ALL Portions in Yellow**

See Equipment Type TAB for type, horsepower and load factor

Note that Phase I will include demolition of some of the structures on the Phase II portion, so the entire site area is noted, although it will all not be disturbed. Please confirm whether you need a more precise number

Project Size	N/A	Dwelling Units	2.87 total project acres disturbed
	800	s.f. residential	
	N/A	s.f. retail	
	900	s.f. office/commercial	
	283,312	s.f. other, specify: self-storage	
	N/A	s.f. parking garage	N/A spaces
		s.f. parking lot	27 spaces
Construction Hours	7am	am to	6pm pm

**Pile Driving? No.**

**Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? \_No\_**

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower:       N/A      

Fuel Type:       N/A      

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	<b>Demolition</b>	<b>Start Date:11/1/2024</b>			<b>Total phase:19 days</b>	<b>19</b>			<b>Overall Import/Export Volumes</b>
		<b>End Date:11/20/24</b>							
1	Concrete/Industrial Saws	81	0.73	0.73	8	1	0.4	8	350 Linear Ft.
1	Excavators	158	0.38	0.38	8	8	3.4	64	69,329 Sq. Ft.
1	Rubber-Tired Dozers	247	0.4	0.4	8	5	2.1	40	4,700 tons
1	Tractors/Loaders/Backhoes	97	0.37	0.37	8	5	2.1	40	69,329
									4,700 tons
									Any pavement demolished and hauled? 35 tons
	<b>Site Preparation</b>	<b>Start Date: 11/21/24</b>			<b>Total phase: 12 day:</b>	<b>12</b>			
		<b>End Date:12/15/24</b>							
1	Graders	187	0.41	0.41	6	12	6.0	72	
2	Rubber Tired Dozers	247	0.4	0.4	8	12	8.0	192	
2	Tractors/Loaders/Backhoes	97	0.37	0.37	8	12	8.0	192	
	<b>Grading / Excavation / Foundations</b>	<b>Start Date:12/16/24</b>			<b>Total phase:25 Days</b>	<b>25</b>			<b>Soil Hauling Volume</b>
		<b>End Date:1/10/25</b>							Export volume = <b>150 foundations</b> cubic yards?
1	Excavators	158	0.38	0.38	6	15	3.6	90	Import volume = <b>0</b> cubic yards?
2	Graders	187	0.41	0.41	8	3	1.0	48	
1	Rubber Tired Dozers	247	0.4	0.4	6	5	1.2	30	
1	Concrete/Industrial Saws	81	0.73	0.73	0	0	0.0	0	
1	Tractors/Loaders/Backhoes	97	0.37	0.37	8	3	1.0	24	
	Other Equipment?								
	<b>Utilities Trenching</b>	<b>Start Date: 1/11/25</b>			<b>Total phase: 6 days</b>	<b>6</b>			
		<b>End Date: 1/17/25</b>							
2	Tractor/Loader/Backhoe	97	0.37	0.37	8	6	8.0	96	
1	Excavators	158	0.38	0.38	8	6	8.0	48	
	Other Equipment?								
	<b>Building - Exterior</b>	<b>Start Date: 1/18/25</b>			<b>Total phase: 178 da</b>	<b>178</b>			<b>Cement Trucks? 45 - 50 Total Round-Trips</b>
		<b>End Date: 7/15/25</b>							
1	Cranes	231	0.29	0.29	8	4	0.2	32	Diesel
2	Forklifts	89	0.2	0.2	8	20	0.9	320	Diesel
1	Generator Sets	84	0.74	0.74	0	0	0.0	0	Line Temp power
1	Tractors/Loaders/Backhoes	97	0.37	0.37	8	6	0.3	48	
1	Welders	46	0.45	0.45	8	8	0.4	64	
	Other Equipment?								
	<b>Building - Interior/Architectural Coating</b>	<b>Start Date: 7/16/25</b>			<b>Total phase: 46 Day</b>	<b>46</b>			
		<b>End Date: 9/1/25</b>							
1	Air Compressors	78	0.48	0.48	8	4	0.7	32	
4	Aerial Lift	62	0.31	0.31	8	15	2.5	480	
	Other Equipment?								
	<b>Paving</b>	<b>Start Date: 9/2/25</b>			<b>Total phase: 10 day:</b>	<b>10</b>			
		<b>End Date: 9/12/25</b>							
2	Cement and Mortar Mixers	9	0.56	0.56	8	6	4.8	96	Asphalt? 1,460 Cubic Yards
1	Pavers	130	0.42	0.42	8	7	5.6	56	
2	Paving Equipment	132	0.36	0.36	8	5	4.0	80	
2	Rollers	80	0.38	0.38	8	5	4.0	80	
1	Tractors/Loaders/Backhoes	97	0.37	0.37	0	0	0.0	0	
	Other Equipment?								
	<b>Additional Phases</b>	<b>Start Date:</b>			<b>Total phase:</b>				
		<b>Start Date:</b>							

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**

# Action Information Data Request

**Project Name:** 1020 Terra Bella Mountain View Phase 2

See Equipment Type TAB for type, horsepower and load factor

**Project Size** Dwelling Units **1.8** total project acres disturbed

N/A s.f. residential

N/A s.f. retail

N/A s.f. office/commercial

**123,952** s.f. other, specify: self-storage

N/A s.f. parking garage N/A spaces

s.f. parking lot **48** spaces

**Construction Hours** 7 am to 6 pm

**Complete ALL Portions in Yellow**

**Pile Driving? Y/N? N**

**Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? \_N\_**

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: \_\_\_\_\_

Fuel Type: \_\_\_\_\_

**Location in project (Plans Desired if Available):**

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	<b>Demolition</b>	<b>Start Date:</b>	<b>11/15/2025</b>	<b>Total phase:</b>	<b>15</b>			<b>Overall Import/Export Volumes</b>
		<b>End Date:</b>	<b>11/30/2025</b>					
1	Concrete/Industrial Saws	81	0.73	8	1	0.5	8	<b>Demolition Volume</b>
2	Excavators	158	0.38	8	8	4.3	128	24,808 SF to be demolished
2	Rubber-Tired Dozers	247	0.4	8	5	2.7	80	2,800 Tons
2	Tractors/Loaders/Backhoes	97	0.37	8	5	2.7	80	<b>24,808 to be demolished</b>
								<b>2,800 tons</b>
								18 tons
	<b>Site Preparation</b>	<b>Start Date:</b>	<b>12/1/2025</b>	<b>Total phase:</b>	<b>10</b>			
		<b>End Date:</b>	<b>12/11/2025</b>					
2	Graders	187	0.41	6	10	6.0		
2	Rubber Tired Dozers	247	0.4	6	8	4.8	96	
2	Tractors/Loaders/Backhoes	97	0.37	8	8	6.4	128	
	<b>Grading / Excavation</b>	<b>Start Date:</b>	<b>12/12/2025</b>	<b>Total phase:</b>	<b>20</b>			<b>Soil Hauling Volume</b>
		<b>End Date:</b>	<b>1/3/2026</b>					130 cubic yards export
1	Excavators	158	0.38	8	13	5.2	104	0 yards import
2	Graders	187	0.41	8	6	2.4	96	
1	Rubber Tired Dozers	247	0.4	5	3	0.8	15	
1	Concrete/Industrial Saws	81	0.73	0	0	0.0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	4	1.6	64	
	Other Equipment?							
	<b>Trenching/Foundation</b>	<b>Start Date:</b>	<b>1/4/2026</b>	<b>Total phase:</b>	<b>4</b>			
		<b>End Date:</b>	<b>1/7/2026</b>					
2	Tractor/Loader/Backhoe	97	0.37	8	4	8.0	64	
1	Excavators	158	0.38	8	3	6.0	24	
	Other Equipment?							
	<b>Building - Exterior</b>	<b>Start Date:</b>	<b>1/8/2026</b>	<b>Total phase:</b>	<b>165</b>			<b>Cement Trucks? 30 - 40 Total Round-Trips</b>
		<b>End Date:</b>	<b>6/22/2026</b>					
1	Cranes	231	0.29	8	2	0.1	16	Diesel
4	Forklifts	89	0.2	8	8	0.4	256	Diesel
0	Generator Sets	84	0.74	0	0	0.0	0	Line temp power
2	Tractors/Loaders/Backhoes	97	0.37	8	3	0.1	48	
2	Welders	46	0.45	8	8	0.4	128	
	Other Equipment?					0		
	<b>Interior/Architectural Coating</b>	<b>Start Date:</b>	<b>6/23/2026</b>	<b>Total phase:</b>	<b>30</b>			
		<b>End Date:</b>	<b>7/23/2026</b>					
2	Air Compressors	78	0.48	8	8	2.1	128	
5	Aerial Lift	62	0.31	8	8	2.1	320	
	Other Equipment?							
	<b>Paving</b>	<b>Start Date:</b>	<b>7/24/2026</b>	<b>Total phase:</b>	<b>27</b>			
		<b>Start Date:</b>	<b>8/20/2026</b>					
1	Cement and Mortar Mixers	9	0.56	8	8	2.4	64	<b>75 cubic yards</b>
1	Pavers	130	0.42	8	4	1.2	32	
1	Paving Equipment	132	0.36	8	4	1.0	32	
1	Rollers	80	0.38	8	4	1.2	32	
1	Tractors/Loaders/Backhoes	97	0.37	8	3	0.9	24	
	Other Equipment?							
	<b>Additional Phases</b>	<b>Start Date:</b>		<b>Total phase:</b>				
		<b>Start Date:</b>						

In "Equipment Types" worksheet tab.

Worksheet is to provide an example of inputs  
 If trucks would be used during grading  
 List types and equipment, as appropriate  
 List 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
Unrefrigerated Warehouse	ksf	408,964	593	593	1.45	1.74	1.74
					Rev	1.45	1.45
Apartmetns Mid Rise	DU	109	524	524	4.81	5.44	4.91
					Rev	4.34	3.61
<u>Existing Uses</u>							
Unrefrigerated Warehouse	ksf	77,418	112	112	1.45	1.74	1.74
					Rev	1.45	1.45
Single Family Housing	DU	1	9	9	9.43	9.44	8.55
					Rev	9.53	8.54

Land Use	Size	Daily		AM Peak Hour						PM Peak Hour					
		Rate	Trip	Rate	Split		Trip		Total	Rate	Split		Trip		Total
<u>Proposed Land Uses</u>															
#151 - Mini-Warehouse	408,964 Square Feet	1.450	593	0.090	59%	41%	22	15	37	0.150	47%	53%	29	32	61
#223 - Affordable Housing	109 Dwelling Units	4.810	524	0.360	29%	71%	11	28	39	0.460	59%	41%	30	20	50
Total Project Trips			1,117				33	43	76				59	52	111
<u>Existing Land Uses</u>															
#151 - Mini-Warehouse	77,418 Square Feet	1.450	112	0.090	59%	41%	4	3	7	0.150	47%	53%	6	6	12
#210 - Single-Family Detached Housing	1 Dwelling Units	9.430	9	0.700	26%	74%	0	1	1	0.940	63%	37%	1	0	1
Total Project Trips			121				4	4	8				7	6	13
<b>Net Project Trips</b>			<b>996</b>				<b>29</b>	<b>39</b>	<b>68</b>				<b>52</b>	<b>46</b>	<b>98</b>

Source: ITE Trip Generation Manual, 11<sup>th</sup> Edition 2021.

Total Project Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e
Year	Tons				
Construction Equipment					
2024	0.53	0.56	0.02	0.02	93.85
2025	1.83	0.51	0.02	0.02	84.76
2026	0.68	0.26	0.01	0.01	47.54
EMFAC					
2024	0.03	0.09	0.01	0.00	109.21
2025	0.04	0.22	0.02	0.01	224.78
2026	0.02	0.08	0.01	0.00	88.65
Total Construction Emissions by Year					
2024	0.56	0.66	0.03	0.02	203.06
2025	1.88	0.73	0.04	0.03	309.54
2026	0.69	0.35	0.02	0.01	136.18
Total Construction Emissions					
Tons	3.13	1.73	0.09	0.06	648.78
Average Daily Emissions					
2024	3.94	4.61	0.22	0.17	284
2025	11.87	4.63	0.24	0.17	316
2026	4.98	2.49	0.12	0.09	279
Threshold - lbs/day	54.0	54.0	82.0	54.0	
Total Construction Emissions					
Pounds	20.78	11.73	0.58	0.43	0.00
Average	7.12	3.94	0.20	0.14	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0	879.00

Operational Criteria Air Pollutants				
Unmitigated	ROG	NOX	Total PM10	Total PM2.5
Year	Tons			
Total	2.941	0.436	0.988	0.254
Existing Use Emissions				
Total	0.456	0.091	0.122	0.033
Net Annual Operational Emissions				
Tons/year	2.48	0.34	0.87	0.22
Threshold - Tons/year	10.0	10.0	15.0	10.0
Average Daily Emissions				
Pounds Per Day	13.61	1.89	4.74	1.21
Threshold - lbs/day	54.0	54.0	82.0	54.0

Category	CO2e			
	Project	Existing	Project 2030	Existing
Area	1.36	0.18	1.36	0.18
Energy	2.46	16.02	2.46	16.02
Mobile	928.30	125.91	873.68	125.91
Waste	218.54	37.23	218.54	37.23
Water	62.89	24.55	62.89	24.55
TOTAL	1213.56	203.89	1158.93	203.89
Net GHG Emissions		1009.67		955.05
Service Population	260			
Per Capita Emissions		4.66		4.45
CA DOF 1920 =	109 units		4 Employees	
	2.35 pph			

Residential Phase 1 Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e
Year	Tons				
Construction Equipment					
2024	0.53	0.56	0.02	0.02	93.85
2025	0.30	0.07	0.002	0.002	15.12
2026					
EMFAC					
2024	0.03	0.09	0.01	0.003	109.21
2025	0.01	0.02	0.002	0.001	28.92
2026					
Total Construction Emissions by Year					
2024	0.56	0.66	0.03	0.02	203.06
2025	0.31	0.09	0.00	0.00	44.04
2026	0.00	0.00	0.00	0.00	0.00
Total Construction Emissions					
Tons	0.87	0.75	0.04	0.03	247.11
Average Daily Emissions					
2024	3.94	4.61	0.22	0.17	284
2025	6.00	1.85	0.09	0.06	102
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Threshold - lbs/day	54.0	54.0	82.0	54.0	
Total Construction Emissions					
Pounds	9.94	6.46	0.31	0.23	0.00
Average	1.97	1.71	0.08	0.06	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0	386.00

Storage Phase 1 Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons					MT
Construction Equipment						
2024						
2025	1.53	0.44	0.02	0.02	69.64	
2026						
EMFAC						
2024						
2025	0.04	0.20	0.01	0.01	195.85	
2026						
Total Construction Emissions by Year						
2024	0.00	0.00	0.00	0.00	0.00	
2025	1.57	0.64	0.03	0.02	265.49	
2026	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	1.57	0.64	0.03	0.02	265.49	
Average Daily Emissions						
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	9.93	4.03	0.21	0.15		316
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	9.93	4.03	0.21	0.15	0.00	
Average	3.57	1.45	0.08	0.05	0.00	316.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Storage Phase 2 Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons					MT
Construction Equipment						
2024						
2025						
2026	0.68	0.26	0.01	0.01	47.54	
EMFAC						
2024						
2025						
2026	0.02	0.08	0.01	0.003	88.65	
Total Construction Emissions by Year						
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.69	0.35	0.02	0.01	136.18	
Total Construction Emissions						
Tons	0.69	0.35	0.02	0.01	136.18	
Average Daily Emissions						
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	4.98	2.49	0.12	0.09		279
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	4.98	2.49	0.12	0.09	0.00	
Average	1.58	0.79	0.04	0.03	0.00	279.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

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

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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking Structure	105.00	Space	0.00	31,802.00	0
Apartments Mid Rise	108.00	Dwelling Unit	1.04	107,896.00	309

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2026
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MW hr)</b>	2	<b>CH4 Intensity (lb/MW hr)</b>	0	<b>N2O Intensity (lb/MW hr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Provided construction data - Total square footages provided in construction information.
- Construction Phase - Provided in construction and equipment list
- Off-road Equipment - Provided in construction and equipment list
- Off-road Equipment - Provided in construction and equipment list
- Off-road Equipment - Provided in construction and equipment list
- Off-road Equipment - Provided construction equip & hours
- Off-road Equipment - Provided in construction and equipment list
- Off-road Equipment - Provided in construction and equipment list
- Off-road Equipment - Provided in construction and equipment list
- Grading - Provided in construction and equipment list





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

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	152.00
tblConstructionPhase	NumDays	200.00	154.00
tblConstructionPhase	NumDays	20.00	16.00
tblConstructionPhase	NumDays	4.00	15.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	2.00	8.00
tblGrading	MaterialExported	0.00	3,000.00
tblLandUse	LandUseSquareFeet	42,000.00	31,802.00
tblLandUse	LandUseSquareFeet	108,000.00	107,896.00
tblLandUse	LotAcreage	0.95	0.00
tblLandUse	LotAcreage	2.84	1.04
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	OffRoadEquipmentType	Other Construction Equipment	Pumps
tblOffRoadEquipment	OffRoadEquipmentType	Other Construction Equipment	Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00

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

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.40
tblOffRoadEquipment	UsageHours	6.00	2.20
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.40
tblOffRoadEquipment	UsageHours	8.00	1.80
tblOffRoadEquipment	UsageHours	7.00	0.40
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	1.10
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	3.60
tblOffRoadEquipment	UsageHours	8.00	4.40
tblTripsAndVMT	HaulingTripNumber	139.00	0.00
tblTripsAndVMT	HaulingTripNumber	375.00	0.00
tblTripsAndVMT	VendorTripNumber	17.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	91.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0115	0.1141	0.1054	2.0000e-004	0.0283	5.2100e-003	0.0335	7.7000e-003	4.7900e-003	0.0125	0.0000	17.8574	17.8574	5.7800e-003	0.0000	18.0018
2024	0.5205	0.4472	0.4482	8.7000e-004	0.0726	0.0179	0.0905	0.0344	0.0166	0.0511	0.0000	75.3017	75.3017	0.0220	0.0000	75.8520
2025	0.2991	0.0692	0.1052	1.7000e-004	0.0000	2.4500e-003	2.4500e-003	0.0000	2.2700e-003	2.2700e-003	0.0000	15.0058	15.0058	4.6500e-003	0.0000	15.1221
<b>Maximum</b>	<b>0.5205</b>	<b>0.4472</b>	<b>0.4482</b>	<b>8.7000e-004</b>	<b>0.0726</b>	<b>0.0179</b>	<b>0.0905</b>	<b>0.0344</b>	<b>0.0166</b>	<b>0.0511</b>	<b>0.0000</b>	<b>75.3017</b>	<b>75.3017</b>	<b>0.0220</b>	<b>0.0000</b>	<b>75.8520</b>

**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	3.1600e-003	0.0733	0.1333	2.0000e-004	0.0127	3.3000e-004	0.0131	3.4600e-003	3.3000e-004	3.8000e-003	0.0000	17.8574	17.8574	5.7800e-003	0.0000	18.0018
2024	0.4898	0.3551	0.5573	8.7000e-004	0.0327	6.2600e-003	0.0389	0.0155	6.2600e-003	0.0218	0.0000	75.3016	75.3016	0.0220	0.0000	75.8519
2025	0.2959	0.0813	0.1227	1.7000e-004	0.0000	1.8200e-003	1.8200e-003	0.0000	1.8200e-003	1.8200e-003	0.0000	15.0058	15.0058	4.6500e-003	0.0000	15.1221
<b>Maximum</b>	<b>0.4898</b>	<b>0.3551</b>	<b>0.5573</b>	<b>8.7000e-004</b>	<b>0.0327</b>	<b>6.2600e-003</b>	<b>0.0389</b>	<b>0.0155</b>	<b>6.2600e-003</b>	<b>0.0218</b>	<b>0.0000</b>	<b>75.3016</b>	<b>75.3016</b>	<b>0.0220</b>	<b>0.0000</b>	<b>75.8519</b>

	ROG	NOx	CO	SO2	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 Not Applied**

Percent Reduction	5.09	19.17	-23.45	0.00	55.00	67.06	57.44	55.01	64.50	58.41	0.00	0.00	0.00	0.00	0.00	0.00
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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-1-2023	2-29-2024	0.2975	0.1785
2	3-1-2024	5-31-2024	0.0076	0.0097
3	6-1-2024	8-31-2024	0.1415	0.1160
4	9-1-2024	11-30-2024	0.4802	0.4596
5	12-1-2024	2-28-2025	0.4202	0.4166
6	3-1-2025	5-31-2025	0.1095	0.1150
		Highest	0.4802	0.4596

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2023	12/23/2023	5	16	
2	Site Preparation	Site Preparation	12/27/2023	1/6/2024	5	8	
3	Grading	Grading	1/1/2024	1/20/2024	5	15	
4	Trenching	Trenching	1/21/2024	6/21/2024	5	110	
5	Building Construction	Building Construction	6/23/2024	1/23/2025	5	154	
6	Architectural Coating	Architectural Coating	8/22/2024	3/22/2025	5	152	
7	Paving	Paving	3/23/2025	5/23/2025	5	45	

**Acres of Grading (Site Preparation Phase): 8**

**Acres of Grading (Grading Phase): 15**

**Acres of Paving: 0**

**Residential Indoor: 218,489; Residential Outdoor: 72,830; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,908**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	4.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching	Excavators	1	0.80	158	0.38
Trenching	Pumps	1	0.20	84	0.74
Building Construction	Cranes	1	4.40	231	0.29
Building Construction	Forklifts	2	2.20	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Aerial Lifts	1	4.40	63	0.31
Building Construction	Tractors/Loaders/Backhoes	1	1.10	97	0.37
Building Construction	Welders	1	4.40	46	0.45
Architectural Coating	Aerial Lifts	2	4.50	63	0.31
Architectural Coating	Air Compressors	0	0.00	78	0.48
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	1	0.40	130	0.42
Paving	Paving Equipment	1	1.80	132	0.36
Paving	Rollers	1	0.40	80	0.38

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

Paving	Tractors/Loaders/Backhoes	1	3.60	97	0.37
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**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	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	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
Category	tons/yr										MT/yr					
Fugitive Dust					0.0150	0.0000	0.0150	2.2800e-003	0.0000	2.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7100e-003	0.0941	0.0948	1.8000e-004		4.3900e-003	4.3900e-003		4.0400e-003	4.0400e-003	0.0000	15.4496	15.4496	5.0000e-003	0.0000	15.5746

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

<b>Total</b>	<b>9.7100e-003</b>	<b>0.0941</b>	<b>0.0948</b>	<b>1.8000e-004</b>	<b>0.0150</b>	<b>4.3900e-003</b>	<b>0.0194</b>	<b>2.2800e-003</b>	<b>4.0400e-003</b>	<b>6.3200e-003</b>	<b>0.0000</b>	<b>15.4496</b>	<b>15.4496</b>	<b>5.0000e-003</b>	<b>0.0000</b>	<b>15.5746</b>
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7600e-003	0.0000	6.7600e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0653	0.1177	1.8000e-004		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	15.4496	15.4496	5.0000e-003	0.0000	15.5745



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

Total	2.6900e-003	0.0653	0.1177	1.8000e-004	6.7600e-003	2.9000e-004	7.0500e-003	1.0200e-003	2.9000e-004	1.3100e-003	0.0000	15.4496	15.4496	5.0000e-003	0.0000	15.5745
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
Category	tons/yr										MT/yr					
Fugitive Dust					0.0133	0.0000	0.0133	5.4200e-003	0.0000	5.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8300e-003	0.0200	0.0106	3.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	2.4078	2.4078	7.8000e-004	0.0000	2.4273

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

<b>Total</b>	<b>1.8300e-003</b>	<b>0.0200</b>	<b>0.0106</b>	<b>3.0000e-005</b>	<b>0.0133</b>	<b>8.2000e-004</b>	<b>0.0141</b>	<b>5.4200e-003</b>	<b>7.6000e-004</b>	<b>6.1800e-003</b>	<b>0.0000</b>	<b>2.4078</b>	<b>2.4078</b>	<b>7.8000e-004</b>	<b>0.0000</b>	<b>2.4273</b>
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9700e-003	0.0000	5.9700e-003	2.4400e-003	0.0000	2.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	8.0200e-003	0.0156	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.4078	2.4078	7.8000e-004	0.0000	2.4273

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

Total	4.8000e-004	8.0200e-003	0.0156	3.0000e-005	5.9700e-003	4.0000e-005	6.0100e-003	2.4400e-003	4.0000e-005	2.4800e-003	0.0000	2.4078	2.4078	7.8000e-004	0.0000	2.4273
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.3 Site Preparation - 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					
Fugitive Dust					0.0193	0.0000	0.0193	8.7300e-003	0.0000	8.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0318	0.0176	5.0000e-005		1.3100e-003	1.3100e-003		1.2000e-003	1.2000e-003	0.0000	4.0126	4.0126	1.3000e-003	0.0000	4.0451

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

<b>Total</b>	<b>2.9800e-003</b>	<b>0.0318</b>	<b>0.0176</b>	<b>5.0000e-005</b>	<b>0.0193</b>	<b>1.3100e-003</b>	<b>0.0206</b>	<b>8.7300e-003</b>	<b>1.2000e-003</b>	<b>9.9300e-003</b>	<b>0.0000</b>	<b>4.0126</b>	<b>4.0126</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>4.0451</b>
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.6800e-003	0.0000	8.6800e-003	3.9300e-003	0.0000	3.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-004	0.0134	0.0260	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.0126	4.0126	1.3000e-003	0.0000	4.0450

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

Total	7.9000e-004	0.0134	0.0260	5.0000e-005	8.6800e-003	7.0000e-005	8.7500e-003	3.9300e-003	7.0000e-005	4.0000e-003	0.0000	4.0126	4.0126	1.3000e-003	0.0000	4.0450
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.4 Grading - 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					
Fugitive Dust					0.0533	0.0000	0.0533	0.0257	0.0000	0.0257	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1256	0.1153	2.4000e-004		5.3700e-003	5.3700e-003		4.9700e-003	4.9700e-003	0.0000	20.8615	20.8615	6.1900e-003	0.0000	21.0163

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

<b>Total</b>	0.0128	0.1256	0.1153	2.4000e-004	0.0533	5.3700e-003	0.0587	0.0257	4.9700e-003	0.0307	0.0000	20.8615	20.8615	6.1900e-003	0.0000	21.0163
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0240	0.0000	0.0240	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7600e-003	0.0826	0.1512	2.4000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	20.8615	20.8615	6.1900e-003	0.0000	21.0163

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

Total	3.7600e-003	0.0826	0.1512	2.4000e-004	0.0240	3.8000e-004	0.0244	0.0116	3.8000e-004	0.0120	0.0000	20.8615	20.8615	6.1900e-003	0.0000	21.0163
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.5 Trenching - 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	1.4100e-003	0.0113	0.0231	4.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	3.2732	3.2732	8.4000e-004	0.0000	3.2943
<b>Total</b>	<b>1.4100e-003</b>	<b>0.0113</b>	<b>0.0231</b>	<b>4.0000e-005</b>		<b>5.4000e-004</b>	<b>5.4000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>3.2732</b>	<b>3.2732</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>3.2943</b>

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

**Unmitigated Construction Off-Site**

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

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.2000e-004	0.0158	0.0271	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.2732	3.2732	8.4000e-004	0.0000	3.2943
<b>Total</b>	<b>5.2000e-004</b>	<b>0.0158</b>	<b>0.0271</b>	<b>4.0000e-005</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>		<b>6.0000e-005</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>3.2732</b>	<b>3.2732</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>3.2943</b>



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

**Mitigated Construction 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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.6 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.2507	0.2345	4.6000e-004		0.0102	0.0102		9.5000e-003	9.5000e-003	0.0000	39.3539	39.3539	0.0112	0.0000	39.6329
<b>Total</b>	<b>0.0276</b>	<b>0.2507</b>	<b>0.2345</b>	<b>4.6000e-004</b>		<b>0.0102</b>	<b>0.0102</b>		<b>9.5000e-003</b>	<b>9.5000e-003</b>	<b>0.0000</b>	<b>39.3539</b>	<b>39.3539</b>	<b>0.0112</b>	<b>0.0000</b>	<b>39.6329</b>

**Unmitigated Construction Off-Site**

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

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

**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	8.7200e-003	0.1934	0.2857	4.6000e-004		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	39.3539	39.3539	0.0112	0.0000	39.6328
<b>Total</b>	<b>8.7200e-003</b>	<b>0.1934</b>	<b>0.2857</b>	<b>4.6000e-004</b>		<b>3.7000e-003</b>	<b>3.7000e-003</b>		<b>3.7000e-003</b>	<b>3.7000e-003</b>	<b>0.0000</b>	<b>39.3539</b>	<b>39.3539</b>	<b>0.0112</b>	<b>0.0000</b>	<b>39.6328</b>

**Mitigated Construction Off-Site**

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

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

**3.6 Building Construction - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2100e-003	0.0289	0.0288	6.0000e-005		1.1300e-003	1.1300e-003		1.0600e-003	1.0600e-003	0.0000	4.8837	4.8837	1.3800e-003	0.0000	4.9182
<b>Total</b>	<b>3.2100e-003</b>	<b>0.0289</b>	<b>0.0288</b>	<b>6.0000e-005</b>		<b>1.1300e-003</b>	<b>1.1300e-003</b>		<b>1.0600e-003</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>4.8837</b>	<b>4.8837</b>	<b>1.3800e-003</b>	<b>0.0000</b>	<b>4.9182</b>

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	1.0800e-003	0.0240	0.0355	6.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	4.8837	4.8837	1.3800e-003	0.0000	4.9182
<b>Total</b>	<b>1.0800e-003</b>	<b>0.0240</b>	<b>0.0355</b>	<b>6.0000e-005</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>		<b>4.6000e-004</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>4.8837</b>	<b>4.8837</b>	<b>1.3800e-003</b>	<b>0.0000</b>	<b>4.9182</b>

**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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.4738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8300e-003	0.0278	0.0578	9.0000e-005		4.8000e-004	4.8000e-004		4.4000e-004	4.4000e-004	0.0000	7.8005	7.8005	2.5200e-003	0.0000	7.8635
<b>Total</b>	<b>0.4756</b>	<b>0.0278</b>	<b>0.0578</b>	<b>9.0000e-005</b>		<b>4.8000e-004</b>	<b>4.8000e-004</b>		<b>4.4000e-004</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>7.8005</b>	<b>7.8005</b>	<b>2.5200e-003</b>	<b>0.0000</b>	<b>7.8635</b>

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0499	0.0674	9.0000e-005		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	7.8004	7.8004	2.5200e-003	0.0000	7.8635
<b>Total</b>	<b>0.4760</b>	<b>0.0499</b>	<b>0.0674</b>	<b>9.0000e-005</b>		<b>2.0400e-003</b>	<b>2.0400e-003</b>		<b>2.0400e-003</b>	<b>2.0400e-003</b>	<b>0.0000</b>	<b>7.8004</b>	<b>7.8004</b>	<b>2.5200e-003</b>	<b>0.0000</b>	<b>7.8635</b>

**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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.7 Architectural Coating - 2025**  
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2924					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	0.0170	0.0356	5.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	4.8130	4.8130	1.5600e-003	0.0000	4.8520
<b>Total</b>	<b>0.2935</b>	<b>0.0170</b>	<b>0.0356</b>	<b>5.0000e-005</b>		<b>2.9000e-004</b>	<b>2.9000e-004</b>		<b>2.7000e-004</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>4.8130</b>	<b>4.8130</b>	<b>1.5600e-003</b>	<b>0.0000</b>	<b>4.8520</b>

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2924					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3500e-003	0.0308	0.0416	5.0000e-005		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	4.8130	4.8130	1.5600e-003	0.0000	4.8520
<b>Total</b>	<b>0.2937</b>	<b>0.0308</b>	<b>0.0416</b>	<b>5.0000e-005</b>		<b>1.2600e-003</b>	<b>1.2600e-003</b>		<b>1.2600e-003</b>	<b>1.2600e-003</b>	<b>0.0000</b>	<b>4.8130</b>	<b>4.8130</b>	<b>1.5600e-003</b>	<b>0.0000</b>	<b>4.8520</b>

**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					



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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.8 Paving - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4300e-003	0.0233	0.0408	6.0000e-005		1.0300e-003	1.0300e-003		9.5000e-004	9.5000e-004	0.0000	5.3091	5.3091	1.7200e-003	0.0000	5.3520
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>2.4300e-003</b>	<b>0.0233</b>	<b>0.0408</b>	<b>6.0000e-005</b>		<b>1.0300e-003</b>	<b>1.0300e-003</b>		<b>9.5000e-004</b>	<b>9.5000e-004</b>	<b>0.0000</b>	<b>5.3091</b>	<b>5.3091</b>	<b>1.7200e-003</b>	<b>0.0000</b>	<b>5.3520</b>

**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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	1.0900e-003	0.0265	0.0457	6.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	5.3091	5.3091	1.7200e-003	0.0000	5.3520
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.0900e-003</b>	<b>0.0265</b>	<b>0.0457</b>	<b>6.0000e-005</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>5.3091</b>	<b>5.3091</b>	<b>1.7200e-003</b>	<b>0.0000</b>	<b>5.3520</b>

**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					



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

**1040 Terra Bella Ave Storage Phase 1 - Construction  
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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	285.01	1000sqft	2.87	285,012.00	0
Parking Lot	27.00	Space	0.00	10,800.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2026
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MW hr)</b>	2	<b>CH4 Intensity (lb/MW hr)</b>	0	<b>N2O Intensity (lb/MW hr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Provided land uses - Total lot acreage included in construction information.

Construction Phase - Scedule provided in construction information.

Off-road Equipment - Provided in construction information list.

Off-road Equipment - Provided in construction information.

Off-road Equipment - Provided in construction information.

Off-road Equipment - Provided in construction information.

Off-road Equipment - Provided in construction information.

Off-road Equipment - Provided in construction information.

Off-road Equipment - Provided in construction information.

Grading - Provided by construction list.



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

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	48.00
tblConstructionPhase	NumDays	220.00	179.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDays	3.00	25.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	MaterialExported	0.00	150.00
tblLandUse	LotAcreage	6.54	2.87
tblLandUse	LotAcreage	0.24	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	0.70
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	8.00	0.20
tblOffRoadEquipment	UsageHours	7.00	0.90
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	5.60
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	1.20
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.30
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	0.40
tblTripsAndVMT	HaulingTripNumber	465.00	0.00
tblTripsAndVMT	HaulingTripNumber	19.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	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 Not Applied**

tblTripsAndVMT	WorkerTripNumber	124.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	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					
2024	0.0301	0.3088	0.2042	4.6000e-004	0.2291	0.0134	0.2425	0.0966	0.0123	0.1090	0.0000	40.4402	40.4402	0.0129	0.0000	40.7616
2025	1.5025	0.1319	0.2015	3.3000e-004	7.2800e-003	5.3600e-003	0.0126	2.7800e-003	5.0500e-003	7.8400e-003	0.0000	28.7037	28.7037	6.9300e-003	0.0000	28.8768
<b>Maximum</b>	<b>1.5025</b>	<b>0.3088</b>	<b>0.2042</b>	<b>4.6000e-004</b>	<b>0.2291</b>	<b>0.0134</b>	<b>0.2425</b>	<b>0.0966</b>	<b>0.0123</b>	<b>0.1090</b>	<b>0.0000</b>	<b>40.4402</b>	<b>40.4402</b>	<b>0.0129</b>	<b>0.0000</b>	<b>40.7616</b>

**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					
2024	7.9100e-003	0.1446	0.2742	4.6000e-004	0.1031	7.5000e-004	0.1038	0.0435	7.5000e-004	0.0442	0.0000	40.4401	40.4401	0.0129	0.0000	40.7615
2025	1.4946	0.1403	0.2275	3.3000e-004	3.2800e-003	1.7700e-003	5.0500e-003	1.2500e-003	1.7700e-003	3.0300e-003	0.0000	28.7036	28.7036	6.9300e-003	0.0000	28.8768



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

Maximum	1.4946	0.1446	0.2742	4.6000e-004	0.1031	1.7700e-003	0.1038	0.0435	1.7700e-003	0.0442	0.0000	40.4401	40.4401	0.0129	0.0000	40.7615
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.96	35.36	-23.65	0.00	55.00	86.57	57.32	55.01	85.51	59.54	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	11-1-2024	1-31-2025	0.3751	0.1870
2	2-1-2025	4-30-2025	0.0337	0.0288
3	5-1-2025	7-31-2025	0.5317	0.5316
4	8-1-2025	9-30-2025	1.0329	1.0401
		Highest	1.0329	1.0401

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2024	11/20/2024	7	20	
2	Site Preparation	Site Preparation	11/21/2024	12/15/2024	7	25	
3	Grading	Grading	12/16/2024	1/10/2025	7	26	
4	Trenching	Trenching	1/11/2025	1/17/2025	7	7	
5	Building Construction	Building Construction	1/18/2025	7/15/2025	7	179	
6	Architectural Coating	Architectural Coating	7/16/2025	9/1/2025	7	48	
7	Paving	Paving	9/2/2025	9/12/2025	7	11	

**Acres of Grading (Site Preparation Phase): 34.38**

**Acres of Grading (Grading Phase): 5.2**

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 427,518; Non-Residential Outdoor: 142,506; Striped Parking Area: 648**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.40	81	0.73
Demolition	Excavators	1	3.40	158	0.38
Demolition	Rubber Tired Dozers	1	2.10	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	2.10	97	0.37
Site Preparation	Graders	1	6.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	0	0.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	1.00	81	0.73
Grading	Excavators	1	3.60	158	0.38
Grading	Graders	2	1.00	187	0.41
Grading	Rubber Tired Dozers	1	1.20	247	0.40
Grading	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	0.20	231	0.29
Building Construction	Forklifts	2	0.90	89	0.20
Building Construction	Generator Sets	1	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	0.30	97	0.37
Building Construction	Welders	1	0.40	46	0.45
Architectural Coating	Aerial Lifts	4	2.50	63	0.31
Architectural Coating	Air Compressors	1	0.70	78	0.48
Paving	Cement and Mortar Mixers	2	4.80	9	0.56
Paving	Pavers	1	5.60	130	0.42



















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

Off-Road	5.0000e-004	0.0112	0.0205	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.8172	2.8172	8.2000e-004	0.0000	2.8377
<b>Total</b>	<b>5.0000e-004</b>	<b>0.0112</b>	<b>0.0205</b>	<b>3.0000e-005</b>	<b>3.2800e-003</b>	<b>5.0000e-005</b>	<b>3.3300e-003</b>	<b>1.2500e-003</b>	<b>5.0000e-005</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>2.8172</b>	<b>2.8172</b>	<b>8.2000e-004</b>	<b>0.0000</b>	<b>2.8377</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.5 Trenching - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5100e-003	0.0136	0.0270	4.0000e-005		5.9000e-004	5.9000e-004		5.4000e-004	5.4000e-004	0.0000	3.5068	3.5068	1.1300e-003	0.0000	3.5351

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

Total	1.5100e-003	0.0136	0.0270	4.0000e-005		5.9000e-004	5.9000e-004		5.4000e-004	5.4000e-004	0.0000	3.5068	3.5068	1.1300e-003	0.0000	3.5351
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	7.1000e-004	0.0175	0.0301	4.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	3.5068	3.5068	1.1300e-003	0.0000	3.5351
<b>Total</b>	<b>7.1000e-004</b>	<b>0.0175</b>	<b>0.0301</b>	<b>4.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>3.5068</b>	<b>3.5068</b>	<b>1.1300e-003</b>	<b>0.0000</b>	<b>3.5351</b>

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

**Mitigated Construction 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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.6 Building Construction - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8600e-003	0.0609	0.0825	1.4000e-004		2.6200e-003	2.6200e-003		2.5100e-003	2.5100e-003	0.0000	11.9238	11.9238	1.8500e-003	0.0000	11.9702
<b>Total</b>	<b>6.8600e-003</b>	<b>0.0609</b>	<b>0.0825</b>	<b>1.4000e-004</b>		<b>2.6200e-003</b>	<b>2.6200e-003</b>		<b>2.5100e-003</b>	<b>2.5100e-003</b>	<b>0.0000</b>	<b>11.9238</b>	<b>11.9238</b>	<b>1.8500e-003</b>	<b>0.0000</b>	<b>11.9702</b>

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

**Unmitigated Construction Off-Site**

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

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6900e-003	0.0552	0.0902	1.4000e-004		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	11.9238	11.9238	1.8500e-003	0.0000	11.9701
<b>Total</b>	<b>2.6900e-003</b>	<b>0.0552</b>	<b>0.0902</b>	<b>1.4000e-004</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>11.9238</b>	<b>11.9238</b>	<b>1.8500e-003</b>	<b>0.0000</b>	<b>11.9701</b>

**Mitigated Construction Off-Site**

1040 Terra Bella Ave Phase 1 - Construction - Santa Clara County, Annual

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

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

**3.7 Architectural Coating - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4884					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	0.0188	0.0378	6.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	5.1407	5.1407	1.4700e-003	0.0000	5.1775
<b>Total</b>	<b>1.4899</b>	<b>0.0188</b>	<b>0.0378</b>	<b>6.0000e-005</b>		<b>4.1000e-004</b>	<b>4.1000e-004</b>		<b>3.9000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>5.1407</b>	<b>5.1407</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>5.1775</b>

**Unmitigated Construction Off-Site**

1040 Terra Bella Ave Phase 1 - Construction - Santa Clara County, Annual

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

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

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4884					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3900e-003	0.0313	0.0434	6.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	5.1407	5.1407	1.4700e-003	0.0000	5.1775
<b>Total</b>	<b>1.4898</b>	<b>0.0313</b>	<b>0.0434</b>	<b>6.0000e-005</b>		<b>1.1700e-003</b>	<b>1.1700e-003</b>		<b>1.1700e-003</b>	<b>1.1700e-003</b>	<b>0.0000</b>	<b>5.1407</b>	<b>5.1407</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>5.1775</b>

**Mitigated Construction Off-Site**



1040 Terra Bella Ave Phase 1 - Construction - Santa Clara County, Annual

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

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

**3.8 Paving - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7100e-003	0.0243	0.0389	6.0000e-005		1.1600e-003	1.1600e-003		1.0700e-003	1.0700e-003	0.0000	5.3151	5.3151	1.6500e-003	0.0000	5.3564
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>2.7100e-003</b>	<b>0.0243</b>	<b>0.0389</b>	<b>6.0000e-005</b>		<b>1.1600e-003</b>	<b>1.1600e-003</b>		<b>1.0700e-003</b>	<b>1.0700e-003</b>	<b>0.0000</b>	<b>5.3151</b>	<b>5.3151</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>5.3564</b>

**Unmitigated Construction Off-Site**

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

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

**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	8.7000e-004	0.0251	0.0433	6.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.3151	5.3151	1.6500e-003	0.0000	5.3564
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.7000e-004</b>	<b>0.0251</b>	<b>0.0433</b>	<b>6.0000e-005</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>		<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>5.3151</b>	<b>5.3151</b>	<b>1.6500e-003</b>	<b>0.0000</b>	<b>5.3564</b>

**Mitigated Construction Off-Site**



1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

**1020 Terra Bella Storage Phase 2 - Construction  
Santa Clara County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	123.95	1000sqft	1.90	123,952.00	0
Parking Lot	48.00	Space	0.00	19,200.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2027
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MW hr)</b>	2	<b>CH4 Intensity (lb/MW hr)</b>	0	<b>N2O Intensity (lb/MW hr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Total project acres provided in construction information list. Included in lot acreage above.

Construction Phase - Schedule provided in construction and equipment list.

Off-road Equipment - Provided in construction and equipment list.

Off-road Equipment - Provided in construction and equipment list

Off-road Equipment - Provided in construction and equipment list

Off-road Equipment - Provided in construction and equipment list

Off-road Equipment - Provided in construction and equipment list

Off-road Equipment - Provided in construction and equipment list

Off-road Equipment - Provided in construction and equipment list

Grading - Provided in construction and equipment list



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

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	31.00
tblConstructionPhase	NumDays	200.00	166.00
tblConstructionPhase	NumDays	20.00	16.00
tblConstructionPhase	NumDays	4.00	23.00
tblConstructionPhase	NumDays	10.00	28.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	MaterialExported	0.00	130.00
tblLandUse	LandUseSquareFeet	123,950.00	123,952.00
tblLandUse	LotAcreage	2.85	1.90
tblLandUse	LotAcreage	0.43	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	8.00	0.50
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.80
tblOffRoadEquipment	UsageHours	8.00	6.40
tblOffRoadEquipment	UsageHours	8.00	2.40
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	7.00	1.60
tblOffRoadEquipment	UsageHours	6.00	0.10
tblOffRoadEquipment	UsageHours	6.00	0.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.10
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	6.00	2.10
tblOffRoadEquipment	UsageHours	6.00	2.40
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.20
tblOffRoadEquipment	UsageHours	8.00	0.90
tblTripsAndVMT	HaulingTripNumber	277.00	0.00
tblTripsAndVMT	HaulingTripNumber	16.00	0.00
tblTripsAndVMT	VendorTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00

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

tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblTripsAndVMT	WorkerTripNumber	12.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	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	0.0183	0.1822	0.1579	3.5000e-004	0.0879	7.4100e-003	0.0953	0.0310	6.8300e-003	0.0378	0.0000	30.8112	30.8112	9.7000e-003	0.0000	31.0538
2026	0.6596	0.0797	0.1209	1.9000e-004	5.1800e-003	3.1800e-003	8.3600e-003	9.6000e-004	3.0000e-003	3.9600e-003	0.0000	16.3784	16.3784	4.1300e-003	0.0000	16.4815
<b>Maximum</b>	<b>0.6596</b>	<b>0.1822</b>	<b>0.1579</b>	<b>3.5000e-004</b>	<b>0.0879</b>	<b>7.4100e-003</b>	<b>0.0953</b>	<b>0.0310</b>	<b>6.8300e-003</b>	<b>0.0378</b>	<b>0.0000</b>	<b>30.8112</b>	<b>30.8112</b>	<b>9.7000e-003</b>	<b>0.0000</b>	<b>31.0538</b>

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

Year	tons/yr										MT/yr					
2025	5.7800e-003	0.1170	0.2175	3.5000e-004	0.0395	5.7000e-004	0.0401	0.0140	5.7000e-004	0.0145	0.0000	30.8112	30.8112	9.7000e-003	0.0000	31.0538
2026	0.6540	0.0863	0.1314	1.9000e-004	2.3300e-003	1.3800e-003	3.7100e-003	4.3000e-004	1.3800e-003	1.8100e-003	0.0000	16.3784	16.3784	4.1200e-003	0.0000	16.4815
<b>Maximum</b>	<b>0.6540</b>	<b>0.1170</b>	<b>0.2175</b>	<b>3.5000e-004</b>	<b>0.0395</b>	<b>1.3800e-003</b>	<b>0.0401</b>	<b>0.0140</b>	<b>1.3800e-003</b>	<b>0.0145</b>	<b>0.0000</b>	<b>30.8112</b>	<b>30.8112</b>	<b>9.7000e-003</b>	<b>0.0000</b>	<b>31.0538</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	2.67	22.38	-25.16	0.00	55.01	81.59	57.72	55.02	80.16	60.92	0.00	0.00	0.00	0.07	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-15-2025	2-14-2026	0.2236	0.1446
2	2-15-2026	5-14-2026	0.0186	0.0164
3	5-15-2026	8-14-2026	0.6947	0.6994
4	8-15-2026	9-30-2026	0.0029	0.0027
		Highest	0.6947	0.6994

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/15/2025	11/30/2025	7	16	
2	Site Preparation	Site Preparation	12/1/2025	12/11/2025	7	11	
3	Grading	Grading	12/12/2025	1/3/2026	7	23	
4	Trenching	Trenching	1/4/2026	1/7/2026	7	4	
5	Building Construction	Building Construction	1/8/2026	6/22/2026	7	166	
6	Architectural Coating	Architectural Coating	6/23/2026	7/23/2026	7	31	

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

7	Paving	Paving	7/24/2026	8/20/2026	7	28
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**Acres of Grading (Site Preparation Phase): 14.85**

**Acres of Grading (Grading Phase): 8.05**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 185,928; Non-Residential Outdoor: 61,976; Striped Parking Area: 1,152**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.50	81	0.73
Demolition	Excavators	2	4.30	158	0.38
Demolition	Rubber Tired Dozers	2	2.70	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	2.70	97	0.37
Site Preparation	Graders	2	6.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	4.80	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	6.40	97	0.37
Grading	Concrete/Industrial Saws	1	1.00	81	0.73
Grading	Excavators	1	5.20	158	0.38
Grading	Graders	2	2.40	187	0.41
Grading	Rubber Tired Dozers	1	0.80	247	0.40
Grading	Tractors/Loaders/Backhoes	2	1.60	97	0.37
Trenching	Excavators	1	6.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	0.10	231	0.29
Building Construction	Forklifts	4	0.40	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	0.10	97	0.37
Building Construction	Welders	2	0.40	46	0.45

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

Architectural Coating	Aerial Lifts	5	2.10	63	0.31
Architectural Coating	Air Compressors	2	2.10	78	0.48
Paving	Cement and Mortar Mixers	1	2.40	9	0.56
Paving	Pavers	1	1.20	130	0.42
Paving	Paving Equipment	1	1.00	132	0.36
Paving	Rollers	1	1.20	80	0.38
Paving	Tractors/Loaders/Backhoes	1	0.90	97	0.37

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

**3.2 Demolition - 2025**

**Unmitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8000e-003	0.0547	0.0581	1.1000e-004		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	9.7032	9.7032	3.0600e-003	0.0000	9.7798
<b>Total</b>	<b>5.8000e-003</b>	<b>0.0547</b>	<b>0.0581</b>	<b>1.1000e-004</b>	<b>0.0300</b>	<b>2.4200e-003</b>	<b>0.0324</b>	<b>4.5400e-003</b>	<b>2.2300e-003</b>	<b>6.7700e-003</b>	<b>0.0000</b>	<b>9.7032</b>	<b>9.7032</b>	<b>3.0600e-003</b>	<b>0.0000</b>	<b>9.7798</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0135	0.0000	0.0135	2.0400e-003	0.0000	2.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7300e-003	0.0402	0.0727	1.1000e-004		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	9.7032	9.7032	3.0600e-003	0.0000	9.7798
<b>Total</b>	<b>1.7300e-003</b>	<b>0.0402</b>	<b>0.0727</b>	<b>1.1000e-004</b>	<b>0.0135</b>	<b>1.8000e-004</b>	<b>0.0137</b>	<b>2.0400e-003</b>	<b>1.8000e-004</b>	<b>2.2200e-003</b>	<b>0.0000</b>	<b>9.7032</b>	<b>9.7032</b>	<b>3.0600e-003</b>	<b>0.0000</b>	<b>9.7798</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.3 Site Preparation - 2025**

**Unmitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0476	0.0000	0.0476	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0100e-003	0.0840	0.0526	1.4000e-004		3.3100e-003	3.3100e-003		3.0400e-003	3.0400e-003	0.0000	12.1545	12.1545	3.9300e-003	0.0000	12.2527
<b>Total</b>	<b>8.0100e-003</b>	<b>0.0840</b>	<b>0.0526</b>	<b>1.4000e-004</b>	<b>0.0476</b>	<b>3.3100e-003</b>	<b>0.0509</b>	<b>0.0227</b>	<b>3.0400e-003</b>	<b>0.0257</b>	<b>0.0000</b>	<b>12.1545</b>	<b>12.1545</b>	<b>3.9300e-003</b>	<b>0.0000</b>	<b>12.2527</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0214	0.0000	0.0214	0.0102	0.0000	0.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4300e-003	0.0412	0.0795	1.4000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	12.1545	12.1545	3.9300e-003	0.0000	12.2527
<b>Total</b>	<b>2.4300e-003</b>	<b>0.0412</b>	<b>0.0795</b>	<b>1.4000e-004</b>	<b>0.0214</b>	<b>2.3000e-004</b>	<b>0.0217</b>	<b>0.0102</b>	<b>2.3000e-004</b>	<b>0.0104</b>	<b>0.0000</b>	<b>12.1545</b>	<b>12.1545</b>	<b>3.9300e-003</b>	<b>0.0000</b>	<b>12.2527</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.4 Grading - 2025**

**Unmitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0103	0.0000	0.0103	3.7700e-003	0.0000	3.7700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-003	0.0435	0.0472	1.0000e-004		1.6800e-003	1.6800e-003		1.5500e-003	1.5500e-003	0.0000	8.9536	8.9536	2.7100e-003	0.0000	9.0213
<b>Total</b>	<b>4.5000e-003</b>	<b>0.0435</b>	<b>0.0472</b>	<b>1.0000e-004</b>	<b>0.0103</b>	<b>1.6800e-003</b>	<b>0.0120</b>	<b>3.7700e-003</b>	<b>1.5500e-003</b>	<b>5.3200e-003</b>	<b>0.0000</b>	<b>8.9536</b>	<b>8.9536</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>9.0213</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**



1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6300e-003	0.0000	4.6300e-003	1.7000e-003	0.0000	1.7000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6200e-003	0.0357	0.0653	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.9536	8.9536	2.7100e-003	0.0000	9.0213
<b>Total</b>	<b>1.6200e-003</b>	<b>0.0357</b>	<b>0.0653</b>	<b>1.0000e-004</b>	<b>4.6300e-003</b>	<b>1.6000e-004</b>	<b>4.7900e-003</b>	<b>1.7000e-003</b>	<b>1.6000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>8.9536</b>	<b>8.9536</b>	<b>2.7100e-003</b>	<b>0.0000</b>	<b>9.0213</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.4 Grading - 2026**

**Unmitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.1800e-003	0.0000	5.1800e-003	9.6000e-004	0.0000	9.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	6.5200e-003	7.0800e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.3000e-004	2.3000e-004	0.0000	1.3430	1.3430	4.1000e-004	0.0000	1.3532
<b>Total</b>	<b>6.7000e-004</b>	<b>6.5200e-003</b>	<b>7.0800e-003</b>	<b>2.0000e-005</b>	<b>5.1800e-003</b>	<b>2.5000e-004</b>	<b>5.4300e-003</b>	<b>9.6000e-004</b>	<b>2.3000e-004</b>	<b>1.1900e-003</b>	<b>0.0000</b>	<b>1.3430</b>	<b>1.3430</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.3532</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

1020 Terra Bella Phase 2 - Construction - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3300e-003	0.0000	2.3300e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	5.3600e-003	9.7900e-003	2.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.3430	1.3430	4.1000e-004	0.0000	1.3532
<b>Total</b>	<b>2.4000e-004</b>	<b>5.3600e-003</b>	<b>9.7900e-003</b>	<b>2.0000e-005</b>	<b>2.3300e-003</b>	<b>2.0000e-005</b>	<b>2.3500e-003</b>	<b>4.3000e-004</b>	<b>2.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.3430</b>	<b>1.3430</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>1.3532</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.5 Trenching - 2026**

**Unmitigated Construction On-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8000e-004	7.1700e-003	0.0138	2.0000e-005		3.1000e-004	3.1000e-004		2.8000e-004	2.8000e-004	0.0000	1.7769	1.7769	5.7000e-004	0.0000	1.7913
<b>Total</b>	<b>7.8000e-004</b>	<b>7.1700e-003</b>	<b>0.0138</b>	<b>2.0000e-005</b>		<b>3.1000e-004</b>	<b>3.1000e-004</b>		<b>2.8000e-004</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>1.7769</b>	<b>1.7769</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>1.7913</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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

Category	tons/yr								MT/yr							
	Off-Road	3.7000e-004	8.8300e-003	0.0153	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.7769	1.7769	5.7000e-004	0.0000
<b>Total</b>	<b>3.7000e-004</b>	<b>8.8300e-003</b>	<b>0.0153</b>	<b>2.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.7769</b>	<b>1.7769</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>1.7913</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.6 Building Construction - 2026**

**Unmitigated Construction On-Site**

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

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

Off-Road	3.8700e-003	0.0308	0.0390	6.0000e-005		1.3200e-003	1.3200e-003		1.2400e-003	1.2400e-003	0.0000	4.8860	4.8860	1.2200e-003	0.0000	4.9166
<b>Total</b>	<b>3.8700e-003</b>	<b>0.0308</b>	<b>0.0390</b>	<b>6.0000e-005</b>		<b>1.3200e-003</b>	<b>1.3200e-003</b>		<b>1.2400e-003</b>	<b>1.2400e-003</b>	<b>0.0000</b>	<b>4.8860</b>	<b>4.8860</b>	<b>1.2200e-003</b>	<b>0.0000</b>	<b>4.9166</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	1.1800e-003	0.0293	0.0398	6.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	4.8860	4.8860	1.2200e-003	0.0000	4.9166

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

Total	1.1800e-003	0.0293	0.0398	6.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	4.8860	4.8860	1.2200e-003	0.0000	4.9166
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.6503					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5500e-003	0.0230	0.0418	7.0000e-005		7.4000e-004	7.4000e-004		7.3000e-004	7.3000e-004	0.0000	5.7715	5.7715	1.1200e-003	0.0000	5.7996

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

Total	0.6529	0.0230	0.0418	7.0000e-005		7.4000e-004	7.4000e-004		7.3000e-004	7.3000e-004	0.0000	5.7715	5.7715	1.1200e-003	0.0000	5.7996
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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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6503					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4300e-003	0.0307	0.0458	7.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	5.7715	5.7715	1.1200e-003	0.0000	5.7996









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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	109.00	Dwelling Unit	1.04	107,896.00	312
Unrefrigerated Warehouse-No Rail	408.96	1000sqft	4.77	408,964.00	0
Parking Lot	75.00	Space	0.00	30,000.00	0
Enclosed Parking Structure	105.00	Space	0.00	31,802.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2027
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MW hr)</b>	2	<b>CH4 Intensity (lb/MW hr)</b>	0	<b>N2O Intensity (lb/MW hr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Provided land uses - construction worksheet and PD
- Construction Phase - Operational run - no construction
- Off-road Equipment - Operational run - no construction
- Grading -
- Vehicle Trips - Traffic provided trip gen
- Vehicle Emission Factors - EMFAC2021 vehicle emission facotrs Santa Clara County 2027
- Fleet Mix - EMFAC2021 fleet mix Santa Clara County 2027
- Woodstoves - No Hearths

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

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

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	1/11/2024	12/29/2023
tblEnergyUse	NT24E	3,054.10	3,978.74
tblEnergyUse	NT24E	1.07	1.09
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	0.07	0.00
tblEnergyUse	T24E	70.89	1,602.68
tblEnergyUse	T24E	0.29	1.28
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	3.37	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	16.35	0.00
tblFireplaces	NumberNoFireplace	4.36	0.00
tblFireplaces	NumberWood	18.53	0.00
tblFleetMix	HHD	6.2400e-003	7.6390e-003
tblFleetMix	HHD	6.2400e-003	7.6390e-003
tblFleetMix	HHD	6.2400e-003	7.6390e-003
tblFleetMix	HHD	6.2400e-003	7.6390e-003
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDA	0.58	0.52
tblFleetMix	LDT1	0.06	0.04

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

tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.2570e-003	5.9190e-003
tblFleetMix	LHD2	5.2570e-003	5.9190e-003
tblFleetMix	LHD2	5.2570e-003	5.9190e-003
tblFleetMix	LHD2	5.2570e-003	5.9190e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.6240e-003	2.4420e-003
tblFleetMix	MH	2.6240e-003	2.4420e-003
tblFleetMix	MH	2.6240e-003	2.4420e-003
tblFleetMix	MH	2.6240e-003	2.4420e-003
tblFleetMix	MHD	8.1590e-003	9.5300e-003
tblFleetMix	MHD	8.1590e-003	9.5300e-003

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

tblFleetMix	MHD	8.1590e-003	9.5300e-003
tblFleetMix	MHD	8.1590e-003	9.5300e-003
tblFleetMix	OBUS	8.7700e-004	1.0620e-003
tblFleetMix	OBUS	8.7700e-004	1.0620e-003
tblFleetMix	OBUS	8.7700e-004	1.0620e-003
tblFleetMix	OBUS	8.7700e-004	1.0620e-003
tblFleetMix	SBUS	8.7400e-004	6.8400e-004
tblFleetMix	SBUS	8.7400e-004	6.8400e-004
tblFleetMix	SBUS	8.7400e-004	6.8400e-004
tblFleetMix	SBUS	8.7400e-004	6.8400e-004
tblFleetMix	UBUS	3.5600e-004	4.0600e-004
tblFleetMix	UBUS	3.5600e-004	4.0600e-004
tblFleetMix	UBUS	3.5600e-004	4.0600e-004
tblFleetMix	UBUS	3.5600e-004	4.0600e-004
tblLandUse	LandUseSquareFeet	109,000.00	107,896.00
tblLandUse	LandUseSquareFeet	42,000.00	31,802.00
tblLandUse	LotAcreage	2.87	1.04
tblLandUse	LotAcreage	9.39	4.77
tblLandUse	LotAcreage	0.68	0.00
tblLandUse	LotAcreage	0.95	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
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

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

tblVehicleEF	HHD	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	3.73
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	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.1000e-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



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tblVehicleEF	HHD	7.1000e-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	3.1000e-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	1.86	2.42
tblVehicleEF	LDA	214.18	226.32
tblVehicleEF	LDA	45.42	58.59
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	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.3670e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDA	2.1190e-003	2.2370e-003

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tbVehicleEF	LDA	4.5000e-004	5.7900e-004
tbVehicleEF	LDA	0.03	0.25
tbVehicleEF	LDA	0.07	0.07
tbVehicleEF	LDA	0.03	0.00
tbVehicleEF	LDA	6.3460e-003	8.1650e-003
tbVehicleEF	LDA	0.03	0.19
tbVehicleEF	LDA	0.16	0.26
tbVehicleEF	LDT1	2.3950e-003	4.4930e-003
tbVehicleEF	LDT1	0.04	0.09
tbVehicleEF	LDT1	0.65	1.12
tbVehicleEF	LDT1	2.00	4.20
tbVehicleEF	LDT1	258.06	307.00
tbVehicleEF	LDT1	55.33	80.21
tbVehicleEF	LDT1	4.5300e-003	7.3650e-003
tbVehicleEF	LDT1	0.02	0.04
tbVehicleEF	LDT1	0.05	0.09
tbVehicleEF	LDT1	0.17	0.32
tbVehicleEF	LDT1	0.04	9.1980e-003
tbVehicleEF	LDT1	1.3260e-003	1.5760e-003
tbVehicleEF	LDT1	1.7710e-003	2.4760e-003
tbVehicleEF	LDT1	0.02	3.2190e-003
tbVehicleEF	LDT1	1.2200e-003	1.4490e-003
tbVehicleEF	LDT1	1.6290e-003	2.2770e-003
tbVehicleEF	LDT1	0.06	0.51
tbVehicleEF	LDT1	0.12	0.14
tbVehicleEF	LDT1	0.05	0.00
tbVehicleEF	LDT1	9.7520e-003	0.02
tbVehicleEF	LDT1	0.07	0.39
tbVehicleEF	LDT1	0.20	0.42

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tblVehicleEF	LDT1	2.5540e-003	3.0350e-003
tblVehicleEF	LDT1	5.4800e-004	7.9300e-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	0.62	0.71
tblVehicleEF	LDT2	2.44	3.08
tblVehicleEF	LDT2	271.88	311.88
tblVehicleEF	LDT2	58.84	79.76
tblVehicleEF	LDT2	4.6700e-003	5.0800e-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	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6200e-003	8.4950e-003
tblVehicleEF	LDT2	0.06	0.20

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tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	2.6900e-003	3.0830e-003
tblVehicleEF	LDT2	5.8200e-004	7.8900e-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
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

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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
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

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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
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

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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
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

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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	0.63	0.76
tblVehicleEF	MDV	2.55	3.20
tblVehicleEF	MDV	327.97	373.77
tblVehicleEF	MDV	69.67	94.84
tblVehicleEF	MDV	6.1060e-003	6.4520e-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	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.5210e-003	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.26	0.37



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tblVehicleEF	MDV	3.2410e-003	3.6930e-003
tblVehicleEF	MDV	6.8900e-004	9.3800e-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
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

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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
tblVehicleEF	MHD	0.37	0.76
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

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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
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

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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
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

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

tblVehicleEF	OBUS	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	1.24
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
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

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

tblVehicleEF	SBUS	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
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

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

tblVehicleEF	UBUS	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	4.34
tblVehicleTrips	ST_TR	1.74	1.45
tblVehicleTrips	SU_TR	4.09	3.61
tblVehicleTrips	SU_TR	1.74	1.45
tblVehicleTrips	WD_TR	5.44	4.81
tblVehicleTrips	WD_TR	1.74	1.45
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

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

tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	2.18	0.00
tblWoodstoves	NumberNoncatalytic	2.18	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

**2.0 Emissions Summary**

**2.2 Overall Operational  
Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3379	9.3600e-003	0.8140	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3649
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Mobile	0.6026	0.4261	4.0581	9.9000e-003	0.9766	6.5300e-003	0.9831	0.2436	6.0900e-003	0.2496	0.0000	914.8874	914.8874	0.0444	0.0413	928.2977
Waste						0.0000	0.0000		0.0000	0.0000	88.2118	0.0000	88.2118	5.2132	0.0000	218.5409



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

Water						0.0000	0.0000		0.0000	0.0000	35.9724	0.5133	36.4857	0.1238	0.0782	62.8930
<b>Total</b>	<b>2.9405</b>	<b>0.4355</b>	<b>4.8721</b>	<b>9.9400e-003</b>	<b>0.9766</b>	<b>0.0110</b>	<b>0.9876</b>	<b>0.2436</b>	<b>0.0106</b>	<b>0.2542</b>	<b>124.1841</b>	<b>919.1927</b>	<b>1,043.3768</b>	<b>5.3827</b>	<b>0.1195</b>	<b>1,213.5558</b>

**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	2.3379	9.3600e-003	0.8140	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3649
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Mobile	0.6026	0.4261	4.0581	9.9000e-003	0.9766	6.5300e-003	0.9831	0.2436	6.0900e-003	0.2496	0.0000	914.8874	914.8874	0.0444	0.0413	928.2977
Waste						0.0000	0.0000		0.0000	0.0000	88.2118	0.0000	88.2118	5.2132	0.0000	218.5409
Water						0.0000	0.0000		0.0000	0.0000	35.9724	0.5133	36.4857	0.1238	0.0782	62.8930
<b>Total</b>	<b>2.9405</b>	<b>0.4355</b>	<b>4.8721</b>	<b>9.9400e-003</b>	<b>0.9766</b>	<b>0.0110</b>	<b>0.9876</b>	<b>0.2436</b>	<b>0.0106</b>	<b>0.2542</b>	<b>124.1841</b>	<b>919.1927</b>	<b>1,043.3768</b>	<b>5.3827</b>	<b>0.1195</b>	<b>1,213.5558</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6026	0.4261	4.0581	9.9000e-003	0.9766	6.5300e-003	0.9831	0.2436	6.0900e-003	0.2496	0.0000	914.8874	914.8874	0.0444	0.0413	928.2977
Unmitigated	0.6026	0.4261	4.0581	9.9000e-003	0.9766	6.5300e-003	0.9831	0.2436	6.0900e-003	0.2496	0.0000	914.8874	914.8874	0.0444	0.0413	928.2977

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	524.29	473.06	393.49	1,150,844	1,150,844
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	593.00	593.00	593.00	1,731,264	1,731,264
<b>Total</b>	<b>1,117.29</b>	<b>1,066.06</b>	<b>986.49</b>	<b>2,882,108</b>	<b>2,882,108</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	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 Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Apartments Mid Rise	0.522645	0.038170	0.234287	0.131557	0.023622	0.005919	0.009530	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Enclosed Parking Structure	0.522645	0.038170	0.234287	0.131557	0.023622	0.005919	0.009530	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Parking Lot	0.522645	0.038170	0.234287	0.131557	0.023622	0.005919	0.009530	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Unrefrigerated Warehouse-No Rail	0.522645	0.038170	0.234287	0.131557	0.023622	0.005919	0.009530	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**



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

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	689192	0.6252	0.0000	0.0000	0.6252
Enclosed Parking Structure	166961	0.1515	0.0000	0.0000	0.1515
Parking Lot	10500	9.5300e-003	0.0000	0.0000	9.5300e-003
Unrefrigerated Warehouse-No	1.84443e+006	1.6732	0.0000	0.0000	1.6732
<b>Total</b>		<b>2.4595</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4595</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	689192	0.6252	0.0000	0.0000	0.6252
Enclosed Parking Structure	166961	0.1515	0.0000	0.0000	0.1515
Parking Lot	10500	9.5300e-003	0.0000	0.0000	9.5300e-003
Unrefrigerated Warehouse-No	1.84443e+006	1.6732	0.0000	0.0000	1.6732



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

Hearth	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0248	9.3600e-003	0.8140	4.0000e-005	4.5100e-003	4.5100e-003	4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3649	
<b>Total</b>	<b>2.3379</b>	<b>9.3600e-003</b>	<b>0.8140</b>	<b>4.0000e-005</b>	<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>0.0000</b>	<b>1.3326</b>	<b>1.3326</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>1.3649</b>	

**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	0.2905					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0248	9.3600e-003	0.8140	4.0000e-005	4.5100e-003	4.5100e-003	4.5100e-003	4.5100e-003	4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3649
<b>Total</b>	<b>2.3379</b>	<b>9.3600e-003</b>	<b>0.8140</b>	<b>4.0000e-005</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>0.0000</b>	<b>1.3326</b>	<b>1.3326</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>1.3649</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4857	0.1238	0.0782	62.8930
Unmitigated	36.4857	0.1238	0.0782	62.8930

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.10179 / 4.47721	2.5617	8.6500e-003	5.4600e-003	4.4062
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	94.572 / 0	33.9240	0.1152	0.0728	58.4867
<b>Total</b>		<b>36.4857</b>	<b>0.1238</b>	<b>0.0782</b>	<b>62.8930</b>



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

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.10179 / 4.47721	2.5617	8.6500e-003	5.4600e-003	4.4062
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	94.572 / 0	33.9240	0.1152	0.0728	58.4867
<b>Total</b>		<b>36.4857</b>	<b>0.1238</b>	<b>0.0782</b>	<b>62.8930</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	88.2118	5.2132	0.0000	218.5409
Unmitigated	88.2118	5.2132	0.0000	218.5409

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

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.14	10.1780	0.6015	0.0000	25.2155
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	384.42	78.0338	4.6117	0.0000	193.3254
<b>Total</b>		<b>88.2118</b>	<b>5.2132</b>	<b>0.0000</b>	<b>218.5409</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.14	10.1780	0.6015	0.0000	25.2155
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000

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

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	384.42	78.0338	4.6117	0.0000	193.3254
<b>Total</b>		<b>88.2118</b>	<b>5.2132</b>	<b>0.0000</b>	<b>218.5409</b>

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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

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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	77.42	1000sqft	1.78	77,418.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	1,800.00	3
Parking Lot	2.70	Acre	2.70	117,612.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2022
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MWhr)</b>	2	<b>CH4 Intensity (lb/MWhr)</b>	0	<b>N2O Intensity (lb/MWhr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Provided existing land uses
- Construction Phase - Existing Operational run - no construction
- Off-road Equipment - Existing Operational run - no construction
- Grading -
- Vehicle Trips - Provided traffic trip gen
- Vehicle Emission Factors - EMFAC2021 vehicle emission facotrs Santa Clara County 2022
- Fleet Mix - EMFAC2021 fleet mix Santa Clara County 2022

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	9/7/2022	9/1/2022
tblFleetMix	HHD	6.4120e-003	7.0510e-003
tblFleetMix	HHD	6.4120e-003	7.0510e-003
tblFleetMix	HHD	6.4120e-003	7.0510e-003
tblFleetMix	LDA	0.57	0.54
tblFleetMix	LDA	0.57	0.54
tblFleetMix	LDA	0.57	0.54
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	4.9710e-003	5.4180e-003
tblFleetMix	LHD2	4.9710e-003	5.4180e-003
tblFleetMix	LHD2	4.9710e-003	5.4180e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.9050e-003	2.8740e-003
tblFleetMix	MH	2.9050e-003	2.8740e-003
tblFleetMix	MH	2.9050e-003	2.8740e-003

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tblFleetMix	MHD	8.0870e-003	9.3840e-003
tblFleetMix	MHD	8.0870e-003	9.3840e-003
tblFleetMix	MHD	8.0870e-003	9.3840e-003
tblFleetMix	OBUS	9.3900e-004	1.0660e-003
tblFleetMix	OBUS	9.3900e-004	1.0660e-003
tblFleetMix	OBUS	9.3900e-004	1.0660e-003
tblFleetMix	SBUS	9.3900e-004	6.7800e-004
tblFleetMix	SBUS	9.3900e-004	6.7800e-004
tblFleetMix	SBUS	9.3900e-004	6.7800e-004
tblFleetMix	UBUS	3.9800e-004	4.2400e-004
tblFleetMix	UBUS	3.9800e-004	4.2400e-004
tblFleetMix	UBUS	3.9800e-004	4.2400e-004
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.05	0.13
tblVehicleEF	HHD	5.94	4.98
tblVehicleEF	HHD	0.53	0.80
tblVehicleEF	HHD	5.8680e-003	4.3700e-004
tblVehicleEF	HHD	1,105.70	879.58
tblVehicleEF	HHD	1,510.66	1,666.15
tblVehicleEF	HHD	0.05	0.03
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.24	0.27
tblVehicleEF	HHD	1.2000e-005	2.4000e-005
tblVehicleEF	HHD	5.92	4.48
tblVehicleEF	HHD	3.51	2.39

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tblVehicleEF	HHD	2.05	2.43
tblVehicleEF	HHD	3.3620e-003	2.4760e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	3.2170e-003	2.3640e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8730e-003	8.7800e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	3.0000e-006	3.3600e-004
tblVehicleEF	HHD	1.5200e-004	1.0000e-004
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.09	0.03
tblVehicleEF	HHD	8.1000e-005	9.0000e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	0.01	7.8120e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	3.0000e-006	3.3600e-004
tblVehicleEF	HHD	1.5200e-004	1.0000e-004
tblVehicleEF	HHD	0.49	0.57
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.15	0.16
tblVehicleEF	HHD	8.1000e-005	9.0000e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	2.2480e-003	2.6200e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.61	0.76

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tblVehicleEF	LDA	2.22	3.32
tblVehicleEF	LDA	249.80	259.46
tblVehicleEF	LDA	52.94	67.11
tblVehicleEF	LDA	4.5590e-003	4.9100e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.19	0.26
tblVehicleEF	LDA	0.04	7.2330e-003
tblVehicleEF	LDA	1.4180e-003	1.2910e-003
tblVehicleEF	LDA	1.8170e-003	2.0630e-003
tblVehicleEF	LDA	0.02	2.5320e-003
tblVehicleEF	LDA	1.3060e-003	1.1890e-003
tblVehicleEF	LDA	1.6710e-003	1.8970e-003
tblVehicleEF	LDA	0.04	0.30
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.04	0.00
tblVehicleEF	LDA	8.7510e-003	0.01
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.23	0.35
tblVehicleEF	LDA	2.4710e-003	2.5650e-003
tblVehicleEF	LDA	5.2400e-004	6.6300e-004
tblVehicleEF	LDA	0.04	0.30
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.04	0.00
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.26	0.38
tblVehicleEF	LDT1	4.8360e-003	7.7670e-003
tblVehicleEF	LDT1	0.07	0.12



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tblVehicleEF	LDT1	1.06	1.69
tblVehicleEF	LDT1	2.43	6.09
tblVehicleEF	LDT1	297.63	336.34
tblVehicleEF	LDT1	63.89	89.88
tblVehicleEF	LDT1	7.1620e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.09	0.16
tblVehicleEF	LDT1	0.25	0.43
tblVehicleEF	LDT1	0.04	9.2260e-003
tblVehicleEF	LDT1	1.9010e-003	2.1970e-003
tblVehicleEF	LDT1	2.3990e-003	3.2560e-003
tblVehicleEF	LDT1	0.02	3.2290e-003
tblVehicleEF	LDT1	1.7490e-003	2.0230e-003
tblVehicleEF	LDT1	2.2060e-003	2.9940e-003
tblVehicleEF	LDT1	0.09	0.65
tblVehicleEF	LDT1	0.17	0.18
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.09	0.53
tblVehicleEF	LDT1	0.34	0.63
tblVehicleEF	LDT1	2.9450e-003	3.3250e-003
tblVehicleEF	LDT1	6.3200e-004	8.8900e-004
tblVehicleEF	LDT1	0.09	0.65
tblVehicleEF	LDT1	0.17	0.18
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.09	0.53
tblVehicleEF	LDT1	0.37	0.69
tblVehicleEF	LDT2	3.6070e-003	3.3830e-003

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tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.85	0.95
tblVehicleEF	LDT2	2.87	4.09
tblVehicleEF	LDT2	324.07	354.17
tblVehicleEF	LDT2	70.13	91.20
tblVehicleEF	LDT2	6.6840e-003	7.0190e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	0.29	0.38
tblVehicleEF	LDT2	0.04	8.8860e-003
tblVehicleEF	LDT2	1.4330e-003	1.4300e-003
tblVehicleEF	LDT2	1.7980e-003	2.2210e-003
tblVehicleEF	LDT2	0.02	3.1100e-003
tblVehicleEF	LDT2	1.3190e-003	1.3160e-003
tblVehicleEF	LDT2	1.6530e-003	2.0420e-003
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.13	0.09
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.23
tblVehicleEF	LDT2	0.33	0.44
tblVehicleEF	LDT2	3.2060e-003	3.5010e-003
tblVehicleEF	LDT2	6.9400e-004	9.0200e-004
tblVehicleEF	LDT2	0.06	0.31
tblVehicleEF	LDT2	0.13	0.09
tblVehicleEF	LDT2	0.06	0.00
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.23
tblVehicleEF	LDT2	0.36	0.48

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tblVehicleEF	LHD1	5.3430e-003	5.7150e-003
tblVehicleEF	LHD1	9.3450e-003	0.01
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.84	1.06
tblVehicleEF	LHD1	1.13	2.14
tblVehicleEF	LHD1	9.02	8.91
tblVehicleEF	LHD1	808.85	817.34
tblVehicleEF	LHD1	12.12	18.22
tblVehicleEF	LHD1	7.3500e-004	6.4300e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.82	0.85
tblVehicleEF	LHD1	0.34	0.48
tblVehicleEF	LHD1	8.0800e-004	6.6800e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.7110e-003	9.3800e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.7000e-004	2.7200e-004
tblVehicleEF	LHD1	7.7300e-004	6.3900e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4280e-003	2.3450e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.4800e-004	2.5000e-004
tblVehicleEF	LHD1	2.1470e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0820e-003	0.00

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tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.21	0.20
tblVehicleEF	LHD1	0.08	0.13
tblVehicleEF	LHD1	8.8000e-005	8.7000e-005
tblVehicleEF	LHD1	7.9010e-003	7.9900e-003
tblVehicleEF	LHD1	1.2000e-004	1.8000e-004
tblVehicleEF	LHD1	2.1470e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0820e-003	0.00
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.21	0.20
tblVehicleEF	LHD1	0.09	0.14
tblVehicleEF	LHD2	3.2840e-003	3.4590e-003
tblVehicleEF	LHD2	7.5540e-003	8.3140e-003
tblVehicleEF	LHD2	9.2300e-003	0.01
tblVehicleEF	LHD2	0.14	0.15
tblVehicleEF	LHD2	0.66	0.68
tblVehicleEF	LHD2	0.67	1.26
tblVehicleEF	LHD2	14.10	13.96
tblVehicleEF	LHD2	782.55	858.12
tblVehicleEF	LHD2	8.09	10.56
tblVehicleEF	LHD2	1.7430e-003	1.6790e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.00	1.12
tblVehicleEF	LHD2	0.19	0.27
tblVehicleEF	LHD2	1.4080e-003	1.3340e-003

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tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.4100e-004	1.2800e-004
tblVehicleEF	LHD2	1.3470e-003	1.2760e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6820e-003	2.6520e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3000e-004	1.1700e-004
tblVehicleEF	LHD2	1.1650e-003	0.08
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.8300e-004	0.00
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.05	0.07
tblVehicleEF	LHD2	1.3500e-004	1.3400e-004
tblVehicleEF	LHD2	7.5590e-003	8.2760e-003
tblVehicleEF	LHD2	8.0000e-005	1.0400e-004
tblVehicleEF	LHD2	1.1650e-003	0.08
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.8300e-004	0.00
tblVehicleEF	LHD2	0.14	0.15
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	MCY	0.33	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	19.19	13.58

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tblVehicleEF	MCY	9.00	8.11
tblVehicleEF	MCY	210.27	188.98
tblVehicleEF	MCY	61.40	50.91
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.7610e-003
tblVehicleEF	MCY	1.15	0.61
tblVehicleEF	MCY	0.27	0.15
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.9370e-003	1.8910e-003
tblVehicleEF	MCY	3.1610e-003	3.7730e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.8120e-003	1.7720e-003
tblVehicleEF	MCY	2.9780e-003	3.5560e-003
tblVehicleEF	MCY	0.91	3.98
tblVehicleEF	MCY	0.70	3.56
tblVehicleEF	MCY	0.50	0.00
tblVehicleEF	MCY	2.23	1.16
tblVehicleEF	MCY	0.56	3.73
tblVehicleEF	MCY	1.95	1.44
tblVehicleEF	MCY	2.0810e-003	1.8680e-003
tblVehicleEF	MCY	6.0800e-004	5.0300e-004
tblVehicleEF	MCY	0.91	0.09
tblVehicleEF	MCY	0.70	3.56
tblVehicleEF	MCY	0.50	0.00
tblVehicleEF	MCY	2.75	1.38
tblVehicleEF	MCY	0.56	3.73
tblVehicleEF	MCY	2.13	1.57
tblVehicleEF	MDV	4.4780e-003	4.8960e-003
tblVehicleEF	MDV	0.09	0.12

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tblVehicleEF	MDV	0.95	1.15
tblVehicleEF	MDV	3.30	4.56
tblVehicleEF	MDV	392.54	428.50
tblVehicleEF	MDV	84.08	109.53
tblVehicleEF	MDV	9.1410e-003	0.01
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.10	0.13
tblVehicleEF	MDV	0.36	0.51
tblVehicleEF	MDV	0.04	9.0680e-003
tblVehicleEF	MDV	1.5860e-003	1.5330e-003
tblVehicleEF	MDV	2.0110e-003	2.4040e-003
tblVehicleEF	MDV	0.02	3.1740e-003
tblVehicleEF	MDV	1.4630e-003	1.4130e-003
tblVehicleEF	MDV	1.8500e-003	2.2100e-003
tblVehicleEF	MDV	0.07	0.37
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.07	0.29
tblVehicleEF	MDV	0.42	0.60
tblVehicleEF	MDV	3.8800e-003	4.2330e-003
tblVehicleEF	MDV	8.3200e-004	1.0830e-003
tblVehicleEF	MDV	0.07	0.37
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.07	0.29
tblVehicleEF	MDV	0.46	0.66
tblVehicleEF	MH	0.01	0.02

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tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.34	2.06
tblVehicleEF	MH	2.25	2.79
tblVehicleEF	MH	1,557.00	1,702.83
tblVehicleEF	MH	19.21	23.70
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.43	1.65
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	2.9100e-004	3.7000e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2700e-003	3.2840e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.6800e-004	3.4000e-004
tblVehicleEF	MH	0.79	36.75
tblVehicleEF	MH	0.07	10.29
tblVehicleEF	MH	0.27	0.00
tblVehicleEF	MH	0.08	0.11
tblVehicleEF	MH	0.02	0.24
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9000e-004	2.3400e-004
tblVehicleEF	MH	0.79	36.75
tblVehicleEF	MH	0.07	10.29
tblVehicleEF	MH	0.27	0.00
tblVehicleEF	MH	0.10	0.15



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

tblVehicleEF	MH	0.02	0.24
tblVehicleEF	MH	0.11	0.14
tblVehicleEF	MHD	3.4370e-003	0.01
tblVehicleEF	MHD	5.6390e-003	0.01
tblVehicleEF	MHD	9.4480e-003	9.6820e-003
tblVehicleEF	MHD	0.37	0.65
tblVehicleEF	MHD	0.48	0.50
tblVehicleEF	MHD	1.16	1.24
tblVehicleEF	MHD	75.81	165.30
tblVehicleEF	MHD	1,131.31	1,248.40
tblVehicleEF	MHD	9.18	9.14
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	6.8530e-003	6.0820e-003
tblVehicleEF	MHD	0.56	1.04
tblVehicleEF	MHD	2.06	1.57
tblVehicleEF	MHD	1.38	1.28
tblVehicleEF	MHD	1.2350e-003	3.0390e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	1.2000e-004	1.2200e-004
tblVehicleEF	MHD	1.1810e-003	2.9080e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	1.1000e-004	1.1200e-004
tblVehicleEF	MHD	4.4800e-004	0.03
tblVehicleEF	MHD	0.02	7.7870e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.2200e-004	0.00

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

tblVehicleEF	MHD	0.09	0.06
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	7.1900e-004	1.5400e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.1000e-005	9.0000e-005
tblVehicleEF	MHD	4.4800e-004	0.03
tblVehicleEF	MHD	0.02	7.7870e-003
tblVehicleEF	MHD	0.03	0.05
tblVehicleEF	MHD	2.2200e-004	0.00
tblVehicleEF	MHD	0.11	0.08
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.1700e-003	7.5570e-003
tblVehicleEF	OBUS	5.7850e-003	9.7900e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.56	0.49
tblVehicleEF	OBUS	0.59	0.64
tblVehicleEF	OBUS	1.92	2.13
tblVehicleEF	OBUS	95.82	85.25
tblVehicleEF	OBUS	1,365.97	1,420.91
tblVehicleEF	OBUS	15.56	16.62
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.14	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.47	0.39
tblVehicleEF	OBUS	1.73	1.21
tblVehicleEF	OBUS	1.02	0.91
tblVehicleEF	OBUS	7.1500e-004	4.5900e-004

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

tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	1.3700e-004	1.4800e-004
tblVehicleEF	OBUS	6.8400e-004	4.3900e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	1.2600e-004	1.3600e-004
tblVehicleEF	OBUS	1.0630e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.6800e-004	0.00
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	0.04	0.07
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	9.1000e-004	8.0800e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5400e-004	1.6400e-004
tblVehicleEF	OBUS	1.0630e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.6800e-004	0.00
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.04	0.07
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.5710e-003	0.09
tblVehicleEF	SBUS	4.5790e-003	4.6880e-003
tblVehicleEF	SBUS	2.08	1.62
tblVehicleEF	SBUS	0.54	0.95

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

tblVehicleEF	SBUS	0.68	0.67
tblVehicleEF	SBUS	347.47	195.36
tblVehicleEF	SBUS	1,071.12	1,071.28
tblVehicleEF	SBUS	3.82	3.71
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	4.2030e-003	3.9880e-003
tblVehicleEF	SBUS	3.61	1.51
tblVehicleEF	SBUS	5.09	2.99
tblVehicleEF	SBUS	0.77	0.47
tblVehicleEF	SBUS	4.2010e-003	1.5740e-003
tblVehicleEF	SBUS	0.74	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	4.3000e-005	3.8000e-005
tblVehicleEF	SBUS	4.0190e-003	1.5050e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7350e-003	2.7340e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	3.9000e-005	3.5000e-005
tblVehicleEF	SBUS	4.9600e-004	0.02
tblVehicleEF	SBUS	4.8020e-003	6.8000e-003
tblVehicleEF	SBUS	0.23	0.18
tblVehicleEF	SBUS	2.0400e-004	0.00
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	9.5330e-003	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3050e-003	1.7820e-003
tblVehicleEF	SBUS	0.01	9.9600e-003

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

tblVehicleEF	SBUS	3.8000e-005	3.7000e-005
tblVehicleEF	SBUS	4.9600e-004	0.02
tblVehicleEF	SBUS	4.8020e-003	6.8000e-003
tblVehicleEF	SBUS	0.33	0.29
tblVehicleEF	SBUS	2.0400e-004	0.00
tblVehicleEF	SBUS	0.11	0.17
tblVehicleEF	SBUS	9.5330e-003	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.38	0.35
tblVehicleEF	UBUS	2.8070e-003	4.6630e-003
tblVehicleEF	UBUS	10.37	4.12
tblVehicleEF	UBUS	0.14	0.48
tblVehicleEF	UBUS	1,606.76	1,102.90
tblVehicleEF	UBUS	1.64	3.31
tblVehicleEF	UBUS	0.27	0.17
tblVehicleEF	UBUS	1.4400e-003	7.1480e-003
tblVehicleEF	UBUS	0.73	0.33
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	0.07	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	5.2780e-003	6.2180e-003
tblVehicleEF	UBUS	2.0000e-006	8.0000e-006
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1210e-003
tblVehicleEF	UBUS	5.0490e-003	5.9460e-003
tblVehicleEF	UBUS	2.0000e-006	8.0000e-006
tblVehicleEF	UBUS	1.9400e-004	0.02
tblVehicleEF	UBUS	2.9870e-003	5.6250e-003
tblVehicleEF	UBUS	1.2200e-004	0.00

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

tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	7.6400e-004	0.01
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.01	9.4760e-003
tblVehicleEF	UBUS	1.6000e-005	3.3000e-005
tblVehicleEF	UBUS	1.9400e-004	0.02
tblVehicleEF	UBUS	2.9870e-003	5.6250e-003
tblVehicleEF	UBUS	1.2200e-004	0.00
tblVehicleEF	UBUS	1.41	0.42
tblVehicleEF	UBUS	7.6400e-004	0.01
tblVehicleEF	UBUS	0.01	0.02
tblVehicleTrips	ST_TR	9.54	9.53
tblVehicleTrips	ST_TR	1.74	1.45
tblVehicleTrips	SU_TR	8.55	8.54
tblVehicleTrips	SU_TR	1.74	1.45
tblVehicleTrips	WD_TR	9.44	9.43
tblVehicleTrips	WD_TR	1.74	1.45

**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	0.3673	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0448	0.1719	2.6000e-004	1.0000e-005	0.1804



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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0869	0.0763	0.6428	1.3400e-003	0.1183	1.0100e-003	0.1193	0.0295	9.4000e-004	0.0305	0.0000	123.9974	123.9974	6.8000e-003	5.8600e-003	125.9133
Unmitigated	0.0869	0.0763	0.6428	1.3400e-003	0.1183	1.0100e-003	0.1193	0.0295	9.4000e-004	0.0305	0.0000	123.9974	123.9974	6.8000e-003	5.8600e-003	125.9133

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Single Family Housing	9.43	9.53	8.54	21,519	21,519
Unrefrigerated Warehouse-No Rail	112.26	112.26	112.26	327,733	327,733
<b>Total</b>	<b>121.69</b>	<b>121.79</b>	<b>120.80</b>	<b>349,252</b>	<b>349,252</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3



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

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.537284	0.044282	0.222640	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874
Single Family Housing	0.537284	0.044282	0.222640	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874
Unrefrigerated Warehouse-No Rail	0.537284	0.044282	0.222640	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.2903	0.2903	0.0000	0.0000	0.2903
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.2903	0.2903	0.0000	0.0000	0.2903
NaturalGas Mitigated	1.5800e-003	0.0143	0.0115	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6328	15.6328	3.0000e-004	2.9000e-004	15.7257
NaturalGas Unmitigated	1.5800e-003	0.0143	0.0115	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.6328	15.6328	3.0000e-004	2.9000e-004	15.7257

**5.2 Energy by Land Use - NaturalGas Unmitigated**

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

	Natural Gas 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	26629.5	1.4000e-004	1.2300e-003	5.2000e-004	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4211	1.4211	3.0000e-005	3.0000e-005	1.4295
Unrefrigerated Warehouse-No	266318	1.4400e-003	0.0131	0.0110	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	14.2117	14.2117	2.7000e-004	2.6000e-004	14.2962
<b>Total</b>		<b>1.5800e-003</b>	<b>0.0143</b>	<b>0.0115</b>	<b>9.0000e-005</b>		<b>1.0900e-003</b>	<b>1.0900e-003</b>		<b>1.0900e-003</b>	<b>1.0900e-003</b>	<b>0.0000</b>	<b>15.6328</b>	<b>15.6328</b>	<b>3.0000e-004</b>	<b>2.9000e-004</b>	<b>15.7257</b>

**Mitigated**

	Natural Gas 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	26629.5	1.4000e-004	1.2300e-003	5.2000e-004	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4211	1.4211	3.0000e-005	3.0000e-005	1.4295
Unrefrigerated Warehouse-No	266318	1.4400e-003	0.0131	0.0110	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	14.2117	14.2117	2.7000e-004	2.6000e-004	14.2962
<b>Total</b>		<b>1.5800e-003</b>	<b>0.0143</b>	<b>0.0115</b>	<b>9.0000e-005</b>		<b>1.0900e-003</b>	<b>1.0900e-003</b>		<b>1.0900e-003</b>	<b>1.0900e-003</b>	<b>0.0000</b>	<b>15.6328</b>	<b>15.6328</b>	<b>3.0000e-004</b>	<b>2.9000e-004</b>	<b>15.7257</b>

**5.3 Energy by Land Use - Electricity**

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

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	41164.2	0.0373	0.0000	0.0000	0.0373
Single Family Housing	7833.22	7.1100e-003	0.0000	0.0000	7.1100e-003
Unrefrigerated Warehouse-No	270963	0.2458	0.0000	0.0000	0.2458
<b>Total</b>		<b>0.2903</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2903</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	41164.2	0.0373	0.0000	0.0000	0.0373
Single Family Housing	7833.22	7.1100e-003	0.0000	0.0000	7.1100e-003
Unrefrigerated Warehouse-No	270963	0.2458	0.0000	0.0000	0.2458
<b>Total</b>		<b>0.2903</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.2903</b>

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3673	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0448	0.1719	2.6000e-004	1.0000e-005	0.1804
Unmitigated	0.3673	2.2000e-004	0.0167	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0448	0.1719	2.6000e-004	1.0000e-005	0.1804

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.9000e-004	9.0000e-005	8.1700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0136	0.0136	2.0000e-005	0.0000	0.0140

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

<b>Total</b>	<b>0.3673</b>	<b>2.2000e-004</b>	<b>0.0167</b>	<b>2.0000e-005</b>		<b>1.2800e-003</b>	<b>1.2800e-003</b>		<b>1.2800e-003</b>	<b>1.2800e-003</b>	<b>0.1271</b>	<b>0.0448</b>	<b>0.1719</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>0.1804</b>
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**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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665	
Landscaping	2.9000e-004	9.0000e-005	8.1700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0136	0.0136	2.0000e-005	0.0000	0.0140	
<b>Total</b>	<b>0.3673</b>	<b>2.2000e-004</b>	<b>0.0167</b>	<b>2.0000e-005</b>		<b>1.2800e-003</b>	<b>1.2800e-003</b>		<b>1.2800e-003</b>	<b>1.2800e-003</b>	<b>0.1271</b>	<b>0.0448</b>	<b>0.1719</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>0.1804</b>	

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
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Terra Bella - Existing - Santa Clara County, Annual

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

Category	MT/yr			
Mitigated	5.7889	0.5855	0.0138	24.5464
Unmitigated	5.7889	0.5855	0.0138	24.5464

**7.2 Water by Land Use**

**Unmitigated**

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr		
Parking Lot	0 / 0	0.0000	0.0000	0.0000
Single Family Housing	0.065154 / 0.0410754	0.0211	2.1200e-003	5.0000e-005
Unrefrigerated Warehouse-No	17.9034 / 0	5.7678	0.5834	0.0138
<b>Total</b>		<b>5.7889</b>	<b>0.5855</b>	<b>0.0138</b>

**Mitigated**

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

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

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.065154 / 0.0410754	0.0211	2.1200e-003	5.0000e-005	0.0891
Unrefrigerated Warehouse-No	17.9034 / 0	5.7678	0.5834	0.0138	24.4573
<b>Total</b>		<b>5.7889</b>	<b>0.5855</b>	<b>0.0138</b>	<b>24.5464</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.0274	0.8881	0.0000	37.2298
Unmitigated	15.0274	0.8881	0.0000	37.2298

**8.2 Waste by Land Use**

Unmitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e

Terra Bella - Existing - Santa Clara County, Annual

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

Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Unrefrigerated Warehouse-No	72.77	14.7717	0.8730	0.0000	36.5961
<b>Total</b>		<b>15.0274</b>	<b>0.8881</b>	<b>0.0000</b>	<b>37.2298</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Unrefrigerated Warehouse-No	72.77	14.7717	0.8730	0.0000	36.5961
<b>Total</b>		<b>15.0274</b>	<b>0.8881</b>	<b>0.0000</b>	<b>37.2298</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Terra Bella - Existing - Santa Clara County, Annual

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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

**Terra Bella - Operational 2030**

**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	109.00	Dwelling Unit	1.04	107,896.00	312
Unrefrigerated Warehouse-No Rail	408.96	1000sqft	4.77	408,964.00	0
Parking Lot	75.00	Space	0.00	30,000.00	0
Enclosed Parking Structure	105.00	Space	0.00	31,802.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	4			<b>Operational Year</b>	2030
<b>Utility Company</b>	Silicon Valley Clean Energy				
<b>CO2 Intensity (lb/MWhr)</b>	2	<b>CH4 Intensity (lb/MWhr)</b>	0	<b>N2O Intensity (lb/MWhr)</b>	0

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Provided land uses - construction worksheet and PD
- Construction Phase - Operational run - no construction
- Off-road Equipment - Operational run - no construction
- Grading -
- Vehicle Trips - Traffic provided trip gen
- Vehicle Emission Factors - EMFAC2021 vehicle emission facotrs Santa Clara County 2030
- Fleet Mix - EMFAC2021 fleet mix Santa Clara County 2030
- Woodstoves - No Hearths

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

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

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	1/11/2024	12/29/2023
tblEnergyUse	NT24E	3,054.10	3,978.74
tblEnergyUse	NT24E	1.07	1.09
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	0.07	0.00
tblEnergyUse	T24E	70.89	1,602.68
tblEnergyUse	T24E	0.29	1.28
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	3.37	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	16.35	0.00
tblFireplaces	NumberNoFireplace	4.36	0.00
tblFireplaces	NumberWood	18.53	0.00
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	HHD	6.1320e-003	7.8440e-003
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDA	0.58	0.51
tblFleetMix	LDT1	0.06	0.04

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

tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LDT2	0.18	0.24
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	LHD2	5.3980e-003	6.1700e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MH	2.5260e-003	2.2720e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003

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

tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	MHD	8.2190e-003	9.6590e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	OBUS	8.5200e-004	1.0640e-003
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	SBUS	8.3700e-004	6.8100e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblFleetMix	UBUS	3.3500e-004	3.9600e-004
tblLandUse	LandUseSquareFeet	109,000.00	107,896.00
tblLandUse	LandUseSquareFeet	42,000.00	31,802.00
tblLandUse	LotAcreage	2.87	1.04
tblLandUse	LotAcreage	9.39	4.77
tblLandUse	LotAcreage	0.68	0.00
tblLandUse	LotAcreage	0.95	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7300e-004

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

tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4370e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	4.0000e-006
tblVehicleEF	HHD	5.20	3.42
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7380e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0530e-003	1.6560e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7860e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.6530e-003	6.2150e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00

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

tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	9.5900e-004	1.2510e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.40	0.48
tblVehicleEF	LDA	1.69	2.09
tblVehicleEF	LDA	199.86	212.85
tblVehicleEF	LDA	42.17	54.77
tblVehicleEF	LDA	3.1760e-003	3.1650e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.12	0.18
tblVehicleEF	LDA	0.04	7.0780e-003
tblVehicleEF	LDA	9.1600e-004	8.3800e-004
tblVehicleEF	LDA	1.2750e-003	1.4820e-003
tblVehicleEF	LDA	0.02	2.4770e-003
tblVehicleEF	LDA	8.4300e-004	7.7100e-004
tblVehicleEF	LDA	1.1720e-003	1.3620e-003
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	3.2350e-003	4.3400e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20

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

tblVehicleEF	LDA	1.9770e-003	2.1040e-003
tblVehicleEF	LDA	4.1700e-004	5.4100e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	4.6990e-003	6.3290e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2730e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.53	0.90
tblVehicleEF	LDT1	1.82	3.41
tblVehicleEF	LDT1	241.46	289.93
tblVehicleEF	LDT1	51.55	75.02
tblVehicleEF	LDT1	3.7700e-003	5.8700e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27
tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	1.0550e-003	1.2600e-003
tblVehicleEF	LDT1	1.4610e-003	2.0740e-003
tblVehicleEF	LDT1	0.02	3.1980e-003
tblVehicleEF	LDT1	9.7000e-004	1.1590e-003
tblVehicleEF	LDT1	1.3440e-003	1.9070e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	6.4760e-003	0.01
tblVehicleEF	LDT1	0.06	0.36



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

tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.8660e-003
tblVehicleEF	LDT1	5.1000e-004	7.4200e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	9.4480e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.55	0.64
tblVehicleEF	LDT2	2.25	2.73
tblVehicleEF	LDT2	249.80	293.05
tblVehicleEF	LDT2	53.79	74.63
tblVehicleEF	LDT2	4.0490e-003	4.4940e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8380e-003
tblVehicleEF	LDT2	1.0100e-003	9.8900e-004
tblVehicleEF	LDT2	1.3400e-003	1.6580e-003
tblVehicleEF	LDT2	0.02	3.0930e-003
tblVehicleEF	LDT2	9.3000e-004	9.1000e-004
tblVehicleEF	LDT2	1.2320e-003	1.5240e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	6.5290e-003	6.8650e-003

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

tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	2.8970e-003
tblVehicleEF	LDT2	5.3200e-004	7.3800e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	9.4890e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3350e-003
tblVehicleEF	LHD1	5.1950e-003	4.0280e-003
tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93
tblVehicleEF	LHD1	10.09	15.88
tblVehicleEF	LHD1	7.2900e-004	5.8900e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6600e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3430e-003
tblVehicleEF	LHD1	7.0190e-003	9.1890e-003

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tblVehicleEF	LHD1	2.1000e-004	1.3400e-004
tblVehicleEF	LHD1	8.7500e-004	6.3700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3360e-003
tblVehicleEF	LHD1	6.6710e-003	8.7610e-003
tblVehicleEF	LHD1	1.9300e-004	1.2300e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.00
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.6000e-005
tblVehicleEF	LHD1	6.8120e-003	6.4980e-003
tblVehicleEF	LHD1	1.0000e-004	1.5700e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.00
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5080e-003
tblVehicleEF	LHD2	5.3390e-003	4.4570e-003
tblVehicleEF	LHD2	4.8110e-003	8.7200e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11

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

tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4560e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.7000e-005
tblVehicleEF	LHD2	1.4370e-003	1.3930e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6340e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	9.8000e-005	5.2000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.00
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2800e-004
tblVehicleEF	LHD2	6.5570e-003	6.8600e-003
tblVehicleEF	LHD2	6.4000e-005	8.4000e-005

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

tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.00
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3410e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1380e-003	1.9970e-003
tblVehicleEF	MCY	2.8620e-003	3.4160e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8640e-003
tblVehicleEF	MCY	2.6760e-003	3.1970e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13

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tblVehicleEF	MCY	2.0760e-003	1.8350e-003
tblVehicleEF	MCY	5.8600e-004	4.2300e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0970e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.54	0.66
tblVehicleEF	MDV	2.29	2.78
tblVehicleEF	MDV	301.13	349.58
tblVehicleEF	MDV	63.46	88.38
tblVehicleEF	MDV	5.2660e-003	5.3820e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27
tblVehicleEF	MDV	0.04	8.8920e-003
tblVehicleEF	MDV	1.0200e-003	9.7100e-004
tblVehicleEF	MDV	1.3440e-003	1.6080e-003
tblVehicleEF	MDV	0.02	3.1120e-003
tblVehicleEF	MDV	9.4000e-004	8.9400e-004
tblVehicleEF	MDV	1.2360e-003	1.4780e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	6.8620e-003	8.0910e-003
tblVehicleEF	MDV	0.05	0.21

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

tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.4540e-003
tblVehicleEF	MDV	6.2800e-004	8.7400e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.9460e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0740e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3360e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1400e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90

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

tblVehicleEF	MH	0.14	0.00
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9900e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	0.00
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4650e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72
tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7600e-003
tblVehicleEF	MHD	0.34	0.63
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5500e-004
tblVehicleEF	MHD	0.13	0.04



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

tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2000e-005
tblVehicleEF	MHD	1.5500e-004	6.2600e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6960e-003	5.1780e-003
tblVehicleEF	MHD	1.0300e-004	7.6000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3200e-003
tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.00
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46

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

tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1100e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.8820e-003	0.01
tblVehicleEF	OBUS	1.5600e-004	1.1800e-004
tblVehicleEF	OBUS	1.3600e-004	2.9700e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.00
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01

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tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.00
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2160e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81
tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8480e-003
tblVehicleEF	SBUS	2.71	1.05
tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4600e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.6000e-005
tblVehicleEF	SBUS	1.9600e-003	7.1300e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6100e-003
tblVehicleEF	SBUS	0.02	8.1870e-003

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

tblVehicleEF	SBUS	6.2000e-005	4.2000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.00
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6390e-003
tblVehicleEF	SBUS	9.2880e-003	8.7390e-003
tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.00
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5020e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15

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

tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8220e-003
tblVehicleEF	UBUS	1.5000e-005	1.3000e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6090e-003
tblVehicleEF	UBUS	1.4000e-005	1.2000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	9.2610e-003	8.3780e-003
tblVehicleEF	UBUS	0.01	7.3890e-003
tblVehicleEF	UBUS	1.4000e-005	3.0000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	0.00
tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	0.01	9.1730e-003
tblVehicleTrips	ST_TR	4.91	4.34
tblVehicleTrips	ST_TR	1.74	1.45
tblVehicleTrips	SU_TR	4.09	3.61
tblVehicleTrips	SU_TR	1.74	1.45
tblVehicleTrips	WD_TR	5.44	4.81
tblVehicleTrips	WD_TR	1.74	1.45
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

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

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	2.18	0.00
tblWoodstoves	NumberNoncatalytic	2.18	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

**2.0 Emissions Summary**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3377	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Mobile	0.5328	0.3582	3.6200	9.3200e-003	0.9766	5.5300e-003	0.9821	0.2435	5.1600e-003	0.2487	0.0000	861.3627	861.3627	0.0389	0.0381	873.6764

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Waste						0.0000	0.0000		0.0000	0.0000	88.2118	0.0000	88.2118	5.2132	0.0000	218.5409
Water						0.0000	0.0000		0.0000	0.0000	35.9724	0.5133	36.4857	0.1238	0.0782	62.8930
<b>Total</b>	<b>2.8706</b>	<b>0.3675</b>	<b>4.4326</b>	<b>9.3600e-003</b>	<b>0.9766</b>	<b>0.0100</b>	<b>0.9866</b>	<b>0.2435</b>	<b>9.6700e-003</b>	<b>0.2532</b>	<b>124.1841</b>	<b>865.6681</b>	<b>989.8522</b>	<b>5.3771</b>	<b>0.1163</b>	<b>1,158.9345</b>

**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	2.3377	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Mobile	0.5328	0.3582	3.6200	9.3200e-003	0.9766	5.5300e-003	0.9821	0.2435	5.1600e-003	0.2487	0.0000	861.3627	861.3627	0.0389	0.0381	873.6764
Waste						0.0000	0.0000		0.0000	0.0000	88.2118	0.0000	88.2118	5.2132	0.0000	218.5409
Water						0.0000	0.0000		0.0000	0.0000	35.9724	0.5133	36.4857	0.1238	0.0782	62.8930
<b>Total</b>	<b>2.8706</b>	<b>0.3675</b>	<b>4.4326</b>	<b>9.3600e-003</b>	<b>0.9766</b>	<b>0.0100</b>	<b>0.9866</b>	<b>0.2435</b>	<b>9.6700e-003</b>	<b>0.2532</b>	<b>124.1841</b>	<b>865.6681</b>	<b>989.8522</b>	<b>5.3771</b>	<b>0.1163</b>	<b>1,158.9345</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**4.0 Operational Detail - Mobile**

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

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5328	0.3582	3.6200	9.3200e-003	0.9766	5.5300e-003	0.9821	0.2435	5.1600e-003	0.2487	0.0000	861.3627	861.3627	0.0389	0.0381	873.6764
Unmitigated	0.5328	0.3582	3.6200	9.3200e-003	0.9766	5.5300e-003	0.9821	0.2435	5.1600e-003	0.2487	0.0000	861.3627	861.3627	0.0389	0.0381	873.6764

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	524.29	473.06	393.49	1,150,844	1,150,844
Enclosed Parking Structure	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	593.00	593.00	593.00	1,731,264	1,731,264
<b>Total</b>	<b>1,117.29</b>	<b>1,066.06</b>	<b>986.49</b>	<b>2,882,108</b>	<b>2,882,108</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	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 Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

**4.4 Fleet Mix**



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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Enclosed Parking Structure	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Parking Lot	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272
Unrefrigerated Warehouse-No Rail	0.514977	0.035448	0.239576	0.135703	0.024260	0.006170	0.009659	0.007844	0.001064	0.000396	0.021950	0.000681	0.002272

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.4595	2.4595	0.0000	0.0000	2.4595
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**



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

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	689192	0.6252	0.0000	0.0000	0.6252
Enclosed Parking Structure	166961	0.1515	0.0000	0.0000	0.1515
Parking Lot	10500	9.5300e-003	0.0000	0.0000	9.5300e-003
Unrefrigerated Warehouse-No	1.84443e+006	1.6732	0.0000	0.0000	1.6732
<b>Total</b>		<b>2.4595</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4595</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	689192	0.6252	0.0000	0.0000	0.6252
Enclosed Parking Structure	166961	0.1515	0.0000	0.0000	0.1515

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

Parking Lot	10500	9.5300e-003	0.0000	0.0000	9.5300e-003
Unrefrigerated Warehouse-No	1.84443e+006	1.6732	0.0000	0.0000	1.6732
<b>Total</b>		<b>2.4595</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4595</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3377	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647
Unmitigated	2.3377	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647

**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					

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

Architectural Coating	0.2905					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0246	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647
<b>Total</b>	<b>2.3377</b>	<b>9.3500e-003</b>	<b>0.8126</b>	<b>4.0000e-005</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>0.0000</b>	<b>1.3326</b>	<b>1.3326</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>1.3647</b>

**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	0.2905					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0246	9.3500e-003	0.8126	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3326	1.3326	1.2900e-003	0.0000	1.3647
<b>Total</b>	<b>2.3377</b>	<b>9.3500e-003</b>	<b>0.8126</b>	<b>4.0000e-005</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>		<b>4.5100e-003</b>	<b>4.5100e-003</b>	<b>0.0000</b>	<b>1.3326</b>	<b>1.3326</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>1.3647</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4857	0.1238	0.0782	62.8930
Unmitigated	36.4857	0.1238	0.0782	62.8930

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.10179 / 4.47721	2.5617	8.6500e-003	5.4600e-003	4.4062
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	94.572 / 0	33.9240	0.1152	0.0728	58.4867
<b>Total</b>		<b>36.4857</b>	<b>0.1238</b>	<b>0.0782</b>	<b>62.8930</b>

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

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.10179 / 4.47721	2.5617	8.6500e-003	5.4600e-003	4.4062
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	94.572 / 0	33.9240	0.1152	0.0728	58.4867
<b>Total</b>		<b>36.4857</b>	<b>0.1238</b>	<b>0.0782</b>	<b>62.8930</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	88.2118	5.2132	0.0000	218.5409
Unmitigated	88.2118	5.2132	0.0000	218.5409

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

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.14	10.1780	0.6015	0.0000	25.2155
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	384.42	78.0338	4.6117	0.0000	193.3254
<b>Total</b>		<b>88.2118</b>	<b>5.2132</b>	<b>0.0000</b>	<b>218.5409</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	50.14	10.1780	0.6015	0.0000	25.2155
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000



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

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	384.42	78.0338	4.6117	0.0000	193.3254
<b>Total</b>		<b>88.2118</b>	<b>5.2132</b>	<b>0.0000</b>	<b>218.5409</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

**Attachment 3: EMFAC2021 Emissions Calculations**

**Residential Phase 1 - Summary of Construction Traffic Emissions (EMFAC2021)**

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	NBio- CO2	CH4	N2O	CO2e
					PM10	PM10	Total	PM2.5	PM2.5	Total				
					<i>Tons</i>									
<b>Criteria Pollutants</b>														
2023-2024	0.0270	0.0940	0.3012	0.0011	0.0750	0.0080	0.0830	0.0113	0.0032	0.0145	106.3535	0.0053	0.0091	109.2109
2025	0.0071	0.0249	0.0798	0.0003	0.0199	0.0021	0.0220	0.0030	0.0008	0.0038	28.1640	0.0014	0.0024	28.9207
<b>Toxic Air Contaminants (0.5 Mile Trip Length)</b>														
2023-2024	0.0234	0.0272	0.0970	0.0001	0.0035	0.0004	0.0040	0.0005	0.0002	0.0007	8.1900	0.0021	0.0013	8.6359
2025	0.0062	0.0072	0.0257	0.0000	0.0009	0.0001	0.0010	0.0001	0.0001	0.0002	2.1688	0.0005	0.0004	2.2869

**Storage Phase 1 - Summary of Construction Traffic Emissions (EMFAC2021)**

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	NBio- CO2	CH4	N2O	CO2e
					PM10	PM10	Total	PM2.5	PM2.5	Total				
					<i>Tons</i>									
<b>Criteria Pollutants</b>														
2024-2025	0.0366	0.1964	0.4195	0.0020	0.1125	0.0145	0.1270	0.0169	0.0059	0.0228	189.8861	0.0094	0.0192	195.8548
<b>Toxic Air Contaminants (0.5 Mile Trip Length)</b>														
2024-2025	0.0314	0.0652	0.1447	0.0002	0.0056	0.0009	0.0065	0.0008	0.0004	0.0012	16.9819	0.0035	0.0027	17.8694

**Storage Phase 2 - Summary of Construction Traffic Emissions (EMFAC2021)**

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	NBio- CO2	CH4	N2O	CO2e
					PM10	PM10	Total	PM2.5	PM2.5	Total				
					<i>Tons</i>									
<b>Criteria Pollutants</b>														
2025-2026	0.0162	0.0849	0.1850	0.0009	0.0527	0.0067	0.0593	0.0079	0.0027	0.0106	85.9751	0.0041	0.0086	88.6471
<b>Toxic Air Contaminants (0.5 Mile Trip Length)</b>														
2025-2026	0.0140	0.0282	0.0637	0.0001	0.0026	0.0004	0.0030	0.0004	0.0002	0.0006	7.4928	0.0015	0.0012	7.8831

**Residential Phase 1 - CalEEMod Construction Inputs**

Phase	CalEEMod	CalEEMod	Total	Total	CalEEMod	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling
	WORKER	VENDOR	Worker	Vendor	HAULING									
Demolition	10	0	160	0	205	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1728	0	4100
Site Preparation	8	0	64	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	691.2	0	0
Grading	15	0	225	0	375	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2430	0	7500
Trenching	5	0	550	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5940	0	0
Building Construction	91	17	14014	2618	30	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	151351.2	19111.4	219
Architectural Coating	18	0	2736	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	29548.8	0	0
Paving	10	0	450	0	20	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	4860	0	146

**Number of Days Per Year**

2023-2024	12/1/23	12/31/24	397	284
2025	1/1/25	5/23/25	143	102
			540	<b>386 Total Workdays</b>

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	12/1/2023	12/23/2023	5	16
Site Preparation	12/27/2023	1/6/2024	5	8
Grading	1/1/2024	1/20/2024	5	15
Trenching	1/21/2024	6/21/2024	5	110
Building Construction	6/23/2024	1/23/2025	5	154
Architectural Coating	8/22/2024	3/22/2025	5	152
Paving	3/23/2025	5/23/2025	5	45

**Storage Phase 1 - CalEEMod Construction Inputs**

Phase	CalEEMod	CalEEMod	Total	Total	CalEEMod	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling
	WORKER	VENDOR	Worker	Vendor	HAULING									
Demolition	10	0	200	0	472	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2160	0	9440
Site Preparation	13	0	325	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3510	0	0
Grading	15	0	390	0	19	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4212	0	380
Trenching	8	0	56	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	604.8	0	0
Building Construction	124	48	22196	8592	100	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	239716.8	62721.6	730
Architectural Coating	25	0	1200	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	12960	0	0
Paving	20	0	220	0	350	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	2376	0	2555

**Number of Days Per Year**

2024-2025	11/1/24	9/12/25	316	316
			316	<b>316 Total Workdays</b>

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	11/1/2024	11/20/2024	7	20
Site Preparation	11/21/2024	12/15/2024	7	25
Grading	12/16/2024	1/10/2025	7	26
Trenching	1/11/2025	1/17/2025	7	7
Building Construction	1/18/2025	7/15/2025	7	179
Architectural Coating	7/16/2025	9/1/2025	7	48
Paving	9/2/2025	9/12/2025	7	11

**Storage Phase 2 - CalEEMod Construction Inputs**

Phase	CalEEMod	CalEEMod	Total	Total	CalEEMod	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor Vehicle	Hauling Vehicle	Worker	Vendor	Hauling
	WORKER	VENDOR	Worker	Vendor	HAULING									
Demolition	18	0	288	0	281	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3110.4	0	5620
Site Preparation	15	0	165	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1782	0	0
Grading	18	0	414	0	16	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4471.2	0	320
Trenching	8	0	32	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	345.6	0	0
Building Construction	60	23	9960	3818	80	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	107568	27871.4	584
Architectural Coating	12	0	372	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4017.6	0	0
Paving	13	0	364	0	18	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	3931.2	0	131.4

**Number of Days Per Year**

2025-2026	11/15/25	8/20/26	279	279
			279	<b>279 Total Workdays</b>

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	11/15/2025	11/30/2025	7	16
Site Preparation	12/1/2025	12/11/2025	7	11
Grading	12/12/2025	1/3/2026	7	23
Trenching	1/4/2026	1/7/2026	7	4
Building Construction	1/8/2026	6/22/2026	7	166
Architectural Coating	6/23/2026	7/23/2026	7	31
Paving	7/24/2026	8/20/2026	7	28



Category	Mtx %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust	PM10	PM10_PM	PM10_PM	PM10_IDL	PM10_RU	PM10_STREX	Road Dust	PM25_PM	PM25_PM	PM25_PM	PM25_IDL	PM25_RUN	PM25_STR	PM25_STR	CO2_NBIO	CO2_NBIO	CO2_NBIO	CH4_IDLE	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
			19	22	23	8	9	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hauling	100.0	1	0.000199377	5.83846E-05	0.23789936	0	0.01860554	0.00032501	4.36152E-07	4.075118	1.850604526	2.731403881	5.139556	0.77488683	0.000626	0.00728035	0.014633772	1.93499E-07	0.081298	0.025125	0.002182	0.025474	6.09682E-07	0.028454	0.008781	0.0003082	0.0243688	5.606E-07	832.31669	1617.1297	0.010973	0.222934	0.121678903	8.02769E-08	0.134072	0.258076714	1.34765E-05	0.024668	0.158249654	0.006031915		
	0.0	0	0.025794994	0.006259754	0.026359118	0	0.038811329	0.00596401	0.04894298	0.8928855	1.11291974	1.40789614	0.673181	0.34617278	1.07433	0.00148998	0.011664295	8.43209E-05	0.299	0.045389	0.012	0.002128	0.012985	0.000106814	0.044499	0.01589	0.003	0.0002035	0.0124511	9.821E-05	160.25985	1229.1806	8.5293121	0.013383	0.00965827	0.008772715	0.024668	0.158249654	0.006031915			
Vendor	50.0	0.5	9.79886E-05	2.91428E-05	0.134884908	0	0.009302771	0.0002625	2.18076E-07	2.037759	0.925202263	1.38170419	2.50778	0.38744341	0.000313	0.00364017	0.007317886	9.67497E-08	0.040649	0.017563	0.001091	0.012737	3.04841E-07	0.014217	0.004391	0.001041	0.0121644	2.803E-07	416.13835	808.54485	0.0097865	0.110467	0.006892451	4.01380E-08	0.007836	0.129038357	9.73817E-05	0.024668	0.158249654	0.006031915		
	50.0	0.5	0.012897497	0.003129877	0.013179559	0	0.019056644	0.02548201	0.02447149	0.4464293	0.556460987	0.70394807	0.335691	0.17398639	0.537165	0.00074499	0.005821247	4.21605E-05	0.0227	0.006	0.001064	0.006902	5.3407E-05	0.007945	0.0015	0.0001018	0.0062075	4.921E-05	80.129514	614.5903	4.2646661	0.006691	0.004829164	0.004836358	0.012344	0.079124827	0.003015958	0.024668	0.158249654	0.006031915		
	1	0.012995486	0.003159019	0.178074527	0	0.028395841	0.02574451	0.024471708	2.4839883	1.48176325	2.06965226	2.933471	0.5665298	0.537478	0.00438516	0.013150033	4.2257E-05	0.299	0.063348	0.023563	0.002155	0.01923	5.3719E-05	0.044499	0.022172	0.005891	0.0002059	0.0183919	4.939E-05	496.28827	1423.1552	4.2744426	0.123158	0.065668615	0.004836398	0.07938	0.208161184	0.003025696	0.024668	0.158249654	0.006031915	
Worker	50.0	0.5	0.136796864	0.040510207	0	0.00394385	0.10236849	0.147535756	0	0.018684555	0.115476587	0	0.32486778	1.445873	0	0.002111349	0.000313927	0.003584	0.004	0	0.000585	0.000954881	0.001254	0.001	0	0.000539	0.000878	0	122.54122	31.754603	0	0.001026569	0.03235985	0	0.002080964	0.014940319	0.024668	0.158249654	0.006031915			
	25.0	0.25	0.148814258	0.041105424	0	0.00690435	0.11745495	0.134116008	0	0.0319581	0.094816904	0	0.35468197	1.306204	0	0.000804162	0.00021249	0.002306	0.002	0	0.000482	0.00072446	0.000807	0.0005	0	0.0004415	0.0006661	0	81.34419	21.494004	0	0.001555571	0.026204278	0	0.002343639	0.009623613	0.024668	0.158249654	0.006031915			
	25.0	0.25	0.072043204	0.020150051	0	0.00277508	0.05338915	0.094795741	0	0.017007912	0.082407943	0	0.2073141	0.905899	0	0.000831592	0.000213499	0.002217	0.002	0	0.000333	0.000526973	0.000776	0.0005	0	0.0003065	0.0004845	0	84.129497	21.596069	0	0.000794556	0.020482249	0	0.001504103	0.009197602	0.024668	0.158249654	0.006031915			
	1	0.357654326	0.101769681	0	0.01362228	0.2734126	0.376447505	0	0.067650567	0.292701033	0	0.88688396	3.657977	0	0.002847102	0.000739916	0.299	0.008107	0.008	0	0.001401	0.002296134	0.044499	0.002837	0.002	0	0.001289	0.0002086	0	288.01491	74.844475	0	0.001286696	0.079046277	0	0.005928705	0.033761535	0.024668	0.158249654	0.006031915		

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNUN	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust	PM10	PM10_PM	PM10_PM	PM10_EX	PM10_RU	PM10_NEX	PM10_STREX	Road Dust	PM25_PM	PM25_PM	PM25_PM	PM25_EX	PM25_RUN	PM25_STR	PM25_STR	CO2_NBIO	CO2_NBIO	CO2_NBIO	CH4_IDLE	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
			19	22	23	8	9	10	19	22	23	8	9	10	19	22	23	8	9	10	19	22	23	8	9	10	19	22	23	8	9	10	19	22	23	8	9	10	19	22	23	8	9
Hauling	100.0	1	0.000161301	4.79645-05	0.32711502	0	0.0177956	0.00042304	4.206338-07	2.3652113	1.774037666	2.751173224	5.17629	0.736653561	0.003685	0.00709894	0.014348163	1.691916-07	0.081222	0.035128	0.002097	0.025021	5.202895-07	0.028428	0.008782	0.002	0.0229449	4.7855-07	813.97235	1586.8336	0.017142	0.229861	0.117123109	7.747595-08	0.131219	0.252304832	1.421546-05	0.024457	0.156018341	0.005882352			
	MHD	0.0	0	0.02318162	0.005603296	0.025250869	0	0.03248334	0.04529154	0.045776126	0.8479275	1.006394097	1.405484797	0.668176	0.2369393	1.000247	0.00147206	0.011511702	8.11155E-05	0.299	0.04526	0.012	0.001762	0.011186	0.000100992	0.044499	0.015841	0.003	0.0001685	0.0106642	9.28E-05	158.59364	1213.6546	8.2050726	0.013842	0.0095255	0.008314196	0.024457	0.156018341	0.005882352			
Vendor	50.0	0.5	8.00502E-05	2.39821-05	0.163592931	0	0.0088998	0.00021002	2.10316E-07	1.3826057	0.89702833	1.37588662	2.588145	0.3732078	0.003182	0.00354047	0.007174082	8.40956E-08	0.040611	0.017564	0.001048	0.012516	2.02108E-07	0.014214	0.004391	0.001	0.0119725	2.392E-07	406.98663	795.41681	0.0085371	0.114931	0.050566054	3.87379E-08	0.00561	0.12662016	7.10709E-05						
	MHD	50.0	0.5	0.011559081	0.002801648	0.012625434	0	0.01624167	0.022864507	0.022888063	0.4229638	0.502197049	0.703742398	0.334088	0.14846966	0.500124	0.00073603	0.005758511	4.05577E-05	0.022963	0.006	0.000881	0.005093	5.06468E-05	0.00792	0.0015	0.000943	0.0053471	4.64E-05	79.396518	606.82729	4.1023363	0.006921	0.00476775	0.004157098	0.012228	0.078009171	0.002929126					
Worker	50.0	0.5	0.011639731	0.00282563	0.176184944	0	0.02514147	0.02286159	0.022888273	2.4065694	1.390225882	2.07732906	2.922233	0.52673746	0.500466	0.0042855	0.012929933	4.06423E-05	0.299	0.063241	0.023564	0.001929	0.018109	5.0726E-05	0.044499	0.022134	0.005891	0.0001842	0.0173196	4.664E-05	486.28315	1400.2441	4.1110934	0.121851	0.063333805	0.004157137	0.077838	0.204661187	0.002936234				
LDA	50.0	0.5	0.132316144	0.038798622	0	0.00347076	0.09896031	0.136662954	0	0.01669164	0.109258161	0	0.303302	1.355747	0	0.00117474	0.000305136	0.003568	0.004	0	0.00056	0.000924606	0.001249	0.001	0	0.0005155	0.0008501	0	118.83714	30.865404	0	0.000920346	0.030308682	0	0.001942295	0.014436598							
LDT1	25.0	0.25	0.140646011	0.03898451	0	0.0061396	0.10983229	0.123932987	0	0.028671908	0.089369331	0	0.32677673	1.213816	0	0.00078885	0.000207607	0.002305	0.002	0	0.000453	0.000687493	0.000807	0.0005	0	0.0004172	0.0006321	0	79.795329	21.000607	0	0.001394323	0.02448908	0	0.002156838	0.009328014							
LDT2	25.0	0.25	0.070892203	0.019532741	0	0.00252324	0.05273079	0.088626233	0	0.01535685	0.07730776	0	0.15935521	0.854482	0	0.000899611	0.000207623	0.002215	0.002	0	0.000323	0.000515217	0.000775	0.0005	0	0.0002971	0.0004737	0	81.900889	21.001723	0	0.000484321	0.019128106	0	0.001411832	0.008875809							
	1	0.348854318	0.097313873	0	0.01211371	0.26154339	0.349222174	0	0.02121371	0.26154339	0.349222174	0	0.82543394	3.434044	0	0.002773201	0.000720366	0.299	0.008088	0.008	0	0.001336	0.002127136	0.044499	0.002831	0.002	0	0.0012299	0.001956	0	280.33836	72.867394	0	0.00296279	0.074125868	0	0.005107966	0.012635421					

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust	PM10	PM10_PM	PM10_PM	PM10	PM10_RU	PM10_STREX	Road Dust	PM25	PM25_PM	PM25_PM	PM25_IDL	PM25_RUN	PM25_STR	PM25_STR	CO2_NBIO	CO2_NBIO	CO2_NBIO	CH4_IDLE	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
			PM10	BW	TW	EX	NEX	PM10_STREX	PM25	BW	TW	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX
Hauling	100.0	1	0.000106002	3.361438-05	0.22445582	0	0.01701891	0.00032073	0.068488-07	3.8409822	1.701647234	0.760133946	5.153655	0.73309991	0.000738	0.00692351	0.014049606	1.337396-07	0.081458	0.025132	0.002013	0.024769	2.29379E-07	0.001445	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.001382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.014329	0.009524548	0.007918504	0.024186	0.135578352	0.005689167	
	0.0	0	0.0221312827	0.005105771	0.0242461021	0	0.027766184	0.04201809	0.043042965	0.8059976	0.906228922	1.39169173	0.664762	0.2571492	0.934813	0.00145189	0.011343734	7.82441E-05	0.299	0.045088	0.012	0.001445	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.001382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.014329	0.009524548	0.007918504	0.024186	0.135578352	0.005689167			
Vendor	50.0	0.5	3.3008E-05	1.82071E-05	0.16221751	0	0.00809045	0.00011136	0.03242E-07	1.5245411	0.802823617	1.380660373	2.576828	0.36654996	0.000389	0.00346176	0.007024803	6.4888E-08	0.040729	0.017506	0.001006	0.012385	1.64687E-07	0.0014255	0.004391	0.00095	0.0118471	1.524E-07	397.83497	777.4807	0.0067639	0.112154	0.052923068	3.74914E-08	0.004173	0.12412973	4.0208E-05					
	50.0	0.5	0.010656414	0.002255885	0.01213051	0	0.01383092	0.002100905	0.021521462	0.4009988	0.65114461	0.695845865	0.333381	0.1285746	0.467407	0.00072595	0.005673867	3.91122E-05	0.022544	0.006	0.000723	0.004818	4.81675E-05	0.0014255	0.004391	0.00095	0.0118471	1.524E-07	397.83497	777.4807	0.0067639	0.112154	0.052923068	3.74914E-08	0.004173	0.12412973	4.0208E-05					
		1	0.010709414	0.002569693	0.17435842	0	0.02234037	0.021116041	0.02151688	2.3255399	1.303938078	2.075912838	2.909209	0.49512456	0.467775	0.0041877	0.01269667	3.91889E-05	0.299	0.063273	0.023566	0.001729	0.017702	4.83322E-05	0.04499	0.022146	0.005891	0.001651	0.0164522	4.444E-05	476.18287	1375.751	3.9640749	0.119319	0.060685342	0.003959289	0.076266	0.200922149	0.002848604			
Worker	50.0	0.5	0.127252154	0.036844958	0	0.000310372	0.09549445	0.1277128959	0	0.015187697	0.103974769	0	0.28653009	1.277031	0	0.0001145495	0.000297052	0.003561	0.004	0	0.000536	0.000895416	0.001246	0.001	0	0.000493	0.0008233	0	115.87797	30.047725	0	0.000837586	0.028479341	0	0.001838924	0.013991495						
	25.0	0.25	0.132430724	0.036844584	0	0.00546911	0.10347702	0.11457624	0	0.025800958	0.084390428	0	0.30149447	1.128878	0	0.000773719	0.000202829	0.002303	0.002	0	0.000427	0.00063661	0.000806	0.0005	0	0.0003926	0.000601	0	78.26465	20.516787	0	0.00125256	0.022898387	0	0.0019927	0.009041201						
	25.0	0.25	0.069772888	0.018822709	0	0.00238206	0.05209969	0.083130872	0	0.014000924	0.071061014	0	0.185495	0.809666	0	0.000789304	0.000202147	0.002214	0.002	0	0.000111	0.000500467	0.000775	0.0005	0	0.000286	0.0004602	0	79.851497	20.44778	0	0.000600438	0.018292607	0	0.001335689	0.008608075						
		1	0.329450766	0.09236225	0	0.01088088	0.25107136	0.324837454	0	0.054989579	0.261426211	0	0.77398336	3.215575	0	0.002708517	0.000702029	0.299	0.008078	0.008	0	0.001273	0.000409544	0.04499	0.002827	0.002	0	0.0011716	0.0018845	0	273.99412	71.012292	0	0.002600584	0.069670334	0	0.005167313	0.031640771				

**CalEEMod EMFAC2021 Emission Factors Input**

**Year 2022**

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005715	0.003459	0.013325	0.206586857	0.007557	0	0	0.073426	0
A	CH4_RUNEX	0.00262	0.007767	0.003383	0.004896	0.010237	0.008314	0.010833	0.125617727	0.00979	0.350130168	0.173457	0.093942	0.017185
A	CH4_STREX	0.073882	0.119672	0.092036	0.116615	0.025471	0.014269	0.009682	9.9441E-08	0.019008	0.004663452	0.19335	0.004688	0.028369
A	CO_IDLEX	0	0	0	0	0.198658	0.145501	0.651982	4.97661886	0.488392	0	0	1.621037	0
A	CO_RUNEX	0.760971	1.692165	0.951378	1.147782	1.056725	0.677353	0.501333	0.800252118	0.642924	4.124448351	13.58248	0.9513	2.058413
A	CO_STREX	3.322299	6.090252	4.093035	4.559313	2.13502	1.264781	1.235154	0.000436679	2.130857	0.48496823	8.107621	0.67174	2.789542
A	CO2_NBIO_IDLEX	0	0	0	0	8.910742	13.95614	165.3045	879.5752488	85.25208	0	0	195.3581	0
A	CO2_NBIO_RUNEX	259.4628	336.3424	354.1685	428.4987	817.3397	858.1198	1248.398	1666.151858	1420.912	1102.901969	188.9834	1071.282	1702.83
A	CO2_NBIO_STREX	67.11243	89.8835	91.20332	109.5269	18.21997	10.55785	9.138443	0.030444739	16.62396	3.31327329	50.90901	3.708073	23.6993
A	NOX_IDLEX	0	0	0	0	0.052368	0.100699	1.038732	4.483888986	0.385202	0	0	1.506794	0
A	NOX_RUNEX	0.048635	0.159739	0.086392	0.134091	0.853668	1.119952	1.574899	2.394965381	1.208206	0.329132707	0.60517	2.986224	1.654513
A	NOX_STREX	0.261102	0.427174	0.383682	0.505292	0.479423	0.269607	1.281987	2.425661108	0.91248	0.048622235	0.149724	0.46558	0.298066
A	PM10_IDLEX	0	0	0	0	0.000668	0.001334	0.003039	0.002476095	0.000459	0	0	0.001574	0
A	PM10_PMBW	0.007233	0.009226	0.008886	0.009068	0.078	0.091	0.045475	0.082552815	0.049849	0.110359457	0.012	0.046029	0.044952
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.00938	0.01061	0.012	0.035118082	0.012	0.032484506	0.004	0.010935	0.013135
A	PM10_RUNEX	0.001291	0.002197	0.00143	0.001533	0.016407	0.025675	0.018341	0.027281345	0.016941	0.006218357	0.001891	0.015648	0.032536
A	PM10_STREX	0.002063	0.003256	0.002221	0.002404	0.000272	0.000128	0.000122	1.13121E-06	0.000148	8.37433E-06	0.003773	3.75E-05	0.00037
A	PM25_IDLEX	0	0	0	0	0.000639	0.001276	0.002908	0.002364184	0.000439	0	0	0.001505	0
A	PM25_PMBW	0.002532	0.003229	0.00311	0.003174	0.0273	0.03185	0.015916	0.028893485	0.017447	0.03862581	0.0042	0.01611	0.015733
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002345	0.002652	0.003	0.008779521	0.003	0.008121126	0.001	0.002734	0.003284
A	PM25_RUNEX	0.001189	0.002023	0.001316	0.001413	0.015653	0.024543	0.017539	0.026097586	0.016199	0.005946371	0.001772	0.014956	0.031073
A	PM25_STREX	0.001897	0.002994	0.002042	0.00221	0.00025	0.000117	0.000112	1.04011E-06	0.000136	7.69989E-06	0.003556	3.45E-05	0.00034
A	ROG_DIURN	0.298356	0.654689	0.305234	0.371774	0.142048	0.075802	0.031516	0.000336069	0.066167	0.017061368	3.980024	0.023681	36.75334
A	ROG_HTSK	0.089123	0.181374	0.087307	0.103701	0.037388	0.020186	0.007787	9.99559E-05	0.017416	0.005624927	3.560376	0.0068	10.2939
A	ROG_IDLEX	0	0	0	0	0.023467	0.017109	0.029206	0.334782686	0.040359	0	0	0.178459	0
A	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.010496	0.035089	0.013698	0.021403	0.104886	0.130534	0.060436	0.033100547	0.060818	0.063146087	1.156556	0.062084	0.108196
A	ROG_RUNLS	0.225275	0.530134	0.228911	0.286632	0.202385	0.107137	0.063713	0.000900445	0.073897	0.010905595	3.734124	0.015438	0.237872
A	ROG_STREX	0.34655	0.627914	0.435929	0.600223	0.128012	0.07114	0.05565	5.40242E-07	0.100833	0.017141714	1.442993	0.026744	0.124324
A	SO2_IDLEX	0	0	0	0	8.68E-05	0.000134	0.00154	0.007812146	0.000808	0	0	0.001782	0
A	SO2_RUNEX	0.002565	0.003325	0.003501	0.004233	0.00799	0.008276	0.011852	0.015152394	0.013604	0.009476431	0.001868	0.00996	0.016708
A	SO2_STREX	0.000663	0.000889	0.000902	0.001083	0.00018	0.000104	9.03E-05	3.00977E-07	0.000164	3.27551E-05	0.000503	3.67E-05	0.000234
A	TOG_DIURN	0.298356	0.654689	0.305234	0.371774	0.142048	0.075802	0.031516	0.000336069	0.066167	0.017061368	0.088089	0.023681	36.75334
A	TOG_HTSK	0.089123	0.181374	0.087307	0.103701	0.037388	0.020186	0.007787	9.99559E-05	0.017416	0.005624927	3.560376	0.0068	10.2939
A	TOG_IDLEX	0	0	0	0	0.033415	0.023307	0.0464	0.573123753	0.053678	0	0	0.2911	0
A	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.015286	0.051142	0.019968	0.031121	0.130739	0.152989	0.079545	0.162488475	0.079853	0.420818384	1.378949	0.165501	0.146385
A	TOG_RUNLS	0.225275	0.530134	0.228911	0.286632	0.202385	0.107137	0.063713	0.000900445	0.073897	0.010905595	3.734124	0.015438	0.237872
A	TOG_STREX	0.379427	0.687484	0.477287	0.657163	0.140157	0.077889	0.060929	5.91497E-07	0.1104	0.018768019	1.568432	0.029282	0.136119
A	N2O_IDLEX	0	0	0	0	0.000643	0.001679	0.025434	0.141105148	0.01202	0	0	0.026084	0
A	N2O_RUNEX	0.00491	0.011145	0.007019	0.010292	0.043036	0.0838	0.161707	0.265545018	0.157529	0.166506076	0.041009	0.135782	0.070507
A	N2O_STREX	0.031951	0.040826	0.039881	0.044373	0.037118	0.02093	0.006082	2.37172E-05	0.015897	0.007148428	0.008761	0.003988	0.030278

## 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	0.544798	1.115725	0.709018	0.758335	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	226.3156	306.9979	311.8783	373.7734	729.0592	776.3679	1175.453	1519.263619	1320.543	1063.591211	186.4654	995.3014	1669.128
A	CO2_NBIO_STREX	58.58917	80.20514	79.76496	94.84212	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	0.757707	3.734307068	0.356426	0	0	1.239893	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	0.002237	0.003035	0.003083	0.003693	0.007117	0.007474	0.011139	0.013717513	0.012583	0.00857389	0.001843	0.009244	0.016358
A	SO2_STREX	0.000579	0.000793	0.000789	0.000938	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	0.00508	0.006452	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 Emission Factors Input**

													<b>Year</b>	<b>2030</b>	
<b>Season</b>	<b>EmissionType</b>	<b>LDA</b>	<b>LDT1</b>	<b>LDT2</b>	<b>MDV</b>	<b>LHD1</b>	<b>LHD2</b>	<b>MHD</b>	<b>HHD</b>	<b>OBUS</b>	<b>UBUS</b>	<b>MCY</b>	<b>SBUS</b>	<b>MH</b>	
A	CH4_IDLEX		0	0	0	0	0.004335	0.002508	0.015544	0.200689575	0.007521	0	0	0.081907	0
A	CH4_RUNEX	0.001251	0.003273	0.001878	0.002097	0.004028	0.004457	0.009465	0.087739612	0.010745	0.633168094	0.142987	0.08726	0.006074	
A	CH4_STREX	0.045719	0.070684	0.060357	0.065129	0.016442	0.00872	0.006578	4.40093E-08	0.013432	0.002502449	0.157242	0.005216	0.022777	
A	CO_IDLEX		0	0	0	0	0.182077	0.135546	0.628457	4.997868655	0.549826	0	0	1.823721	0
A	CO_RUNEX	0.484467	0.895508	0.639484	0.660796	0.544761	0.383737	0.155266	0.628349624	0.288528	7.378159276	11.04655	0.716417	0.371762	
A	CO_STREX	2.08878	3.413929	2.729559	2.781248	2.051418	1.109837	0.71851	0.00087263	1.464305	0.531636543	7.830862	0.671301	1.918466	
A	CO2_NBIO_IDLEX		0	0	0	0	7.808851	13.36322	143.3801	719.710734	89.80588	0	0	181.8136	0
A	CO2_NBIO_RUNEX	212.8469	289.9302	293.0501	349.5802	665.9344	713.025	1074.538	1395.928332	1245.372	969.9926525	185.5769	941.807	1656.25	
A	CO2_NBIO_STREX	54.76765	75.02353	74.63055	88.38252	15.88489	8.544837	6.787068	0.009437452	12.01881	3.025945099	42.83228	3.929487	20.12804	
A	NOX_IDLEX		0	0	0	0	0.036306	0.076255	0.630169	3.42443431	0.333548	0	0	1.045112	0
A	NOX_RUNEX	0.023158	0.066035	0.041164	0.048222	0.312391	0.495733	0.584719	1.446947564	0.825827	0.255958394	0.509869	1.567888	1.278466	
A	NOX_STREX	0.178975	0.272625	0.247045	0.271696	0.32724	0.178285	1.220957	2.603954429	0.931305	0.025581732	0.103081	0.520702	0.298107	
A	PM10_IDLEX		0	0	0	0	0.000666	0.001456	0.000655	0.001737607	0.000311	0	0	0.000746	0
A	PM10_PMBW	0.007078	0.009138	0.008838	0.008892	0.0744	0.086908	0.04333	0.082108579	0.049981	0.147119217	0.012	0.043749	0.04494	
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009343	0.010534	0.012	0.035145225	0.012	0.05700071	0.004	0.010442	0.013343	
A	PM10_RUNEX	0.000838	0.00126	0.000989	0.000971	0.009189	0.01687	0.00542	0.023402177	0.012621	0.004822062	0.001997	0.008575	0.022807	
A	PM10_STREX	0.001482	0.002074	0.001658	0.001608	0.000134	5.67E-05	8.23E-05	1.43954E-07	0.000118	1.26121E-05	0.003416	4.58E-05	0.000233	
A	PM25_IDLEX		0	0	0	0	0.000637	0.001393	0.000626	0.001655588	0.000297	0	0	0.000713	0
A	PM25_PMBW	0.002477	0.003198	0.003093	0.003112	0.02604	0.030418	0.015165	0.028738003	0.017493	0.051491726	0.0042	0.015312	0.015729	
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002336	0.002634	0.003	0.008786306	0.003	0.014250178	0.001	0.00261	0.003336	
A	PM25_RUNEX	0.000771	0.001159	0.00091	0.000894	0.008761	0.016127	0.005178	0.022386582	0.012067	0.00460949	0.001864	0.008187	0.021783	
A	PM25_STREX	0.001362	0.001907	0.001524	0.001478	0.000123	5.22E-05	7.56E-05	1.3236E-07	0.000109	1.15963E-05	0.003197	4.21E-05	0.000214	
A	ROG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626	
A	ROG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484	
A	ROG_IDLEX		0	0	0	0	0.01758	0.01365	0.020875	0.311156106	0.039789	0	0	0.197824	0
A	ROG_RESTL		0	0	0	0	0	0	0	0	0	0	0	0	0
A	ROG_RUNEX	0.00434	0.013675	0.006865	0.008091	0.050519	0.082873	0.014952	0.014289903	0.031966	0.05310504	0.890508	0.040189	0.050568	
A	ROG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258	
A	ROG_STREX	0.197184	0.337555	0.26551	0.301161	0.07823	0.041209	0.034167	2.38553E-07	0.071386	0.008378471	1.134366	0.029472	0.088942	
A	SO2_IDLEX		0	0	0	0	7.6E-05	0.000128	0.00132	0.006214699	0.000846	0	0	0.001639	0
A	SO2_RUNEX	0.002104	0.002866	0.002897	0.003454	0.006498	0.00686	0.010167	0.012580529	0.011835	0.007389377	0.001835	0.008739	0.016224	
A	SO2_STREX	0.000541	0.000742	0.000738	0.000874	0.000157	8.45E-05	6.71E-05	9.32988E-08	0.000119	2.99145E-05	0.000423	3.88E-05	0.000199	
A	TOG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626	
A	TOG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484	
A	TOG_IDLEX		0	0	0	0	0.0248	0.018097	0.03926	0.541395418	0.052568	0	0	0.32342	0
A	TOG_RESTL		0	0	0	0	0	0	0	0	0	0	0	0	0
A	TOG_RUNEX	0.006329	0.019954	0.010004	0.011775	0.060583	0.095343	0.026358	0.103810529	0.046832	0.694289379	1.091848	0.133799	0.062589	
A	TOG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258	
A	TOG_STREX	0.215892	0.36958	0.2907	0.329734	0.085652	0.045119	0.037409	2.61185E-07	0.078158	0.009173371	1.234067	0.032269	0.097381	
A	N2O_IDLEX		0	0	0	0	0.000589	0.00168	0.022195	0.116327365	0.013129	0	0	0.023481	0
A	N2O_RUNEX	0.003165	0.00587	0.004494	0.005382	0.035467	0.074134	0.137514	0.223022009	0.151496	0.151061958	0.036967	0.112558	0.068485	
A	N2O_STREX	0.025397	0.032408	0.031653	0.032172	0.028461	0.015119	0.00476	3.77164E-06	0.011347	0.00458201	0.006341	0.004848	0.033159	

**CalEEMod EMFAC2021 Fleet Mix Input**

**Year 2022**

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.537284	0.044282	0.22264	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874
Single Family Housing	0.537284	0.044282	0.22264	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874
Unrefrigerated Warehouse	0.537284	0.044282	0.22264	0.123915	0.022851	0.005418	0.009384	0.007051	0.001066	0.000424	0.022133	0.000678	0.002874

**CalEEMod EMFAC2021 Fleet Mix Input**

**Year 2027**

FleetMixLandUseSubType LDA	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.522645	0.03817	0.234287	0.131557	0.023622	0.005919	0.00953	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Enclosed Parking Structure	0.522645	0.03817	0.234287	0.131557	0.023622	0.005919	0.00953	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Parking Lot	0.522645	0.03817	0.234287	0.131557	0.023622	0.005919	0.00953	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442
Unrefrigerated Warehouse	0.522645	0.03817	0.234287	0.131557	0.023622	0.005919	0.00953	0.007639	0.001062	0.000406	0.022036	0.000684	0.002442



**CalEEMod EMFAC2021 Fleet Mix Input**

**Year 2030**

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

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	3.82736662	3.06472E-05	105.1913484	0.0001019	76.57795135	0.000613
	HHDT	DSL	8126.63008	0.065073107	984491.3077	0.9537077	118998.6435	0.952869
	HHDT	NG	660.775639	0.005291089	47681.35825	0.0461904	5809.396593	0.046518
			8791.23308		1032277.857		124884.618	
	LDA	GAS	604047.779	0.193629661	22374249.93	0.890678	2805661.292	0.899365
	LDA	DSL	1988.84691	0.000637532	60930.0916	0.0024255	8564.495491	0.002745
	LDA	ELEC	49768.5612	0.015953489	2058455.934	0.0819434	247155.5919	0.079227
	LDA	PIH	14080.3346	0.004513501	626833.5276	0.0249531	58222.18377	0.018663
			669885.522		25120469.48		3119603.563	
	LDT1	GAS	54974.0845	0.223264467	1779154.38	0.99554	245182.1054	0.99575
	LDT1	DSL	28.8860153	0.000117314	444.5777523	0.0002488	84.95747345	0.000345
	LDT1	ELEC	182.992792	0.000743183	6367.047111	0.0035627	860.9347277	0.003496
	LDT1	PIH	24.3157739	9.87529E-05	1158.952646	0.0006485	100.5457251	0.000408
			55210.2791		1787124.958		246228.5433	
	LDT2	GAS	274728.482	0.211367862	9911729.948	0.9883247	1286654.306	0.989913
	LDT2	DSL	933.788033	0.000718429	35569.22943	0.0035467	4479.453168	0.003446
	LDT2	ELEC	669.358508	0.000514984	23693.948	0.0023626	3436.204483	0.002644
	LDT2	PIH	1256.28016	0.000966544	57825.98507	0.005766	5194.718469	0.003997
			277587.908		10028819.11		1299764.682	
	LHDT1	GAS	19023.5394	0.047262976	692949.1823	0.6550292	283422.3924	0.704148
	LHDT1	DSL	9466.89746	0.023520005	364941.2883	0.3449708	119081.6607	0.295852
			28490.4369	0.070782981	1057890.471		402504.0531	
	LHDT2	GAS	2479.11932	0.027325923	89333.80071	0.3475945	36935.18397	0.407116
	LHDT2	DSL	4276.17469	0.047133844	167672.0053	0.6524055	53788.89816	0.592884
			6755.29401	0.074459767	257005.806		90724.08214	
	MCY	GAS	27595.0892	0.022132728	162923.9676	1	55190.17831	1
	MDV	GAS	150747.251	0.210750361	5216511.844	0.9733898	697659.3115	0.975354
	MDV	DSL	2337.32844	0.003267674	86668.8473	0.0161722	11158.45778	0.0156
	MDV	ELEC	623.697512	0.000871953	22215.79757	0.0041454	3205.616376	0.004482
	MDV	PIH	789.561205	0.001103836	33722.80892	0.0062926	3264.835584	0.004564
			154497.838		5359119.297		715288.2212	
	MH	GAS	2642.08408	7.37200628	23105.28291	0.7162099	264.3140911	0.737496
	MH	DSL	940.800797	2.625044918	9155.209641	0.2837901	94.08007967	0.262504
			3582.88487		32260.49255		358.3941708	
	MHDT	GAS	1426.53505	0.009471981	69284.18236	0.1382254	28542.11337	0.189515
	MHDT	DSL	10189.5513	0.067657111	428042.2812	0.8539656	121266.7671	0.805193
	MHDT	NG	84.4805227	0.000560938	3914.204711	0.007809	796.8889021	0.005291
			11700.5669		501240.6682		150605.7694	
	OBUS	GAS	470.923365	0.025852134	21653.29515	0.2596868	9422.234682	0.517249
	OBUS	DSL	852.167884	0.046781196	61336.68113	0.7356076	8739.294756	0.479758
	OBUS	NG	6.12418985	0.000336198	392.3599028	0.0047056	54.50528967	0.002992
			1329.21544		83382.33618		18216.03473	
	SBUS	GAS	160.413892	0.015673239	7959.430234	0.3405375	641.6555689	0.062693
	SBUS	DSL	662.516235	0.064731149	15413.71135	0.6594625	9593.235079	0.937307
	SBUS	NG	22.5967669	0.002207817	578.3531561	0.0247443	327.2011847	0.031969
			845.526894		23373.14159		10234.89065	
	UBUS	GAS	45.8110441	0.021676301	4784.036586	0.0818022	183.2441763	0.086705
	UBUS	DSL	435.647489	0.206134265	48716.13451	0.8329971	1742.589957	0.824537
	UBUS	ELEC	5.04675694	0.03014879	199.0027319	0.0415995	20.18702775	0.120595
	UBUS	NG	41.8487514	0.019801472	4783.780965	0.0817979	167.3950058	0.079206
			528.354042		58482.9548		2113.416166	

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	1.83310515	1.28148E-05	147.0377538	0.000134	36.67676781	0.000256
	HHDT	DSL	9011.07054	0.06299448	1021241.459	0.9307328	132754.8218	0.928061
	HHDT	ELEC	177.805179	0.001242998	18594.17257	0.0169462	2312.242257	0.016164
	HHDT	NG	889.169201	0.006215993	57261.8103	0.0521869	7941.659305	0.055518
			10079.878		1097244.48		143045.4002	
	LDA	GAS	599340.546	0.18713399	21995338.59	0.8544339	2782741.959	0.868864
	LDA	DSL	1347.74765	0.000420812	38343.79498	0.0014895	5721.586385	0.001786
	LDA	ELEC	67294.1187	0.021011455	2805164.418	0.1089698	324882.7767	0.101439
	LDA	PIH	21617.5337	0.006749711	903738.2979	0.0351067	89388.50166	0.02791
			689599.946		25742585.1		3202734.824	
	LDT1	GAS	49888.1548	0.222439047	1593479.412	0.9876779	222126.8834	0.990409
	LDT1	DSL	6.22787611	2.77686E-05	90.54084291	5.612E-05	17.39549012	7.76E-05
	LDT1	ELEC	300.498335	0.001339848	12309.71399	0.0076299	1437.605088	0.00641
	LDT1	PIH	168.315007	0.000750475	7479.706544	0.0046361	695.982537	0.003103
			50363.196		1613359.374		224277.8665	
	LDT2	GAS	301290.288	0.208868235	10685987.29	0.9733366	1406456.817	0.97502
	LDT2	DSL	1103.1232	0.000764736	39708.70156	0.0036169	5205.70345	0.003609
	LDT2	ELEC	3306.05994	0.002291912	108939.5464	0.0099228	16647.4372	0.011541
	LDT2	PIH	3429.21286	0.002377287	144081.8505	0.0131237	14179.79517	0.00983
			309128.684		10978717.39		1442489.753	
	LHDT1	GAS	19670.4316	0.044847583	736983.4892	0.6143979	293060.1217	0.668162
	LHDT1	DSL	10848.44	0.024733891	422662.2799	0.352359	136459.7276	0.311121
	LHDT1	ELEC	649.088082	0.001479888	39875.82562	0.0332431	9086.426967	0.020717
			31167.9596	0.071061363	1199521.595		438606.2763	
	LHDT2	GAS	2509.54585	0.024605909	90648.20323	0.3055109	37388.49394	0.366591
	LHDT2	DSL	5135.73367	0.050355483	196396.2345	0.6619126	64601.06884	0.633409
	LHDT2	ELEC	164.939847	0.001617223	9665.772366	0.0325765	2187.867909	0.021452
			7810.21937	0.076578614	296710.2101		101989.5628	
	MCY	GAS	29075.7985	0.022036416	167761.7404	1	58151.59703	1
	MDV	GAS	165596.043	0.205620194	5720178.355	0.9530116	767968.8831	0.953585
	MDV	DSL	2435.7151	0.003024421	83100.92035	0.013845	11312.15421	0.014046
	MDV	ELEC	3455.57097	0.004290774	113998.8871	0.0189928	17408.95229	0.021617
	MDV	PIH	2094.10717	0.002600248	84934.84165	0.0141506	8659.133135	0.010752
			173581.436		6002213.004		805349.1227	
	MH	GAS	2196.55378	6.814936703	20762.4687	0.6788735	219.7432404	0.681766
	MH	DSL	1025.71387	3.182337322	9821.237376	0.3211265	102.5713867	0.318234
			3222.26765		30583.70608		322.3146272	
	MHDT	GAS	1408.04737	0.008714419	72579.59868	0.1377793	28172.2118	0.174358
	MHDT	DSL	10767.2575	0.06663866	434295.527	0.8244322	128657.1776	0.796261
	MHDT	ELEC	282.620889	0.001749143	14714.25293	0.0279324	3656.160606	0.022628
	MHDT	NG	116.095443	0.000718516	5192.024559	0.0098561	1091.190944	0.006753
			12574.0212		526781.4032		161576.7409	
	OBUS	GAS	407.82687	0.022127557	17375.96776	0.2128127	8159.800014	0.442728
	OBUS	DSL	975.872557	0.052948143	63044.61847	0.7721409	10038.86378	0.544681
	OBUS	ELEC	7.14800405	0.000387831	573.2172812	0.0070205	143.0172651	0.00776
	OBUS	NG	10.0047196	0.000542828	655.3060246	0.0080259	89.04200475	0.004831
			1400.85215		81649.10954		18430.72307	
	SBUS	GAS	188.598701	0.01705427	9259.271788	0.3642335	754.394804	0.068217
	SBUS	DSL	674.826752	0.061022041	15110.62134	0.594409	9771.491366	0.883599
	SBUS	ELEC	12.3033842	0.001112549	395.5247459	0.0155588	141.8818066	0.01283
	SBUS	NG	27.0006796	0.00244157	655.8361653	0.0257987	390.9698406	0.035354
			902.729517		25421.25404		11058.73782	
	UBUS	GAS	46.4912643	0.021676301	4855.071828	0.0818022	185.9650573	0.086705
	UBUS	DSL	397.280354	0.185229816	44140.83036	0.743721	1589.121414	0.740919
	UBUS	ELEC	29.3760874	0.11647648	3075.292219	0.4224222	117.5043495	0.465906
	UBUS	NG	63.0515433	0.029397441	7280.138117	0.1226617	252.206173	0.11759
			536.199249		59351.33253		2144.796994	

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















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

Terra Bella Housing and Storage, Mountain View, CA

Land Use	Year	Unmitigated	DPM	Unmitigated	Unmitigated	Fug PM2.5	Unmitigated
		DPM	EMFAC2021	Emissions	Fug PM2.5	EMFAC2021	Emissions
Residential	2023-2024	0.0231	0.0004	0.0235	0.0421	0.0005	0.0426
	2025	0.0025	0.0001	0.0026	0.0000	0.0001	0.0001
Stroage Phase 1	2025	0.0188	0.0009	0.0196	0.0994	0.0008	0.1002
Stroage Phase 2	2026	0.0106	0.0004	0.0110	0.0320	0.0004	0.0324
Residential	Year	Mitigated	DPM	Mitigated	Mitigated	Fug PM2.5	Mitigated
		DPM	EMFAC2021	Emissions	Fug PM2.5	EMFAC2021	Emissions
Residential	2023-2024	0.0066	0.0004	0.0070	0.0190	0.0005	0.0195
	2025	0.0018	0.0001	0.0019	0.0000	0.0001	0.0001
Stroage Phase 1	2025	0.0025	0.0009	0.0034	0.0448	0.0008	0.0456
Stroage Phase 2	2026	0.0020	0.0004	0.0023	0.0144	0.0004	0.0148

**Terra Bella Housing and Storage, Mountain View, CA**

**DPM Emissions and Modeling Emission Rates - Without Mitigation**

Construction Year	Construction Area	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m <sup>2</sup> )	DPM Emission Rate (g/s/m <sup>2</sup> )
				(lb/yr)	(lb/hr)	(g/s)		
<b>2023-2024</b>	Residential	0.024	DPM_RES	47.1	0.012	1.48E-03	4,193	<b>3.52E-07</b>
<b>2025</b>		0.003	DPM_RES	5.1	0.001	1.61E-04	4,193	<b>3.84E-08</b>
<b>2025</b>	Storage Phase 1	0.020	DPM_SP1	39.3	0.010	1.23E-03	7,752	<b>1.59E-07</b>
<b>2026</b>	Storage Phase 2	0.011	DPM_SP2	22.0	0.005	6.89E-04	7,756	<b>8.89E-08</b>
<b>Total</b>		<b>0.057</b>		<b>113.5</b>	<b>0.0283</b>	<b>0.0036</b>		

*Construction Hours*

hr/day = 11 (7am - 6pm)

days/yr = 365

hours/year = 4015

**DPM Emissions and Modeling Emission Rates - Unmitigated**

Construction Year	Construction Area	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m <sup>2</sup> )	DPM Emission Rate (g/s/m <sup>2</sup> )
				(lb/yr)	(lb/hr)	(g/s)		
<b>2023-2024</b>	Residential	0.007	DPM_RES	14.0	0.0035	4.41E-04	4,193	<b>1.05E-07</b>
<b>2025</b>		0.002	DPM_RES	3.9	0.0010	1.21E-04	4,193	<b>2.89E-08</b>
<b>2025</b>	Storage Phase 1	0.003	DPM_SP1	6.8	0.0017	2.14E-04	7,752	<b>2.76E-08</b>
<b>2026</b>	Storage Phase 2	0.002	DPM_SP2	4.7	0.0012	1.47E-04	7,756	<b>1.90E-08</b>
<b>Total</b>		<b>0.015</b>		<b>29.4</b>	<b>0.0073</b>	<b>0.0009</b>		

*Construction Hours*

hr/day = 11 (7am - 6pm)

days/yr = 365

hours/year = 4015

Terra Bella Housing and Storage, Mountain View, CA

**PM2.5 Fugitive Dust Emissions for Modeling - Without Mitigation**

Construction Year	Construction Area	Area Source	PM2.5 Emissions				Modeled Area (m <sup>2</sup> )	PM2.5 Emission Rate g/s/m <sup>2</sup>
			(ton/year)	(lb/yr)	(lb/hr)	(g/s)		
<b>2023-2024</b>	Residential	FUG_RES	0.043	85.3	0.0212	2.68E-03	4,193	<b>6.38E-07</b>
<b>2025</b>		FUG_RES	0.000	0.3	0.0001	8.84E-06	4,193	<b>2.11E-09</b>
<b>2025</b>	Storage Phase 1	FUG_SP1	0.100	200.5	0.0499	6.29E-03	7,752	<b>8.11E-07</b>
<b>2026</b>	Storage Phase 2	FUG_SP2	0.032	64.7	0.0161	2.03E-03	7,756	<b>2.62E-07</b>
<b>Total</b>			<b>0.175</b>	<b>350.7</b>	<b>0.0873</b>	<b>0.0110</b>		

*Construction Hours*

hr/day = 11 (7am - 6pm)  
 days/yr = 365  
 hours/year = 4015

**PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated**

Construction Year	Construction Area	Area Source	PM2.5 Emissions				Modeled Area (m <sup>2</sup> )	PM2.5 Emission Rate g/s/m <sup>2</sup>
			(ton/year)	(lb/yr)	(lb/hr)	(g/s)		
<b>2023-2024</b>	Residential	FUG_RES	0.019	39.0	0.0097	1.22E-03	4,193	<b>2.92E-07</b>
<b>2025</b>		FUG_RES	0.000	0.3	0.0001	8.84E-06	4,193	<b>2.11E-09</b>
<b>2025</b>	Storage Phase 1	FUG_SP1	0.046	91.2	0.0227	2.86E-03	7,752	<b>3.69E-07</b>
<b>2026</b>	Storage Phase 2	FUG_SP2	0.015	29.6	0.0074	9.30E-04	7,756	<b>1.20E-07</b>
<b>Total</b>			<b>0.080</b>	<b>160.1</b>	<b>0.0399</b>	<b>0.0050</b>		

*Construction Hours*

hr/day = 11 (7am - 6pm)  
 days/yr = 365  
 hours/year = 4015

## Terra Bella Housing and Storage, Mountain View, CA - Construction Health Impact Summary

### Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration (µg/m <sup>3</sup> )
	Exhaust PM10/DPM (µg/m <sup>3</sup> )	Fugitive PM2.5 (µg/m <sup>3</sup> )	Infant/Child	Adult		
	2023-2024*	0.0487			0.1007	8.66
2025	0.0123	0.0372	2.02	0.04	0.002	0.05
2026	0.0154	0.0498	0.40	0.04	0.003	0.07
<b>Total</b>	-	-	<b>11.08</b>	<b>0.22</b>	-	-
<b>Maximum</b>	0.0487	0.1007	-	-	<b>0.01</b>	<b>0.15</b>

\* Includes 2023 (one month of construction)

### Maximum Impacts at MEI Residential Location - With Mitigation

Emissions Year	Maximum Concentrations		Cancer Risk (per million)		Hazard Index (-)	Maximum Annual PM2.5 Concentration (µg/m <sup>3</sup> )
	Exhaust PM10/DPM (µg/m <sup>3</sup> )	Fugitive PM2.5 (µg/m <sup>3</sup> )	Infant/Child	Adult		
	2023-2024**	0.0145			0.0461	2.58
2025	0.0052	0.0171	0.86	0.01	0.001	0.02
2026	0.0033	0.0228	0.09	0.01	0.001	0.03
<b>Total</b>	-	-	<b>3.52</b>	<b>0.07</b>	-	-
<b>Maximum</b>	0.0145	0.0461	-	-	<b>0.003</b>	<b>0.06</b>

\* Includes 2023 (one month of construction)

- Tier 4 Interim Engines and BMPs Mitigation

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - Without Mitigation**  
**Maximum DPM Cancer Risk and PM2.5 Calculations From Construction**  
**Impacts at Off-Site MEI Location - 1.5 meter receptor height (1st Floor Level)**

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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

Values

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information		Infant/Child Age Sensitivity Factor	Cancer Risk (per million)	Adult - Exposure Information		Adult Cancer Risk (per million)	Maximum					
			DPM Conc (ug/m <sup>3</sup> )				Modeled	Age Sensitivity Factor		DPM Conc (ug/m <sup>3</sup> )	Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
			Year	Annual											
			Year	Annual			Year	Annual		Year	Annual	Year	Annual		
0	0.25	-0.25 - 0*	2023-2024**	0.0487	10	0.66	2023-2024**	0.0487	-	-	-	-	-	-	
1	1	0 - 1	2023-2024**	0.0487	10	8.00	2023-2024**	0.0487	1	0.14	0.01	0.10	0.15		
2	1	1 - 2	2025	0.0123	10	2.02	2025	0.0123	1	0.04	0.002	0.04	0.05		
3	1	2 - 3	2026	0.0154	3	0.40	2026	0.0154	1	0.04	0.003	0.05	0.07		
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00					
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00					
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00					
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00					
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00					
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00					
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00					
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00					
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00					
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00					
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00					
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00					
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00					
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00					
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00					
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00					
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00					
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00					
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00					
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00					
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00					
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00					
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00					
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00					
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00					
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00					
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00					
<b>Total Increased Cancer Risk</b>						<b>11.08</b>				<b>0.22</b>					

\* Third trimester of pregnancy

\*\* Includes 2023 (one month of construction)



**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - With Mitigation  
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
Impacts at Off-Site MEI Location - 1.5 meter receptor height (1st Floor Level)**

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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

Values

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information		Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information		Age Sensitivity Factor	Adult Cancer Risk (per million)	Maximum						
			DPM Conc (ug/m <sup>3</sup> )				Modeled				DPM Conc (ug/m <sup>3</sup> )	Sensitivity	DPM Conc (ug/m <sup>3</sup> )	Sensitivity	DPM Conc (ug/m <sup>3</sup> )	Sensitivity	DPM Conc (ug/m <sup>3</sup> )
			Year	Annual			Year	Annual									
0	0.25	-0.25 - 0*	2023-2024**	0.0145	10	0.20	2023-2024**	0.0145	-	-							
1	1	0 - 1	2023-2024**	0.0145	10	2.38	2023-2024**	0.0145	1	0.04	0.003	0.05	0.06				
2	1	1 - 2	2025	0.0052	10	0.86	2025	0.0052	1	0.01	0.001	0.02	0.02				
3	1	2 - 3	2026	0.0033	3	0.09	2026	0.0033	1	0.01	0.001	0.02	0.03				
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00							
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00							
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00							
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00							
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00							
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00							
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00							
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00							
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00							
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00							
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00							
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00							
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00							
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00							
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00							
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00							
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00							
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00							
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00							
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00							
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00							
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00							
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00							
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00							
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00							
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00							
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00							
<b>Total Increased Cancer Risk</b>						<b>3.52</b>				<b>0.07</b>							

\* Third trimester of pregnancy

\*\* Includes 2023 (one month of construction)

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - Without Mitigation**  
**Maximum DPM Cancer Risk and PM2.5 Calculations From Construction**  
**Impacts at Residential Building Phase 1 On-Site MEI Location - 1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0654	10	0.89	2026	0.0654	-	-
1	1	0 - 1	2026	0.0654	10	10.74	2026	0.0654	1	0.19
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>11.63</b>				<b>0.19</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.013	0.57	0.63

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - Without Mitigation**  
**Maximum DPM Cancer Risk and PM2.5 Calculations From Construction**  
**Impacts at Residential & Storage Phase 1 On-Site MEI Location - 6.4 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.1228	10	1.67	2026	0.1228	-	-
1	1	0 - 1	2026	0.1228	10	20.17	2026	0.1228	1	0.35
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>21.84</b>				<b>0.35</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.02	0.16	0.27

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - Without Mitigation  
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
Impacts at Residential & Storage Phase 1 On-Site MEI Location - 10.4 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0345	10	0.47	2026	0.0345	-	-
1	1	0 - 1	2026	0.0345	10	5.67	2026	0.0345	1	0.10
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>6.14</b>				<b>0.10</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.007	0.08	0.11

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - With Mitigation  
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
Impacts at Residential Building Phase 1 On-Site MEI Location - 1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0140	10	0.19	2026	0.0140	-	-
1	1	0 - 1	2026	0.0140	10	2.29	2026	0.0140	1	0.04
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>2.48</b>				<b>0.04</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.003	0.26	0.28

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - With Mitigation  
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
Impacts at Residential & Storage Phase 1 On-Site MEI Location - 6.4 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum			
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor		Cancer Risk	Hazard Index	Fugitive PM2.5	Total PM2.5
			Year	Annual			Year	Annual						
0	0.25	-0.25 - 0*	2026	0.0263	10	0.36	2026	0.0263	-	-				
1	1	0 - 1	2026	0.0263	10	4.31	2026	0.0263	1	0.08	0.01	0.07	0.09	
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00				
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00				
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00				
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00				
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00				
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00				
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00				
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00				
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00				
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00				
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00				
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00				
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00				
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00				
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00				
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00				
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00				
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00				
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00				
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00				
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00				
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00				
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00				
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00				
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00				
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00				
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00				
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00				
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00				
<b>Total Increased Cancer Risk</b>						<b>4.67</b>				<b>0.08</b>				

\* Third trimester of pregnancy

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - With Mitigation  
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
Impacts at Residential & Storage Phase 1 On-Site MEI Location - 10.4 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled		Age Sensitivity Factor	
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0074	10	0.10	2026	0.0074	-	-
1	1	0 - 1	2026	0.0074	10	1.21	2026	0.0074	1	0.02
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>1.31</b>				<b>0.02</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.001	0.04	0.04

**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - Without Mitigation  
 Maximum DPM Cancer Risk and PM2.5 Calculations From Construction  
 Impacts at Manager's Unit Storage Buildg Phase 1 On-Site MEI Location - 1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information		Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	
			DPM Conc (ug/m3)			Age Sensitivity Factor	Modeled			Age Sensitivity Factor
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0126	10	0.17	2026	0.0126	-	-
1	1	0 - 1	2026	0.0126	10	2.06	2026	0.0126	1	0.04
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>2.24</b>				<b>0.04</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.003	0.10	0.11



**Terra Bella Housing and Storage, Mountain View, CA - Construction Impacts - With Mitigation**  
**Maximum DPM Cancer Risk and PM2.5 Calculations From Construction**  
**Impacts at Manager's Unit Storage Buildg Phase 1 On-Site MEI Location - 1.5 meter receptor height**

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

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Values**

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

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

**Construction Cancer Risk by Year - Maximum Impact Receptor Location**

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information		Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	
			DPM Conc (ug/m3)			Age Sensitivity Factor	Modeled			Age Sensitivity Factor
			Year	Annual			Year	Annual		
0	0.25	-0.25 - 0*	2026	0.0027	10	0.04	2026	0.0027	-	-
1	1	0 - 1	2026	0.0027	10	0.44	2026	0.0027	1	0.01
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>						<b>0.48</b>				<b>0.01</b>

\* Third trimester of pregnancy

Hazard Index	Maximum	
	Fugitive PM2.5	Total PM2.5
0.001	0.05	0.05

**Attachment 5: Cumulative Community Risk from Existing TAC Sources**

# U.S. 101 CT-EMFAC2017 Emissions Factors for Santa Clara County 2024 & Traffic Emissions and Health Risk Calculations

File Name: US101 Terra Bella - Santa Clara (SF) - 2024 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 12:11  
 Area: Santa Clara (SF)  
 Analysis Year: 2024  
 Season: Annual

Vehicle Category	VTM	Diesel VMT	Gas VMT
	Fraction	Fraction	Fraction
	Across	Within	Within
	Category	Category	Category
Truck 1	0.025	0.495	0.505
Truck 2	0.02	0.937	0.048
Non-Truck	0.955	0.014	0.955

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.009008	0.005866	0.003995	0.002866	0.002179	0.00176	0.001511	0.001379	0.001335	0.001363	0.001459	0.001624	0.001869	0.001972
TOG	0.186119	0.122089	0.081646	0.057453	0.043395	0.034622	0.029009	0.025509	0.023538	0.022793	0.023174	0.024774	0.027841	0.030073
Diesel PM	0.001068	0.000864	0.00067	0.000535	0.000456	0.000417	0.000408	0.000424	0.000464	0.000525	0.000608	0.000707	0.00082	0.00082

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

Pollutant Name	Emission Factor
TOG	1.329827

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

Pollutant Name	Emission Factor
PM2.5	0.002113

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

Pollutant Name	Emission Factor
PM2.5	0.016982

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

Pollutant Name	Emission Factor
PM2.5	0.007543

=====-END=-=====

Analysis Year = **2024**

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2024 Vehides (veh/day)
Truck 1 (MDT)	4,810	5,002
Truck 2 (HDT)	3,966	4,125
Non-Truck	186,225	193,674
<b>Total</b>	<b>195,001</b>	<b>202,801</b>

Increase From 2020 1.04  
 Vehicles/Direction **101,401**  
 Avg Vehicles/Hour/Direction 4,225

Traffic Data Year = **2020**

Caltrans 2020 AADT	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
US 101 - MOUNTAIN VIEW, JCT. RTE. 85 SOUTH	195,000	8,775	4,810	1,329	309	2,328
			54.81%	15.15%	3.52%	26.53%

Percent of Total Vehicles 4.50% 2.47% 0.68% 0.16% 1.19%  
 Traffic Increase per Year (%) = 1.00%

8,776 Trucks  
 2.0% HDT  
 2.5% MDT  
 4.50% Total  
 95.5% Other

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - U.S. 101  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2024

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	67.7	3.4	60	101,401
DPM_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	67.7	3.4	60	101,401
									Total	202,801

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00071			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	937	9.52E-05	9	6.03%	6117	6.21E-04	17	6.01%	6090	6.19E-04
2	0.67%	679	6.89E-05	10	6.05%	6137	6.23E-04	18	6.05%	6137	6.23E-04
3	0.61%	619	6.29E-05	11	5.99%	6069	6.16E-04	19	5.30%	5372	5.46E-04
4	0.81%	817	8.30E-05	12	6.01%	6091	6.19E-04	20	4.29%	4348	4.42E-04
5	1.70%	1727	1.75E-04	13	6.02%	6101	6.20E-04	21	3.39%	3441	3.50E-04
6	3.58%	3634	3.69E-04	14	6.18%	6266	6.37E-04	22	2.94%	2984	3.03E-04
7	5.07%	5138	5.22E-04	15	6.47%	6556	6.66E-04	23	2.23%	2259	2.29E-04
8	6.08%	6163	6.26E-04	16	6.12%	6208	6.31E-04	24	1.49%	1509	1.53E-04
Total										101,401	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1174	1.22E-04	9	5.02%	5090	5.30E-04	17	7.23%	7330	7.64E-04
2	0.76%	770	8.03E-05	10	5.11%	5186	5.40E-04	18	7.21%	7312	7.62E-04
3	0.55%	559	5.82E-05	11	5.36%	5437	5.67E-04	19	6.34%	6425	6.70E-04
4	0.44%	447	4.66E-05	12	5.86%	5937	6.19E-04	20	5.34%	5419	5.65E-04
5	0.79%	801	8.35E-05	13	6.36%	6451	6.72E-04	21	4.21%	4268	4.45E-04
6	1.70%	1724	1.80E-04	14	6.80%	6891	7.18E-04	22	3.46%	3508	3.66E-04
7	2.82%	2855	2.98E-04	15	7.30%	7403	7.72E-04	23	2.80%	2839	2.96E-04
8	4.20%	4258	4.44E-04	16	7.17%	7265	7.57E-04	24	2.02%	2049	2.14E-04
Total										101,401	

**Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling**  
**Cumulative Operation - U.S. 101**  
**PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions**  
**Year = 2024**

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	101,401
PM25_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	101,401
									Total	202,801

**Emission Factors - PM2.5**

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.001624			

Emission Factors from CT-EMFAC2017

**2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_101**

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	937	2.19E-04	9	6.03%	6117	1.43E-03	17	6.01%	6090	1.42E-03
2	0.67%	679	1.58E-04	10	6.05%	6137	1.43E-03	18	6.05%	6137	1.43E-03
3	0.61%	619	1.44E-04	11	5.99%	6069	1.42E-03	19	5.30%	5372	1.25E-03
4	0.81%	817	1.91E-04	12	6.01%	6091	1.42E-03	20	4.29%	4348	1.01E-03
5	1.70%	1727	4.03E-04	13	6.02%	6101	1.42E-03	21	3.39%	3441	8.03E-04
6	3.58%	3634	8.48E-04	14	6.18%	6266	1.46E-03	22	2.94%	2984	6.96E-04
7	5.07%	5138	1.20E-03	15	6.47%	6556	1.53E-03	23	2.23%	2259	5.27E-04
8	6.08%	6163	1.44E-03	16	6.12%	6208	1.45E-03	24	1.49%	1509	3.52E-04
										Total	101,401

**2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_101**

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1174	2.81E-04	9	5.02%	5090	1.22E-03	17	7.23%	7330	1.75E-03
2	0.76%	770	1.84E-04	10	5.11%	5186	1.24E-03	18	7.21%	7312	1.75E-03
3	0.55%	559	1.34E-04	11	5.36%	5437	1.30E-03	19	6.34%	6425	1.54E-03
4	0.44%	447	1.07E-04	12	5.86%	5937	1.42E-03	20	5.34%	5419	1.30E-03
5	0.79%	801	1.92E-04	13	6.36%	6451	1.54E-03	21	4.21%	4268	1.02E-03
6	1.70%	1724	4.13E-04	14	6.80%	6891	1.65E-03	22	3.46%	3508	8.40E-04
7	2.82%	2855	6.83E-04	15	7.30%	7403	1.77E-03	23	2.80%	2839	6.80E-04
8	4.20%	4258	1.02E-03	16	7.17%	7265	1.74E-03	24	2.02%	2049	4.91E-04
										Total	101,401

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - U.S. 101  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2024

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	101,401
TEXH_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	101,401
Total										202,801

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02477			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	937	3.34E-03	9	6.03%	6117	2.18E-02	17	6.01%	6090	2.17E-02
2	0.67%	679	2.42E-03	10	6.05%	6137	2.18E-02	18	6.05%	6137	2.18E-02
3	0.61%	619	2.20E-03	11	5.99%	6069	2.16E-02	19	5.30%	5372	1.91E-02
4	0.81%	817	2.91E-03	12	6.01%	6091	2.17E-02	20	4.29%	4348	1.55E-02
5	1.70%	1727	6.15E-03	13	6.02%	6101	2.17E-02	21	3.39%	3441	1.22E-02
6	3.58%	3634	1.29E-02	14	6.18%	6266	2.23E-02	22	2.94%	2984	1.06E-02
7	5.07%	5138	1.83E-02	15	6.47%	6556	2.33E-02	23	2.23%	2259	8.04E-03
8	6.08%	6163	2.19E-02	16	6.12%	6208	2.21E-02	24	1.49%	1509	5.37E-03
Total										101,401	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1174	4.29E-03	9	5.02%	5090	1.86E-02	17	7.23%	7330	2.68E-02
2	0.76%	770	2.81E-03	10	5.11%	5186	1.89E-02	18	7.21%	7312	2.67E-02
3	0.55%	559	2.04E-03	11	5.36%	5437	1.99E-02	19	6.34%	6425	2.35E-02
4	0.44%	447	1.63E-03	12	5.86%	5937	2.17E-02	20	5.34%	5419	1.98E-02
5	0.79%	801	2.93E-03	13	6.36%	6451	2.36E-02	21	4.21%	4268	1.56E-02
6	1.70%	1724	6.29E-03	14	6.80%	6891	2.52E-02	22	3.46%	3508	1.28E-02
7	2.82%	2855	1.04E-02	15	7.30%	7403	2.70E-02	23	2.80%	2839	1.04E-02
8	4.20%	4258	1.56E-02	16	7.17%	7265	2.65E-02	24	2.02%	2049	7.48E-03
Total										101,401	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - U.S. 101  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2024

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	101,401
TEVAP_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	101,401
									Total	202,801

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.32983			
Emissions per Vehicle per Mile (g/VMT)	0.02216			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	937	2.98E-03	9	6.03%	6117	1.95E-02	17	6.01%	6090	1.94E-02
2	0.67%	679	2.16E-03	10	6.05%	6137	1.95E-02	18	6.05%	6137	1.95E-02
3	0.61%	619	1.97E-03	11	5.99%	6069	1.93E-02	19	5.30%	5372	1.71E-02
4	0.81%	817	2.60E-03	12	6.01%	6091	1.94E-02	20	4.29%	4348	1.38E-02
5	1.70%	1727	5.50E-03	13	6.02%	6101	1.94E-02	21	3.39%	3441	1.10E-02
6	3.58%	3634	1.16E-02	14	6.18%	6266	2.00E-02	22	2.94%	2984	9.50E-03
7	5.07%	5138	1.64E-02	15	6.47%	6556	2.09E-02	23	2.23%	2259	7.19E-03
8	6.08%	6163	1.96E-02	16	6.12%	6208	1.98E-02	24	1.49%	1509	4.80E-03
									Total	101,401	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1174	3.84E-03	9	5.02%	5090	1.66E-02	17	7.23%	7330	2.39E-02
2	0.76%	770	2.52E-03	10	5.11%	5186	1.69E-02	18	7.21%	7312	2.39E-02
3	0.55%	559	1.82E-03	11	5.36%	5437	1.78E-02	19	6.34%	6425	2.10E-02
4	0.44%	447	1.46E-03	12	5.86%	5937	1.94E-02	20	5.34%	5419	1.77E-02
5	0.79%	801	2.62E-03	13	6.36%	6451	2.11E-02	21	4.21%	4268	1.39E-02
6	1.70%	1724	5.63E-03	14	6.80%	6891	2.25E-02	22	3.46%	3508	1.15E-02
7	2.82%	2855	9.33E-03	15	7.30%	7403	2.42E-02	23	2.80%	2839	9.27E-03
8	4.20%	4258	1.39E-02	16	7.17%	7265	2.37E-02	24	2.02%	2049	6.69E-03
									Total	101,401	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - U.S. 101  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2024

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	101,401
FUG_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	101,401
									Total	202,801

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01698			
Road Dust - Emissions per Vehicle (g/VMT)	0.00754			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02664			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	937	3.59E-03	9	6.03%	6117	2.34E-02	17	6.01%	6090	2.33E-02
2	0.67%	679	2.60E-03	10	6.05%	6137	2.35E-02	18	6.05%	6137	2.35E-02
3	0.61%	619	2.37E-03	11	5.99%	6069	2.32E-02	19	5.30%	5372	2.06E-02
4	0.81%	817	3.13E-03	12	6.01%	6091	2.33E-02	20	4.29%	4348	1.66E-02
5	1.70%	1727	6.61E-03	13	6.02%	6101	2.33E-02	21	3.39%	3441	1.32E-02
6	3.58%	3634	1.39E-02	14	6.18%	6266	2.40E-02	22	2.94%	2984	1.14E-02
7	5.07%	5138	1.97E-02	15	6.47%	6556	2.51E-02	23	2.23%	2259	8.64E-03
8	6.08%	6163	2.36E-02	16	6.12%	6208	2.38E-02	24	1.49%	1509	5.77E-03
									Total	101,401	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1174	4.61E-03	9	5.02%	5090	2.00E-02	17	7.23%	7330	2.88E-02
2	0.76%	770	3.03E-03	10	5.11%	5186	2.04E-02	18	7.21%	7312	2.87E-02
3	0.55%	559	2.19E-03	11	5.36%	5437	2.13E-02	19	6.34%	6425	2.52E-02
4	0.44%	447	1.76E-03	12	5.86%	5937	2.33E-02	20	5.34%	5419	2.13E-02
5	0.79%	801	3.15E-03	13	6.36%	6451	2.53E-02	21	4.21%	4268	1.68E-02
6	1.70%	1724	6.77E-03	14	6.80%	6891	2.71E-02	22	3.46%	3508	1.38E-02
7	2.82%	2855	1.12E-02	15	7.30%	7403	2.91E-02	23	2.80%	2839	1.11E-02
8	4.20%	4258	1.67E-02	16	7.17%	7265	2.85E-02	24	2.02%	2049	8.05E-03
									Total	101,401	



**Terra Bella Housing and Storage, Mountain View, CA - US 101 Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations  
 at Project MEI Receptor, 1.5m receptor height**

**Emission Year** 2024  
**Receptor Information** Project MEI receptor  
 Number of Receptors 1  
 Receptor Height 1.5 meters  
 Receptor Distances At Project MEI location

**Meteorological Conditions**  
 BAQMD Moffett Fed Airfield Met Data 2013-2017  
 Land Use Classification Urban  
 Wind Speed Variable  
 Wind Direction Variable

**Project MEI Cancer Risk Maximum Concentrations**

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0130	0.4750	0.4264

**Project MEI PM2.5 Maximum Concentrations**

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.5436	0.5124	0.0312

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5 Impacts at Project MEI - 1.5 meter receptor height  
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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2024	10	0.0130	0.4750	0.4264	2.142	0.445	0.0236	2.61
2	1	1 - 2	2025	10	0.0130	0.4750	0.4264	2.142	0.445	0.0236	2.61
3	1	2 - 3	2026	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
4	1	3 - 4	2027	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
5	1	4 - 5	2028	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
6	1	5 - 6	2029	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
7	1	6 - 7	2030	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
8	1	7 - 8	2031	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
9	1	8 - 9	2032	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
10	1	9 - 10	2033	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
11	1	10 - 11	2034	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
12	1	11 - 12	2035	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
13	1	12 - 13	2036	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
14	1	13 - 14	2037	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
15	1	14 - 15	2038	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
16	1	15 - 16	2039	3	0.0130	0.4750	0.4264	0.337	0.070	0.0037	0.41
17	1	16 - 17	2040	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
18	1	17 - 18	2041	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
19	1	18 - 19	2042	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
20	1	19 - 20	2043	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
21	1	20 - 21	2044	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
22	1	21 - 22	2045	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
23	1	22 - 23	2046	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
24	1	23 - 24	2047	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
25	1	24 - 25	2048	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
26	1	25 - 26	2049	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
27	1	26 - 27	2050	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
28	1	27 - 28	2051	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
29	1	28 - 29	2052	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
30	1	29 - 30	2053	1	0.0130	0.4750	0.4264	0.037	0.008	0.0004	0.05
<b>Total Increased Cancer Risk</b>											<b>11.83</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.0026  
**Fugitive PM2.5** 0.51  
**Total PM2.5** 0.54

# S.R. 85 Ramps CT-EMFAC2017 Emissions Factors for Santa Clara County 2024 & Traffic Emissions and Health Risk Calculations

File Name: SR85 Terra Bella - Santa Clara (SF) - 2024 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 12:12  
 Area: Santa Clara (SF)  
 Analysis Year: 2024  
 Season: Annual

Vehicle Category	VMT	Diesel VMT	Gas VMT
	Fraction	Fraction	Fraction
	Across	Within	Within
Truck 1	0.007	0.495	0.505
Truck 2	0.013	0.937	0.048
Non-Truck	0.98	0.014	0.955

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.008688	0.005591	0.003769	0.002678	0.002016	0.00161	0.001365	0.001229	0.001174	0.001185	0.001256	0.001389	0.001594	0.001693
TOG	0.1795	0.11698	0.079044	0.056296	0.042633	0.03403	0.028536	0.025119	0.023204	0.022495	0.022894	0.024484	0.02752	0.029722
Diesel PM	0.000591	0.000487	0.000374	0.000297	0.000255	0.000237	0.000236	0.000251	0.000281	0.000324	0.000382	0.000451	0.00053	0.00053

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

Pollutant Name	Emission Factor
TOG	1.290337

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

Pollutant Name	Emission Factor
PM2.5	0.002071

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

Pollutant Name	Emission Factor
PM2.5	0.016512

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

Pollutant Name	Emission Factor
PM2.5	0.006984

=====END=====

Analysis Year = **2024**

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2024 Vehides (veh/day)
Truck 1 (MDT)	438	456
Truck 2 (HDT)	862	896
Non-Truck	63,700	66,248
<b>Total</b>	<b>65,000</b>	<b>67,600</b>

Increase From 2020 1.04  
 Vehides/Direction **33,800**  
 Avg Vehicles/Hour/Direction 1,408

Traffic Data Year = **2020**

Caltrans 2020 AADT	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
SR 85 - MOUNTAIN VIEW, JCT. RTE. 101	65,000	1,300	438	100	26	736
			33.69%	7.69%	2.00%	56.62%

Percent of Total Vehicles 2.00% 0.67% 0.15% 0.04% 1.13%  
 Traffic Increase per Year (%) = 1.00%

1,300 Trucks  
 1.3% HDT  
 0.7% MDT  
 2.00% Total  
 98.0% Other

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Southbound Interchange Ramps  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2024

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	43.7	3.4	60	16,900
DPM_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	43.7	3.4	60	16,900
									Total	33,800

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and DPM Emissions - DPM\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	150	8.15E-06	9	4.99%	843	4.57E-05	17	8.18%	1383	7.50E-05
2	0.48%	81	4.40E-06	10	4.83%	817	4.43E-05	18	8.05%	1360	7.38E-05
3	0.31%	52	2.84E-06	11	5.22%	882	4.78E-05	19	6.71%	1134	6.15E-05
4	0.22%	37	2.01E-06	12	5.92%	1001	5.43E-05	20	5.20%	878	4.76E-05
5	0.29%	49	2.68E-06	13	6.66%	1125	6.11E-05	21	3.98%	673	3.65E-05
6	0.68%	115	6.22E-06	14	7.07%	1194	6.48E-05	22	3.18%	538	2.92E-05
7	1.76%	298	1.62E-05	15	8.85%	1495	8.11E-05	23	2.39%	405	2.20E-05
8	3.93%	664	3.60E-05	16	8.71%	1472	7.99E-05	24	1.50%	254	1.38E-05
Total										16,900	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	150	1.07E-05	9	4.99%	843	6.00E-05	17	8.18%	1383	9.84E-05
2	0.48%	81	5.77E-06	10	4.83%	817	5.81E-05	18	8.05%	1360	9.68E-05
3	0.31%	52	3.73E-06	11	5.22%	882	6.28E-05	19	6.71%	1134	8.07E-05
4	0.22%	37	2.64E-06	12	5.92%	1001	7.13E-05	20	5.20%	878	6.25E-05
5	0.29%	49	3.51E-06	13	6.66%	1125	8.01E-05	21	3.98%	673	4.79E-05
6	0.68%	115	8.16E-06	14	7.07%	1194	8.50E-05	22	3.18%	538	3.83E-05
7	1.76%	298	2.12E-05	15	8.85%	1495	1.06E-04	23	2.39%	405	2.88E-05
8	3.93%	664	4.73E-05	16	8.71%	1472	1.05E-04	24	1.50%	254	1.81E-05
Total										16,900	

**Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling**  
**Cumulative Operation - S.R. 85 Northbound Interchange Ramps**  
**DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions**  
**Year = 2024**

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	43.7	3.4	60	16,900
DPM_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	43.7	3.4	60	16,900
									Total	33,800

**Emission Factors - DPM**

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2017

**2024 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_85C**

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	223	9.88E-06	9	6.35%	1073	4.75E-05	17	6.75%	1141	5.05E-05
2	1.47%	248	1.10E-05	10	5.65%	954	4.23E-05	18	6.70%	1132	5.01E-05
3	1.50%	254	1.13E-05	11	5.57%	941	4.17E-05	19	5.46%	923	4.09E-05
4	1.43%	241	1.07E-05	12	5.84%	987	4.37E-05	20	4.10%	693	3.07E-05
5	1.31%	222	9.81E-06	13	6.02%	1017	4.50E-05	21	3.11%	526	2.33E-05
6	3.00%	506	2.24E-05	14	5.90%	997	4.41E-05	22	2.43%	410	1.82E-05
7	4.66%	788	3.49E-05	15	6.01%	1016	4.50E-05	23	1.62%	274	1.21E-05
8	5.79%	979	4.33E-05	16	6.76%	1142	5.06E-05	24	1.26%	214	9.46E-06
Total										16,900	

**2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_NB\_85D**

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	223	1.46E-05	9	6.35%	1073	7.04E-05	17	6.75%	1141	7.48E-05
2	1.47%	248	1.63E-05	10	5.65%	954	6.26E-05	18	6.70%	1132	7.42E-05
3	1.50%	254	1.67E-05	11	5.57%	941	6.17E-05	19	5.46%	923	6.05E-05
4	1.43%	241	1.58E-05	12	5.84%	987	6.47E-05	20	4.10%	693	4.54E-05
5	1.31%	222	1.45E-05	13	6.02%	1017	6.66E-05	21	3.11%	526	3.45E-05
6	3.00%	506	3.32E-05	14	5.90%	997	6.53E-05	22	2.43%	410	2.69E-05
7	4.66%	788	5.17E-05	15	6.01%	1016	6.66E-05	23	1.62%	274	1.80E-05
8	5.79%	979	6.42E-05	16	6.76%	1142	7.49E-05	24	1.26%	214	1.40E-05
Total										16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Southbound Interchange Ramps  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2024

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	16,900
PM25_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.001389			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	150	2.51E-05	9	4.99%	843	1.41E-04	17	8.18%	1383	2.31E-04
2	0.48%	81	1.35E-05	10	4.83%	817	1.36E-04	18	8.05%	1360	2.27E-04
3	0.31%	52	8.76E-06	11	5.22%	882	1.47E-04	19	6.71%	1134	1.89E-04
4	0.22%	37	6.20E-06	12	5.92%	1001	1.67E-04	20	5.20%	878	1.47E-04
5	0.29%	49	8.24E-06	13	6.66%	1125	1.88E-04	21	3.98%	673	1.12E-04
6	0.68%	115	1.92E-05	14	7.07%	1194	2.00E-04	22	3.18%	538	8.99E-05
7	1.76%	298	4.98E-05	15	8.85%	1495	2.50E-04	23	2.39%	405	6.76E-05
8	3.93%	664	1.11E-04	16	8.71%	1472	2.46E-04	24	1.50%	254	4.24E-05
									Total	16,900	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	150	3.29E-05	9	4.99%	843	1.85E-04	17	8.18%	1383	3.03E-04
2	0.48%	81	1.78E-05	10	4.83%	817	1.79E-04	18	8.05%	1360	2.98E-04
3	0.31%	52	1.15E-05	11	5.22%	882	1.93E-04	19	6.71%	1134	2.49E-04
4	0.22%	37	8.14E-06	12	5.92%	1001	2.19E-04	20	5.20%	878	1.93E-04
5	0.29%	49	1.08E-05	13	6.66%	1125	2.47E-04	21	3.98%	673	1.48E-04
6	0.68%	115	2.51E-05	14	7.07%	1194	2.62E-04	22	3.18%	538	1.18E-04
7	1.76%	298	6.54E-05	15	8.85%	1495	3.28E-04	23	2.39%	405	8.87E-05
8	3.93%	664	1.46E-04	16	8.71%	1472	3.23E-04	24	1.50%	254	5.56E-05
									Total	16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Northbound Interchange Ramps  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2024

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	16,900
PM25_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.001389			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	223	3.04E-05	9	6.35%	1073	1.46E-04	17	6.75%	1141	1.56E-04
2	1.47%	248	3.38E-05	10	5.65%	954	1.30E-04	18	6.70%	1132	1.54E-04
3	1.50%	254	3.47E-05	11	5.57%	941	1.28E-04	19	5.46%	923	1.26E-04
4	1.43%	241	3.29E-05	12	5.84%	987	1.35E-04	20	4.10%	693	9.45E-05
5	1.31%	222	3.02E-05	13	6.02%	1017	1.39E-04	21	3.11%	526	7.17E-05
6	3.00%	506	6.91E-05	14	5.90%	997	1.36E-04	22	2.43%	410	5.60E-05
7	4.66%	788	1.08E-04	15	6.01%	1016	1.39E-04	23	1.62%	274	3.74E-05
8	5.79%	979	1.33E-04	16	6.76%	1142	1.56E-04	24	1.26%	214	2.91E-05
									Total	16,900	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	223	4.50E-05	9	6.35%	1073	2.17E-04	17	6.75%	1141	2.30E-04
2	1.47%	248	5.01E-05	10	5.65%	954	1.93E-04	18	6.70%	1132	2.28E-04
3	1.50%	254	5.13E-05	11	5.57%	941	1.90E-04	19	5.46%	923	1.86E-04
4	1.43%	241	4.86E-05	12	5.84%	987	1.99E-04	20	4.10%	693	1.40E-04
5	1.31%	222	4.47E-05	13	6.02%	1017	2.05E-04	21	3.11%	526	1.06E-04
6	3.00%	506	1.02E-04	14	5.90%	997	2.01E-04	22	2.43%	410	8.29E-05
7	4.66%	788	1.59E-04	15	6.01%	1016	2.05E-04	23	1.62%	274	5.53E-05
8	5.79%	979	1.98E-04	16	6.76%	1142	2.31E-04	24	1.26%	214	4.31E-05
									Total	16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Southbound Interchange Ramps  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2024

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	16,900
TEXH_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02448			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	150	4.42E-04	9	4.99%	843	2.48E-03	17	8.18%	1383	4.07E-03
2	0.48%	81	2.39E-04	10	4.83%	817	2.41E-03	18	8.05%	1360	4.01E-03
3	0.31%	52	1.54E-04	11	5.22%	882	2.60E-03	19	6.71%	1134	3.34E-03
4	0.22%	37	1.09E-04	12	5.92%	1001	2.95E-03	20	5.20%	878	2.59E-03
5	0.29%	49	1.45E-04	13	6.66%	1125	3.31E-03	21	3.98%	673	1.98E-03
6	0.68%	115	3.38E-04	14	7.07%	1194	3.52E-03	22	3.18%	538	1.58E-03
7	1.76%	298	8.79E-04	15	8.85%	1495	4.40E-03	23	2.39%	405	1.19E-03
8	3.93%	664	1.96E-03	16	8.71%	1472	4.34E-03	24	1.50%	254	7.47E-04
Total										16,900	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	150	5.81E-04	9	4.99%	843	3.26E-03	17	8.18%	1383	5.34E-03
2	0.48%	81	3.13E-04	10	4.83%	817	3.16E-03	18	8.05%	1360	5.26E-03
3	0.31%	52	2.03E-04	11	5.22%	882	3.41E-03	19	6.71%	1134	4.38E-03
4	0.22%	37	1.43E-04	12	5.92%	1001	3.87E-03	20	5.20%	878	3.39E-03
5	0.29%	49	1.91E-04	13	6.66%	1125	4.35E-03	21	3.98%	673	2.60E-03
6	0.68%	115	4.43E-04	14	7.07%	1194	4.62E-03	22	3.18%	538	2.08E-03
7	1.76%	298	1.15E-03	15	8.85%	1495	5.78E-03	23	2.39%	405	1.56E-03
8	3.93%	664	2.57E-03	16	8.71%	1472	5.69E-03	24	1.50%	254	9.80E-04
Total										16,900	



Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Northbound Interchange Ramps  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2024

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	16,900
TEXH_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	16,900
Total										33,800

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02448			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	223	5.36E-04	9	6.35%	1073	2.58E-03	17	6.75%	1141	2.74E-03
2	1.47%	248	5.96E-04	10	5.65%	954	2.29E-03	18	6.70%	1132	2.72E-03
3	1.50%	254	6.11E-04	11	5.57%	941	2.26E-03	19	5.46%	923	2.22E-03
4	1.43%	241	5.79E-04	12	5.84%	987	2.37E-03	20	4.10%	693	1.66E-03
5	1.31%	222	5.33E-04	13	6.02%	1017	2.44E-03	21	3.11%	526	1.26E-03
6	3.00%	506	1.22E-03	14	5.90%	997	2.40E-03	22	2.43%	410	9.87E-04
7	4.66%	788	1.90E-03	15	6.01%	1016	2.44E-03	23	1.62%	274	6.59E-04
8	5.79%	979	2.35E-03	16	6.76%	1142	2.75E-03	24	1.26%	214	5.13E-04
Total										16,900	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	223	7.94E-04	9	6.35%	1073	3.82E-03	17	6.75%	1141	4.06E-03
2	1.47%	248	8.82E-04	10	5.65%	954	3.40E-03	18	6.70%	1132	4.03E-03
3	1.50%	254	9.05E-04	11	5.57%	941	3.35E-03	19	5.46%	923	3.28E-03
4	1.43%	241	8.57E-04	12	5.84%	987	3.51E-03	20	4.10%	693	2.46E-03
5	1.31%	222	7.89E-04	13	6.02%	1017	3.62E-03	21	3.11%	526	1.87E-03
6	3.00%	506	1.80E-03	14	5.90%	997	3.55E-03	22	2.43%	410	1.46E-03
7	4.66%	788	2.81E-03	15	6.01%	1016	3.62E-03	23	1.62%	274	9.75E-04
8	5.79%	979	3.48E-03	16	6.76%	1142	4.06E-03	24	1.26%	214	7.60E-04
Total										16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Southbound Interchange Ramps  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2024

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	16,900
TEVAP_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.29034			
Emissions per Vehicle per Mile (g/VMT)	0.02151			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	150	3.89E-04	9	4.99%	843	2.18E-03	17	8.18%	1383	3.58E-03
2	0.48%	81	2.10E-04	10	4.83%	817	2.11E-03	18	8.05%	1360	3.52E-03
3	0.31%	52	1.36E-04	11	5.22%	882	2.28E-03	19	6.71%	1134	2.93E-03
4	0.22%	37	9.60E-05	12	5.92%	1001	2.59E-03	20	5.20%	878	2.27E-03
5	0.29%	49	1.28E-04	13	6.66%	1125	2.91E-03	21	3.98%	673	1.74E-03
6	0.68%	115	2.97E-04	14	7.07%	1194	3.09E-03	22	3.18%	538	1.39E-03
7	1.76%	298	7.72E-04	15	8.85%	1495	3.87E-03	23	2.39%	405	1.05E-03
8	3.93%	664	1.72E-03	16	8.71%	1472	3.81E-03	24	1.50%	254	6.56E-04
									Total	16,900	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	150	5.10E-04	9	4.99%	843	2.86E-03	17	8.18%	1383	4.69E-03
2	0.48%	81	2.75E-04	10	4.83%	817	2.77E-03	18	8.05%	1360	4.62E-03
3	0.31%	52	1.78E-04	11	5.22%	882	2.99E-03	19	6.71%	1134	3.85E-03
4	0.22%	37	1.26E-04	12	5.92%	1001	3.40E-03	20	5.20%	878	2.98E-03
5	0.29%	49	1.67E-04	13	6.66%	1125	3.82E-03	21	3.98%	673	2.29E-03
6	0.68%	115	3.89E-04	14	7.07%	1194	4.05E-03	22	3.18%	538	1.83E-03
7	1.76%	298	1.01E-03	15	8.85%	1495	5.08E-03	23	2.39%	405	1.37E-03
8	3.93%	664	2.25E-03	16	8.71%	1472	5.00E-03	24	1.50%	254	8.61E-04
									Total	16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Northbound Interchange Ramps  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2024

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	16,900
TEVAP_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	16,900
Total										33,800

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.29034			
Emissions per Vehicle per Mile (g/VMT)	0.02151			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	223	4.71E-04	9	6.35%	1073	2.27E-03	17	6.75%	1141	2.41E-03
2	1.47%	248	5.24E-04	10	5.65%	954	2.02E-03	18	6.70%	1132	2.39E-03
3	1.50%	254	5.37E-04	11	5.57%	941	1.99E-03	19	5.46%	923	1.95E-03
4	1.43%	241	5.09E-04	12	5.84%	987	2.08E-03	20	4.10%	693	1.46E-03
5	1.31%	222	4.68E-04	13	6.02%	1017	2.15E-03	21	3.11%	526	1.11E-03
6	3.00%	506	1.07E-03	14	5.90%	997	2.10E-03	22	2.43%	410	8.67E-04
7	4.66%	788	1.66E-03	15	6.01%	1016	2.15E-03	23	1.62%	274	5.78E-04
8	5.79%	979	2.07E-03	16	6.76%	1142	2.41E-03	24	1.26%	214	4.51E-04
Total										16,900	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	223	6.97E-04	9	6.35%	1073	3.35E-03	17	6.75%	1141	3.57E-03
2	1.47%	248	7.75E-04	10	5.65%	954	2.98E-03	18	6.70%	1132	3.54E-03
3	1.50%	254	7.95E-04	11	5.57%	941	2.94E-03	19	5.46%	923	2.88E-03
4	1.43%	241	7.53E-04	12	5.84%	987	3.09E-03	20	4.10%	693	2.16E-03
5	1.31%	222	6.93E-04	13	6.02%	1017	3.18E-03	21	3.11%	526	1.64E-03
6	3.00%	506	1.58E-03	14	5.90%	997	3.12E-03	22	2.43%	410	1.28E-03
7	4.66%	788	2.46E-03	15	6.01%	1016	3.18E-03	23	1.62%	274	8.56E-04
8	5.79%	979	3.06E-03	16	6.76%	1142	3.57E-03	24	1.26%	214	6.67E-04
Total										16,900	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Southbound Interchange Ramps  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2024

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	16,900
FUG_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01651			
Road Dust - Emissions per Vehicle (g/VMT)	0.00698			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02557			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	150	4.62E-04	9	4.99%	843	2.59E-03	17	8.18%	1383	4.25E-03
2	0.48%	81	2.49E-04	10	4.83%	817	2.51E-03	18	8.05%	1360	4.18E-03
3	0.31%	52	1.61E-04	11	5.22%	882	2.71E-03	19	6.71%	1134	3.49E-03
4	0.22%	37	1.14E-04	12	5.92%	1001	3.08E-03	20	5.20%	878	2.70E-03
5	0.29%	49	1.52E-04	13	6.66%	1125	3.46E-03	21	3.98%	673	2.07E-03
6	0.68%	115	3.53E-04	14	7.07%	1194	3.67E-03	22	3.18%	538	1.66E-03
7	1.76%	298	9.17E-04	15	8.85%	1495	4.60E-03	23	2.39%	405	1.24E-03
8	3.93%	664	2.04E-03	16	8.71%	1472	4.53E-03	24	1.50%	254	7.80E-04
										Total	16,900

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	150	6.06E-04	9	4.99%	843	3.40E-03	17	8.18%	1383	5.58E-03
2	0.48%	81	3.27E-04	10	4.83%	817	3.30E-03	18	8.05%	1360	5.49E-03
3	0.31%	52	2.12E-04	11	5.22%	882	3.56E-03	19	6.71%	1134	4.58E-03
4	0.22%	37	1.50E-04	12	5.92%	1001	4.04E-03	20	5.20%	878	3.54E-03
5	0.29%	49	1.99E-04	13	6.66%	1125	4.54E-03	21	3.98%	673	2.72E-03
6	0.68%	115	4.63E-04	14	7.07%	1194	4.82E-03	22	3.18%	538	2.17E-03
7	1.76%	298	1.20E-03	15	8.85%	1495	6.03E-03	23	2.39%	405	1.63E-03
8	3.93%	664	2.68E-03	16	8.71%	1472	5.94E-03	24	1.50%	254	1.02E-03
										Total	16,900

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - S.R. 85 Northbound Interchange Ramps  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2024

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	16,900
FUG_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	16,900
									Total	33,800

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01651			
Road Dust - Emissions per Vehicle (g/VMT)	0.00698			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02557			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	223	5.60E-04	9	6.35%	1073	2.69E-03	17	6.75%	1141	2.86E-03
2	1.47%	248	6.22E-04	10	5.65%	954	2.40E-03	18	6.70%	1132	2.84E-03
3	1.50%	254	6.38E-04	11	5.57%	941	2.36E-03	19	5.46%	923	2.32E-03
4	1.43%	241	6.05E-04	12	5.84%	987	2.48E-03	20	4.10%	693	1.74E-03
5	1.31%	222	5.56E-04	13	6.02%	1017	2.55E-03	21	3.11%	526	1.32E-03
6	3.00%	506	1.27E-03	14	5.90%	997	2.50E-03	22	2.43%	410	1.03E-03
7	4.66%	788	1.98E-03	15	6.01%	1016	2.55E-03	23	1.62%	274	6.88E-04
8	5.79%	979	2.46E-03	16	6.76%	1142	2.87E-03	24	1.26%	214	5.36E-04
Total										16,900	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	223	8.29E-04	9	6.35%	1073	3.99E-03	17	6.75%	1141	4.24E-03
2	1.47%	248	9.21E-04	10	5.65%	954	3.55E-03	18	6.70%	1132	4.21E-03
3	1.50%	254	9.45E-04	11	5.57%	941	3.50E-03	19	5.46%	923	3.43E-03
4	1.43%	241	8.95E-04	12	5.84%	987	3.67E-03	20	4.10%	693	2.57E-03
5	1.31%	222	8.24E-04	13	6.02%	1017	3.78E-03	21	3.11%	526	1.95E-03
6	3.00%	506	1.88E-03	14	5.90%	997	3.70E-03	22	2.43%	410	1.53E-03
7	4.66%	788	2.93E-03	15	6.01%	1016	3.78E-03	23	1.62%	274	1.02E-03
8	5.79%	979	3.64E-03	16	6.76%	1142	4.24E-03	24	1.26%	214	7.94E-04
Total										16,900	

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Traffic - TACs & PM2.5  
AERMOD Risk Modeling Parameters and Maximum Concentrations  
at Project MEI Receptor, 1.5m receptor height**

**Emission Year** 2024  
**Receptor Information** Project MEI receptor  
 Number of Receptors 1  
 Receptor Height 1.5 meters  
 Receptor Distances At Project MEI location

**Meteorological Conditions**  
 BAQMD Moffett Fed Airfield Met Data 2013-2017  
 Land Use Classification Urban  
 Wind Speed Variable  
 Wind Direction Variable

**Project MEI Cancer Risk Maximum Concentrations**

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0025	0.1389	0.1221

**Project MEI PM2.5 Maximum Concentrations**

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.1532	0.1453	0.0079

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at Project MEI - 1.5 meter receptor height  
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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2024	10	0.0025	0.1389	0.1221	0.402	0.130	0.0067	0.54
2	1	1 - 2	2025	10	0.0025	0.1389	0.1221	0.402	0.130	0.0067	0.54
3	1	2 - 3	2026	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
4	1	3 - 4	2027	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
5	1	4 - 5	2028	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
6	1	5 - 6	2029	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
7	1	6 - 7	2030	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
8	1	7 - 8	2031	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
9	1	8 - 9	2032	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
10	1	9 - 10	2033	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
11	1	10 - 11	2034	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
12	1	11 - 12	2035	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
13	1	12 - 13	2036	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
14	1	13 - 14	2037	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
15	1	14 - 15	2038	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
16	1	15 - 16	2039	3	0.0025	0.1389	0.1221	0.063	0.021	0.0011	0.08
17	1	16 - 17	2040	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
18	1	17 - 18	2041	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
19	1	18 - 19	2042	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
20	1	19 - 20	2043	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
21	1	20 - 21	2044	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
22	1	21 - 22	2045	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
23	1	22 - 23	2046	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
24	1	23 - 24	2047	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
25	1	24 - 25	2048	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
26	1	25 - 26	2049	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
27	1	26 - 27	2050	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
28	1	27 - 28	2051	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
29	1	28 - 29	2052	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
30	1	29 - 30	2053	1	0.0025	0.1389	0.1221	0.007	0.002	0.0001	0.01
<b>Total Increased Cancer Risk</b>								1.82	0.590	0.031	<b>2.44</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.0005  
**Fugitive PM2.5** 0.15  
**Total PM2.5** 0.15

Shoreline Blvd CT-EMFAC2017 Emissions Factors for Santa Clara County 2024 & Traffic Emissions and Health Risk Calculations



File Name: Shoreline Terra Bella - Santa Clara (SF) - 2024 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 11:49  
 Area: Santa Clara (SF)  
 Analysis Year: 2024  
 Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.015	0.495	0.505
Truck 2	0.02	0.937	0.048
Non-Truck	0.965	0.014	0.955

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	0.008837	0.005727	0.003882	0.002774	0.002102	0.001693	0.001451	0.001324
TOG	0.182802	0.119558	0.080373	0.056919	0.043051	0.034349	0.028781	0.025311
Diesel PM	0.000842	0.000689	0.000532	0.000425	0.000365	0.000339	0.000339	0.000361

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

Pollutant Name	Emission Factor
TOG	1.303551

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	0.016805

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

Pollutant Name	Emission Factor
PM2.5	0.01484

END

Analysis Year = **2024**

Vehicle Type	2022 Caltrans Vehicles (veh/day)	2024 Vehicles (veh/day)
Total	28,475	29,045

Increase From 2022 1.02  
**Vehicles/Direction** **14,522**  
 Avg Vehicles/Hour/Direction 605

Traffic Data Year = **2022**

<i>Project Traffic Data - Background Plus Project ADT</i>	AADT Total	Total Truck
Shoreline Blvd & Terra Bella Ave	28,475	999

Percent of Total Vehicles 3.51%

Traffic Increase per Year (%) = 1.00%

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - Shoreline Boulevard  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2024

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	43.7	3.4	30	14,522
DPM_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	43.7	3.4	30	14,522
									Total	29,045

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00034			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	566	1.60E-05	9	6.42%	932	2.64E-05	17	5.62%	816	2.31E-05
2	2.58%	374	1.06E-05	10	7.34%	1065	3.01E-05	18	3.27%	474	1.34E-05
3	2.87%	416	1.18E-05	11	6.42%	932	2.64E-05	19	2.35%	341	9.66E-06
4	3.32%	483	1.37E-05	12	6.88%	999	2.83E-05	20	0.86%	125	3.53E-06
5	2.18%	316	8.95E-06	13	6.25%	907	2.57E-05	21	3.09%	449	1.27E-05
6	3.38%	491	1.39E-05	14	6.19%	899	2.54E-05	22	4.13%	599	1.70E-05
7	6.02%	874	2.47E-05	15	5.10%	741	2.10E-05	23	2.52%	366	1.04E-05
8	4.64%	674	1.91E-05	16	3.78%	549	1.55E-05	24	0.92%	133	3.77E-06
Total										14,522	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	566	1.51E-05	9	6.42%	932	2.49E-05	17	5.62%	816	2.18E-05
2	2.58%	374	1.00E-05	10	7.34%	1065	2.85E-05	18	3.27%	474	1.27E-05
3	2.87%	416	1.11E-05	11	6.42%	932	2.49E-05	19	2.35%	341	9.12E-06
4	3.32%	483	1.29E-05	12	6.88%	999	2.67E-05	20	0.86%	125	3.34E-06
5	2.18%	316	8.46E-06	13	6.25%	907	2.43E-05	21	3.09%	449	1.20E-05
6	3.38%	491	1.31E-05	14	6.19%	899	2.40E-05	22	4.13%	599	1.60E-05
7	6.02%	874	2.34E-05	15	5.10%	741	1.98E-05	23	2.52%	366	9.79E-06
8	4.64%	674	1.80E-05	16	3.78%	549	1.47E-05	24	0.92%	133	3.56E-06
Total										14,522	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - Shoreline Boulevard  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2024

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,522	
PM25_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,522	
										Total	29,045

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001693			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	167	2.36E-05	9	7.11%	1033	1.46E-04	17	7.39%	1073	1.52E-04
2	0.42%	61	8.57E-06	10	4.39%	637	9.00E-05	18	8.18%	1187	1.68E-04
3	0.41%	59	8.33E-06	11	4.66%	677	9.58E-05	19	5.70%	827	1.17E-04
4	0.26%	38	5.37E-06	12	5.89%	855	1.21E-04	20	4.27%	621	8.77E-05
5	0.50%	73	1.03E-05	13	6.15%	893	1.26E-04	21	3.26%	473	6.69E-05
6	0.90%	131	1.85E-05	14	6.04%	877	1.24E-04	22	3.30%	479	6.77E-05
7	3.79%	550	7.78E-05	15	7.01%	1019	1.44E-04	23	2.46%	357	5.05E-05
8	7.76%	1128	1.59E-04	16	7.14%	1037	1.47E-04	24	1.87%	271	3.83E-05
										Total	14,522

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	167	2.23E-05	9	7.11%	1033	1.38E-04	17	7.39%	1073	1.43E-04
2	0.42%	61	8.10E-06	10	4.39%	637	8.51E-05	18	8.18%	1187	1.59E-04
3	0.41%	59	7.87E-06	11	4.66%	677	9.05E-05	19	5.70%	827	1.10E-04
4	0.26%	38	5.07E-06	12	5.89%	855	1.14E-04	20	4.27%	621	8.29E-05
5	0.50%	73	9.69E-06	13	6.15%	893	1.19E-04	21	3.26%	473	6.32E-05
6	0.90%	131	1.75E-05	14	6.04%	877	1.17E-04	22	3.30%	479	6.39E-05
7	3.79%	550	7.35E-05	15	7.01%	1019	1.36E-04	23	2.46%	357	4.77E-05
8	7.76%	1128	1.51E-04	16	7.14%	1037	1.38E-04	24	1.87%	271	3.62E-05
										Total	14,522

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - Shoreline Boulevard  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2024

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,522
TEXH_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,522
									Total	29,045

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.03435			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	167	4.80E-04	9	7.11%	1033	2.96E-03	17	7.39%	1073	3.08E-03
2	0.42%	61	1.74E-04	10	4.39%	637	1.83E-03	18	8.18%	1187	3.40E-03
3	0.41%	59	1.69E-04	11	4.66%	677	1.94E-03	19	5.70%	827	2.37E-03
4	0.26%	38	1.09E-04	12	5.89%	855	2.45E-03	20	4.27%	621	1.78E-03
5	0.50%	73	2.08E-04	13	6.15%	893	2.56E-03	21	3.26%	473	1.36E-03
6	0.90%	131	3.76E-04	14	6.04%	877	2.51E-03	22	3.30%	479	1.37E-03
7	3.79%	550	1.58E-03	15	7.01%	1019	2.92E-03	23	2.46%	357	1.02E-03
8	7.76%	1128	3.23E-03	16	7.14%	1037	2.97E-03	24	1.87%	271	7.77E-04
										Total	14,522

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	167	4.53E-04	9	7.11%	1033	2.80E-03	17	7.39%	1073	2.91E-03
2	0.42%	61	1.64E-04	10	4.39%	637	1.73E-03	18	8.18%	1187	3.22E-03
3	0.41%	59	1.60E-04	11	4.66%	677	1.84E-03	19	5.70%	827	2.24E-03
4	0.26%	38	1.03E-04	12	5.89%	855	2.32E-03	20	4.27%	621	1.68E-03
5	0.50%	73	1.97E-04	13	6.15%	893	2.42E-03	21	3.26%	473	1.28E-03
6	0.90%	131	3.56E-04	14	6.04%	877	2.38E-03	22	3.30%	479	1.30E-03
7	3.79%	550	1.49E-03	15	7.01%	1019	2.76E-03	23	2.46%	357	9.68E-04
8	7.76%	1128	3.05E-03	16	7.14%	1037	2.81E-03	24	1.87%	271	7.34E-04
										Total	14,522

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - Shoreline Boulevard  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)
TEVAP_NB_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30
TEVAP_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30
									Total

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.30355			
Emissions per Vehicle per Mile (g/VMT)	0.04345			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	167	6.07E-04	9	7.11%	1033	3.75E-03	17	7.39%	1073	3.89E-03
2	0.42%	61	2.20E-04	10	4.39%	637	2.31E-03	18	8.18%	1187	4.31E-03
3	0.41%	59	2.14E-04	11	4.66%	677	2.46E-03	19	5.70%	827	3.00E-03
4	0.26%	38	1.38E-04	12	5.89%	855	3.10E-03	20	4.27%	621	2.25E-03
5	0.50%	73	2.63E-04	13	6.15%	893	3.24E-03	21	3.26%	473	1.72E-03
6	0.90%	131	4.76E-04	14	6.04%	877	3.18E-03	22	3.30%	479	1.74E-03
7	3.79%	550	2.00E-03	15	7.01%	1019	3.70E-03	23	2.46%	357	1.30E-03
8	7.76%	1128	4.09E-03	16	7.14%	1037	3.76E-03	24	1.87%	271	9.83E-04
Total										14,522	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	167	5.73E-04	9	7.11%	1033	3.54E-03	17	7.39%	1073	3.68E-03
2	0.42%	61	2.08E-04	10	4.39%	637	2.18E-03	18	8.18%	1187	4.07E-03
3	0.41%	59	2.02E-04	11	4.66%	677	2.32E-03	19	5.70%	827	2.83E-03
4	0.26%	38	1.30E-04	12	5.89%	855	2.93E-03	20	4.27%	621	2.13E-03
5	0.50%	73	2.49E-04	13	6.15%	893	3.06E-03	21	3.26%	473	1.62E-03
6	0.90%	131	4.50E-04	14	6.04%	877	3.00E-03	22	3.30%	479	1.64E-03
7	3.79%	550	1.89E-03	15	7.01%	1019	3.49E-03	23	2.46%	357	1.23E-03
8	7.76%	1128	3.86E-03	16	7.14%	1037	3.55E-03	24	1.87%	271	9.29E-04
Total										14,522	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Cumulative Operation - Shoreline Boulevard  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2024

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,522
FUG_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,522
									Total	29,045

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)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01484			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03375			

Emission Factors from CT-EMFAC2017

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	167	4.71E-04	9	7.11%	1033	2.91E-03	17	7.39%	1073	3.02E-03
2	0.42%	61	1.71E-04	10	4.39%	637	1.79E-03	18	8.18%	1187	3.35E-03
3	0.41%	59	1.66E-04	11	4.66%	677	1.91E-03	19	5.70%	827	2.33E-03
4	0.26%	38	1.07E-04	12	5.89%	855	2.41E-03	20	4.27%	621	1.75E-03
5	0.50%	73	2.04E-04	13	6.15%	893	2.52E-03	21	3.26%	473	1.33E-03
6	0.90%	131	3.70E-04	14	6.04%	877	2.47E-03	22	3.30%	479	1.35E-03
7	3.79%	550	1.55E-03	15	7.01%	1019	2.87E-03	23	2.46%	357	1.01E-03
8	7.76%	1128	3.18E-03	16	7.14%	1037	2.92E-03	24	1.87%	271	7.64E-04
									Total	14,522	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	167	4.45E-04	9	7.11%	1033	2.75E-03	17	7.39%	1073	2.86E-03
2	0.42%	61	1.61E-04	10	4.39%	637	1.70E-03	18	8.18%	1187	3.16E-03
3	0.41%	59	1.57E-04	11	4.66%	677	1.80E-03	19	5.70%	827	2.20E-03
4	0.26%	38	1.01E-04	12	5.89%	855	2.28E-03	20	4.27%	621	1.65E-03
5	0.50%	73	1.93E-04	13	6.15%	893	2.38E-03	21	3.26%	473	1.26E-03
6	0.90%	131	3.49E-04	14	6.04%	877	2.33E-03	22	3.30%	479	1.27E-03
7	3.79%	550	1.47E-03	15	7.01%	1019	2.71E-03	23	2.46%	357	9.52E-04
8	7.76%	1128	3.00E-03	16	7.14%	1037	2.76E-03	24	1.87%	271	7.21E-04
									Total	14,522	

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations  
 at Project MEI Receptor, 1.5m receptor height**

**Emission Year** 2024  
**Receptor Information** Project MEI receptor  
 Number of Receptors 1  
 Receptor Height 1.5 meters  
 Receptor Distances At Project MEI location

**Meteorological Conditions**  
 BAQMD Moffett Fed Airfield Met Data 2013-2017  
 Land Use Classification Urban  
 Wind Speed Variable  
 Wind Direction Variable

**Project MEI Cancer Risk Maximum Concentrations**

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0120	0.0152

**Project MEI PM2.5 Maximum Concentrations**

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0124	0.0118	0.0006



**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at Project MEI - 1.5 meter receptor height  
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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2024	10	0.0001	0.0120	0.0152	0.020	0.011	0.0008	0.03
2	1	1 - 2	2025	10	0.0001	0.0120	0.0152	0.020	0.011	0.0008	0.03
3	1	2 - 3	2026	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
4	1	3 - 4	2027	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
5	1	4 - 5	2028	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
6	1	5 - 6	2029	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
7	1	6 - 7	2030	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
8	1	7 - 8	2031	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
9	1	8 - 9	2032	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
10	1	9 - 10	2033	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
11	1	10 - 11	2034	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
12	1	11 - 12	2035	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
13	1	12 - 13	2036	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
14	1	13 - 14	2037	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
15	1	14 - 15	2038	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
16	1	15 - 16	2039	3	0.0001	0.0120	0.0152	0.003	0.002	0.0001	0.01
17	1	16 - 17	2040	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
18	1	17 - 18	2041	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
19	1	18 - 19	2042	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
20	1	19 - 20	2043	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
21	1	20 - 21	2044	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
22	1	21 - 22	2045	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
23	1	22 - 23	2046	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
24	1	23 - 24	2047	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
25	1	24 - 25	2048	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
26	1	25 - 26	2049	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
27	1	26 - 27	2050	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
28	1	27 - 28	2051	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
29	1	28 - 29	2052	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
30	1	29 - 30	2053	1	0.0001	0.0120	0.0152	0.000	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.09	0.051	0.004	<b>0.14</b>

\* Third trimester of pregnancy

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

# U.S. 101 CT-EMFAC2017 Emissions Factors for Santa Clara County 2027 & Traffic Emissions and Health Risk Calculations

File Name: US101 Terra Bella - Santa Clara (SF) - 2027 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 12:11  
 Area: Santa Clara (SF)  
 Analysis Year: 2027  
 Season: Annual

Vehicle Category	VTM	Diesel VMT	Gas VMT
	Fraction	Fraction	Fraction
	Across	Within	Within
	Category	Category	Category
Truck 1	0.025	0.513	0.487
Truck 2	0.02	0.934	0.05
Non-Truck	0.955	0.015	0.947

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.007839	0.00511	0.003485	0.002504	0.001907	0.001545	0.001332	0.001222	0.00119	0.001222	0.001314	0.001468	0.001693	0.001781
TOG	0.160175	0.10552	0.070368	0.049367	0.037348	0.029874	0.025083	0.022086	0.020387	0.019731	0.02003	0.021372	0.023965	0.025852
Diesel PM	0.000866	0.000721	0.00057	0.000462	0.000399	0.00037	0.000367	0.000387	0.000428	0.000489	0.00057	0.000668	0.00078	0.00078

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

Pollutant Name	Emission Factor
TOG	1.190294

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

Pollutant Name	Emission Factor
PM2.5	0.002114

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

Pollutant Name	Emission Factor
PM2.5	0.016973

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

Pollutant Name	Emission Factor
PM2.5	0.007529

=====**END**=====

Analysis Year = **2027**

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2027 Vehides (veh/day)
Truck 1 (MDT)	4,810	5,147
Truck 2 (HDT)	3,966	4,244
Non-Truck	186,225	199,261
<b>Total</b>	<b>195,001</b>	<b>208,651</b>

Increase From 2020 1.07  
 Vehides/Direction **104,326**  
 Avg Vehicles/Hour/Direction 4,347

Traffic Data Year = **2020**

Caltrans 2020 AADT	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
US 101 - MOUNTAIN VIEW, JCT. RTE. 85 SOUTH	195,000	8,775	4,810	1,329	309	2,328
			54.81%	15.15%	3.52%	26.53%

Percent of Total Vehicles 4.50% 2.47% 0.68% 0.16% 1.19%  
 Traffic Increase per Year (%) = 1.00%

8,776 Trucks  
 2.0% HDT  
 2.5% MDT  
 4.50% Total  
 95.5% Other

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - U.S. 101  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2027

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	67.7	3.4	60	104,326
DPM_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	67.7	3.4	60	104,326
									Total	208,651

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00067			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	964	9.25E-05	9	6.03%	6294	6.04E-04	17	6.01%	6266	6.01E-04
2	0.67%	698	6.70E-05	10	6.05%	6314	6.06E-04	18	6.05%	6314	6.06E-04
3	0.61%	637	6.11E-05	11	5.99%	6244	5.99E-04	19	5.30%	5527	5.30E-04
4	0.81%	841	8.07E-05	12	6.01%	6266	6.01E-04	20	4.29%	4474	4.29E-04
5	1.70%	1777	1.71E-04	13	6.02%	6277	6.02E-04	21	3.39%	3541	3.40E-04
6	3.58%	3739	3.59E-04	14	6.18%	6447	6.19E-04	22	2.94%	3070	2.95E-04
7	5.07%	5286	5.07E-04	15	6.47%	6746	6.47E-04	23	2.23%	2324	2.23E-04
8	6.08%	6341	6.09E-04	16	6.12%	6387	6.13E-04	24	1.49%	1552	1.49E-04
Total										104,326	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1208	1.19E-04	9	5.02%	5237	5.16E-04	17	7.23%	7542	7.43E-04
2	0.76%	793	7.81E-05	10	5.11%	5335	5.25E-04	18	7.21%	7523	7.41E-04
3	0.55%	575	5.66E-05	11	5.36%	5594	5.51E-04	19	6.34%	6611	6.51E-04
4	0.44%	460	4.53E-05	12	5.86%	6109	6.02E-04	20	5.34%	5575	5.49E-04
5	0.79%	824	8.12E-05	13	6.36%	6637	6.54E-04	21	4.21%	4391	4.32E-04
6	1.70%	1773	1.75E-04	14	6.80%	7090	6.98E-04	22	3.46%	3609	3.55E-04
7	2.82%	2937	2.89E-04	15	7.30%	7617	7.50E-04	23	2.80%	2921	2.88E-04
8	4.20%	4381	4.31E-04	16	7.17%	7475	7.36E-04	24	2.02%	2108	2.08E-04
Total										104,326	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling

Project Operation - U.S. 101

PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions

Year = 2027

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	104,326
PM25_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	104,326
									Total	208,651

Emission Factors - PM2.5

Speed Category Travel Speed (mph)	1	2	3	4
	Emissions per Vehicle (g/VMT)	0.001468		

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	964	2.03E-04	9	6.03%	6294	1.33E-03	17	6.01%	6266	1.32E-03
2	0.67%	698	1.47E-04	10	6.05%	6314	1.33E-03	18	6.05%	6314	1.33E-03
3	0.61%	637	1.34E-04	11	5.99%	6244	1.32E-03	19	5.30%	5527	1.17E-03
4	0.81%	841	1.77E-04	12	6.01%	6266	1.32E-03	20	4.29%	4474	9.44E-04
5	1.70%	1777	3.75E-04	13	6.02%	6277	1.32E-03	21	3.39%	3541	7.47E-04
6	3.58%	3739	7.89E-04	14	6.18%	6447	1.36E-03	22	2.94%	3070	6.47E-04
7	5.07%	5286	1.11E-03	15	6.47%	6746	1.42E-03	23	2.23%	2324	4.90E-04
8	6.08%	6341	1.34E-03	16	6.12%	6387	1.35E-03	24	1.49%	1552	3.27E-04
										Total	104,326

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1208	2.61E-04	9	5.02%	5237	1.13E-03	17	7.23%	7542	1.63E-03
2	0.76%	793	1.72E-04	10	5.11%	5335	1.15E-03	18	7.21%	7523	1.63E-03
3	0.55%	575	1.24E-04	11	5.36%	5594	1.21E-03	19	6.34%	6611	1.43E-03
4	0.44%	460	9.95E-05	12	5.86%	6109	1.32E-03	20	5.34%	5575	1.21E-03
5	0.79%	824	1.78E-04	13	6.36%	6637	1.44E-03	21	4.21%	4391	9.50E-04
6	1.70%	1773	3.84E-04	14	6.80%	7090	1.53E-03	22	3.46%	3609	7.81E-04
7	2.82%	2937	6.36E-04	15	7.30%	7617	1.65E-03	23	2.80%	2921	6.32E-04
8	4.20%	4381	9.48E-04	16	7.17%	7475	1.62E-03	24	2.02%	2108	4.56E-04
										Total	104,326

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - U.S. 101  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2027

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	104,326
TEXH_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	104,326
									Total	208,651

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02137			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	964	2.96E-03	9	6.03%	6294	1.93E-02	17	6.01%	6266	1.92E-02
2	0.67%	698	2.14E-03	10	6.05%	6314	1.94E-02	18	6.05%	6314	1.94E-02
3	0.61%	637	1.96E-03	11	5.99%	6244	1.92E-02	19	5.30%	5527	1.70E-02
4	0.81%	841	2.58E-03	12	6.01%	6266	1.92E-02	20	4.29%	4474	1.37E-02
5	1.70%	1777	5.46E-03	13	6.02%	6277	1.93E-02	21	3.39%	3541	1.09E-02
6	3.58%	3739	1.15E-02	14	6.18%	6447	1.98E-02	22	2.94%	3070	9.43E-03
7	5.07%	5286	1.62E-02	15	6.47%	6746	2.07E-02	23	2.23%	2324	7.14E-03
8	6.08%	6341	1.95E-02	16	6.12%	6387	1.96E-02	24	1.49%	1552	4.77E-03
Total										104,326	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1208	3.81E-03	9	5.02%	5237	1.65E-02	17	7.23%	7542	2.38E-02
2	0.76%	793	2.50E-03	10	5.11%	5335	1.68E-02	18	7.21%	7523	2.37E-02
3	0.55%	575	1.81E-03	11	5.36%	5594	1.76E-02	19	6.34%	6611	2.08E-02
4	0.44%	460	1.45E-03	12	5.86%	6109	1.92E-02	20	5.34%	5575	1.76E-02
5	0.79%	824	2.60E-03	13	6.36%	6637	2.09E-02	21	4.21%	4391	1.38E-02
6	1.70%	1773	5.59E-03	14	6.80%	7090	2.23E-02	22	3.46%	3609	1.14E-02
7	2.82%	2937	9.25E-03	15	7.30%	7617	2.40E-02	23	2.80%	2921	9.20E-03
8	4.20%	4381	1.38E-02	16	7.17%	7475	2.35E-02	24	2.02%	2108	6.64E-03
Total										104,326	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - U.S. 101  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2027

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	104,326
TEVAP_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	104,326
Total										208,651

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.19029			
Emissions per Vehicle per Mile (g/VMT)	0.01984			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	964	2.75E-03	9	6.03%	6294	1.79E-02	17	6.01%	6266	1.79E-02
2	0.67%	698	1.99E-03	10	6.05%	6314	1.80E-02	18	6.05%	6314	1.80E-02
3	0.61%	637	1.81E-03	11	5.99%	6244	1.78E-02	19	5.30%	5527	1.58E-02
4	0.81%	841	2.40E-03	12	6.01%	6266	1.79E-02	20	4.29%	4474	1.28E-02
5	1.70%	1777	5.07E-03	13	6.02%	6277	1.79E-02	21	3.39%	3541	1.01E-02
6	3.58%	3739	1.07E-02	14	6.18%	6447	1.84E-02	22	2.94%	3070	8.75E-03
7	5.07%	5286	1.51E-02	15	6.47%	6746	1.92E-02	23	2.23%	2324	6.62E-03
8	6.08%	6341	1.81E-02	16	6.12%	6387	1.82E-02	24	1.49%	1552	4.42E-03
Total										104,326	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1208	3.53E-03	9	5.02%	5237	1.53E-02	17	7.23%	7542	2.21E-02
2	0.76%	793	2.32E-03	10	5.11%	5335	1.56E-02	18	7.21%	7523	2.20E-02
3	0.55%	575	1.68E-03	11	5.36%	5594	1.64E-02	19	6.34%	6611	1.93E-02
4	0.44%	460	1.35E-03	12	5.86%	6109	1.79E-02	20	5.34%	5575	1.63E-02
5	0.79%	824	2.41E-03	13	6.36%	6637	1.94E-02	21	4.21%	4391	1.28E-02
6	1.70%	1773	5.19E-03	14	6.80%	7090	2.07E-02	22	3.46%	3609	1.06E-02
7	2.82%	2937	8.59E-03	15	7.30%	7617	2.23E-02	23	2.80%	2921	8.54E-03
8	4.20%	4381	1.28E-02	16	7.17%	7475	2.19E-02	24	2.02%	2108	6.16E-03
Total										104,326	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - U.S. 101  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2027

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_101	U.S. 101 Northbound	NB	4	832.4	0.52	20.6	68	1.3	60	104,326
FUG_SB_101	U.S. 101 Southbound	SB	4	854.0	0.53	20.6	68	1.3	60	104,326
									Total	208,651

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01697			
Road Dust - Emissions per Vehicle (g/VMT)	0.00753			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02662			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_101

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.92%	964	3.69E-03	9	6.03%	6294	2.41E-02	17	6.01%	6266	2.40E-02
2	0.67%	698	2.67E-03	10	6.05%	6314	2.41E-02	18	6.05%	6314	2.41E-02
3	0.61%	637	2.43E-03	11	5.99%	6244	2.39E-02	19	5.30%	5527	2.11E-02
4	0.81%	841	3.21E-03	12	6.01%	6266	2.40E-02	20	4.29%	4474	1.71E-02
5	1.70%	1777	6.80E-03	13	6.02%	6277	2.40E-02	21	3.39%	3541	1.35E-02
6	3.58%	3739	1.43E-02	14	6.18%	6447	2.47E-02	22	2.94%	3070	1.17E-02
7	5.07%	5286	2.02E-02	15	6.47%	6746	2.58E-02	23	2.23%	2324	8.89E-03
8	6.08%	6341	2.42E-02	16	6.12%	6387	2.44E-02	24	1.49%	1552	5.94E-03
									Total	104,326	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_101

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.16%	1208	4.74E-03	9	5.02%	5237	2.05E-02	17	7.23%	7542	2.96E-02
2	0.76%	793	3.11E-03	10	5.11%	5335	2.09E-02	18	7.21%	7523	2.95E-02
3	0.55%	575	2.25E-03	11	5.36%	5594	2.19E-02	19	6.34%	6611	2.59E-02
4	0.44%	460	1.80E-03	12	5.86%	6109	2.40E-02	20	5.34%	5575	2.19E-02
5	0.79%	824	3.23E-03	13	6.36%	6637	2.60E-02	21	4.21%	4391	1.72E-02
6	1.70%	1773	6.96E-03	14	6.80%	7090	2.78E-02	22	3.46%	3609	1.42E-02
7	2.82%	2937	1.15E-02	15	7.30%	7617	2.99E-02	23	2.80%	2921	1.15E-02
8	4.20%	4381	1.72E-02	16	7.17%	7475	2.93E-02	24	2.02%	2108	8.27E-03
									Total	104,326	

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0317	1.1384	1.0575

1st Floor

**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	1.4992	1.4209	0.0783

1st Floor



**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0317	1.1384	1.0575	0.431	0.088	0.0048	0.52
1	1	0 - 1	2027	10	0.0317	1.1384	1.0575	5.205	1.067	0.0584	6.33
2	1	1 - 2	2028	10	0.0317	1.1384	1.0575	5.205	1.067	0.0584	6.33
3	1	2 - 3	2029	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
4	1	3 - 4	2030	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
5	1	4 - 5	2031	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
6	1	5 - 6	2032	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
7	1	6 - 7	2033	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
8	1	7 - 8	2034	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
9	1	8 - 9	2035	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
10	1	9 - 10	2036	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
11	1	10 - 11	2037	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
12	1	11 - 12	2038	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
13	1	12 - 13	2039	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
14	1	13 - 14	2040	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
15	1	14 - 15	2041	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
16	1	15 - 16	2042	3	0.0317	1.1384	1.0575	0.819	0.168	0.0092	1.00
17	1	16 - 17	2043	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
18	1	17 - 18	2044	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
19	1	18 - 19	2045	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
20	1	19 - 20	2046	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
21	1	20 - 21	2047	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
22	1	21 - 22	2048	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
23	1	22 - 23	2049	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
24	1	23 - 24	2050	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
25	1	24 - 25	2051	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
26	1	25 - 26	2052	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
27	1	26 - 27	2053	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
28	1	27 - 28	2054	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
29	1	28 - 29	2055	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
30	1	29 - 30	2056	1	0.0317	1.1384	1.0575	0.091	0.019	0.0010	0.11
<b>Total Increased Cancer Risk</b>								<b>23.59</b>	<b>4.837</b>	<b>0.265</b>	<b>28.69</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.01  
**Fugitive PM2.5** 1.42  
**Total PM2.5** 1.50

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 90  
 Receptor Height 1st (1.5m) & 2nd (6.4m) Floors  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0250	0.8646	0.8033	1st Floor
2013-2017	0.0190	0.6450	0.5994	2nd Floor

**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	1.1386	1.0792	0.0595	1st Floor
2013-2017	0.8495	0.8051	0.0444	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age →	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0250	0.8646	0.8033	4.101	0.811	0.0444	4.96
2	1	1 - 2	2028	10	0.0250	0.8646	0.8033	4.101	0.811	0.0444	4.96
3	1	2 - 3	2029	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
4	1	3 - 4	2030	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
5	1	4 - 5	2031	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
6	1	5 - 6	2032	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
7	1	6 - 7	2033	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
8	1	7 - 8	2034	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
9	1	8 - 9	2035	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
10	1	9 - 10	2036	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
11	1	10 - 11	2037	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
12	1	11 - 12	2038	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
13	1	12 - 13	2039	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
14	1	13 - 14	2040	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
15	1	14 - 15	2041	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
16	1	15 - 16	2042	3	0.0250	0.8646	0.8033	0.646	0.128	0.0070	0.78
17	1	16 - 17	2043	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
18	1	17 - 18	2044	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
19	1	18 - 19	2045	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
20	1	19 - 20	2046	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
21	1	20 - 21	2047	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
22	1	21 - 22	2048	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
23	1	22 - 23	2049	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
24	1	23 - 24	2050	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
25	1	24 - 25	2051	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
26	1	25 - 26	2052	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
27	1	26 - 27	2053	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
28	1	27 - 28	2054	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
29	1	28 - 29	2055	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
30	1	29 - 30	2056	1	0.0250	0.8646	0.8033	0.072	0.014	0.0008	0.09
<b>Total Increased Cancer Risk</b>								18.58	3.674	0.201	<b>22.46</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.005  
**Fugitive PM2.5** 1.08  
**Total PM2.5** 1.14

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5 Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights 30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age →	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0190	0.6450	0.5994	3.119	0.605	0.0331	3.76
2	1	1 - 2	2028	10	0.0190	0.6450	0.5994	3.119	0.605	0.0331	3.76
3	1	2 - 3	2029	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
4	1	3 - 4	2030	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
5	1	4 - 5	2031	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
6	1	5 - 6	2032	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
7	1	6 - 7	2033	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
8	1	7 - 8	2034	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
9	1	8 - 9	2035	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
10	1	9 - 10	2036	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
11	1	10 - 11	2037	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
12	1	11 - 12	2038	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
13	1	12 - 13	2039	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
14	1	13 - 14	2040	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
15	1	14 - 15	2041	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
16	1	15 - 16	2042	3	0.0190	0.6450	0.5994	0.491	0.095	0.0052	0.59
17	1	16 - 17	2043	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
18	1	17 - 18	2044	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
19	1	18 - 19	2045	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
20	1	19 - 20	2046	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
21	1	20 - 21	2047	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
22	1	21 - 22	2048	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
23	1	22 - 23	2049	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
24	1	23 - 24	2050	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
25	1	24 - 25	2051	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
26	1	25 - 26	2052	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
27	1	26 - 27	2053	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
28	1	27 - 28	2054	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
29	1	28 - 29	2055	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
30	1	29 - 30	2056	1	0.0190	0.6450	0.5994	0.055	0.011	0.0006	0.07
<b>Total Increased Cancer Risk</b>								14.13	2.741	0.150	<b>17.03</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.0038  
**Fugitive PM2.5** 0.81  
**Total PM2.5** 0.85

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration  
 On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0063	1.1384	1.0575

1st Floor

**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	0.2998	0.2842	0.0157

1st Floor

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0063	1.1384	1.0575	0.086	0.088	0.0048	0.18
1	1	0 - 1	2027	10	0.0063	1.1384	1.0575	1.041	1.067	0.0584	2.17
2	1	1 - 2	2028	10	0.0063	1.1384	1.0575	1.041	1.067	0.0584	2.17
3	1	2 - 3	2029	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
4	1	3 - 4	2030	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
5	1	4 - 5	2031	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
6	1	5 - 6	2032	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
7	1	6 - 7	2033	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
8	1	7 - 8	2034	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
9	1	8 - 9	2035	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
10	1	9 - 10	2036	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
11	1	10 - 11	2037	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
12	1	11 - 12	2038	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
13	1	12 - 13	2039	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
14	1	13 - 14	2040	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
15	1	14 - 15	2041	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
16	1	15 - 16	2042	3	0.0063	1.1384	1.0575	0.164	0.168	0.0092	0.34
17	1	16 - 17	2043	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
18	1	17 - 18	2044	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
19	1	18 - 19	2045	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
20	1	19 - 20	2046	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
21	1	20 - 21	2047	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
22	1	21 - 22	2048	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
23	1	22 - 23	2049	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
24	1	23 - 24	2050	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
25	1	24 - 25	2051	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
26	1	25 - 26	2052	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
27	1	26 - 27	2053	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
28	1	27 - 28	2054	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
29	1	28 - 29	2055	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
30	1	29 - 30	2056	1	0.0063	1.1384	1.0575	0.018	0.019	0.0010	0.04
<b>Total Increased Cancer Risk</b>								4.72	4.837	0.265	<b>9.82</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.001  
**Fugitive PM2.5** 0.28  
**Total PM2.5** 0.30

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration  
 On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 90  
 Receptor Height 1st (1.5m) & 2nd (6.4m) Floors  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0050	0.8646	0.8033	1st Floor
2013-2017	0.0038	0.6450	0.5994	2nd Floor

**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	0.2277	0.2158	0.0119	1st Floor
2013-2017	0.1699	0.1610	0.0089	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5 Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights 30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

- Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age →	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0050	0.8646	0.8033	0.820	0.811	0.0444	1.68
2	1	1 - 2	2028	10	0.0050	0.8646	0.8033	0.820	0.811	0.0444	1.68
3	1	2 - 3	2029	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
4	1	3 - 4	2030	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
5	1	4 - 5	2031	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
6	1	5 - 6	2032	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
7	1	6 - 7	2033	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
8	1	7 - 8	2034	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
9	1	8 - 9	2035	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
10	1	9 - 10	2036	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
11	1	10 - 11	2037	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
12	1	11 - 12	2038	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
13	1	12 - 13	2039	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
14	1	13 - 14	2040	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
15	1	14 - 15	2041	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
16	1	15 - 16	2042	3	0.0050	0.8646	0.8033	0.129	0.128	0.0070	0.26
17	1	16 - 17	2043	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
18	1	17 - 18	2044	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
19	1	18 - 19	2045	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
20	1	19 - 20	2046	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
21	1	20 - 21	2047	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
22	1	21 - 22	2048	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
23	1	22 - 23	2049	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
24	1	23 - 24	2050	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
25	1	24 - 25	2051	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
26	1	25 - 26	2052	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
27	1	26 - 27	2053	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
28	1	27 - 28	2054	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
29	1	28 - 29	2055	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
30	1	29 - 30	2056	1	0.0050	0.8646	0.8033	0.014	0.014	0.0008	0.03
<b>Total Increased Cancer Risk</b>								3.72	3.674	0.201	<b>7.59</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.001  
 Fugitive PM2.5 0.22  
 Total PM2.5 0.23



**Terra Bella Housing and Storage, Mountain View, CA - US 101 Cancer Risk & PM2.5 Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights 30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

- Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0038	0.6450	0.5994	0.624	0.605	0.0331	1.26
2	1	1 - 2	2028	10	0.0038	0.6450	0.5994	0.624	0.605	0.0331	1.26
3	1	2 - 3	2029	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
4	1	3 - 4	2030	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
5	1	4 - 5	2031	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
6	1	5 - 6	2032	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
7	1	6 - 7	2033	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
8	1	7 - 8	2034	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
9	1	8 - 9	2035	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
10	1	9 - 10	2036	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
11	1	10 - 11	2037	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
12	1	11 - 12	2038	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
13	1	12 - 13	2039	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
14	1	13 - 14	2040	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
15	1	14 - 15	2041	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
16	1	15 - 16	2042	3	0.0038	0.6450	0.5994	0.098	0.095	0.0052	0.20
17	1	16-17	2043	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
18	1	17-18	2044	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
19	1	18-19	2045	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
20	1	19-20	2046	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
21	1	20-21	2047	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
22	1	21-22	2048	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
23	1	22-23	2049	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
24	1	23-24	2050	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
25	1	24-25	2051	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
26	1	25-26	2052	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
27	1	26-27	2053	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
28	1	27-28	2054	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
29	1	28-29	2055	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
30	1	29-30	2056	1	0.0038	0.6450	0.5994	0.011	0.011	0.0006	0.02
<b>Total Increased Cancer Risk</b>								2.83	2.741	0.150	<b>5.72</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.0008  
 Fugitive PM2.5 0.16  
 Total PM2.5 0.17

# S.R. 85 Ramps CT-EMFAC2017 Emissions Factors for Santa Clara County 2027 & Traffic Emissions and Health Risk Calculations

File Name: SR85 Terra Bella - Santa Clara (SF) - 20247 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 12:13  
 Area: Santa Clara (SF)  
 Analysis Year: 2027  
 Season: Annual

Vehicle Category	VMT	Diesel VMT	Gas VMT
	Fraction	Fraction	Fraction
	Across	Within	Within
	Category	Category	Category
Truck 1	0.007	0.513	0.487
Truck 2	0.013	0.934	0.05
Non-Truck	0.98	0.015	0.947

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph
PM2.5	0.007573	0.004872	0.003285	0.002335	0.001759	0.001407	0.001196	0.001082	0.001038	0.001053	0.001121	0.001244	0.001431	0.001517
TOG	0.153259	0.100184	0.067742	0.048299	0.036683	0.029373	0.024695	0.021779	0.020138	0.019522	0.019849	0.021194	0.023773	0.025643
Diesel PM	0.000468	0.000396	0.000311	0.00025	0.000218	0.000206	0.000209	0.000227	0.000257	0.000301	0.000357	0.000425	0.000502	0.000502

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

Pollutant Name	Emission Factor
TOG	1.156247

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

Pollutant Name	Emission Factor
PM2.5	0.002071

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

Pollutant Name	Emission Factor
PM2.5	0.016504

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

Pollutant Name	Emission Factor
PM2.5	0.006968

=====-END=-=====

Analysis Year = 2027

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2027 Vehides (veh/day)
Truck 1 (MDT)	438	469
Truck 2 (HDT)	862	922
Non-Truck	63,700	68,159
<b>Total</b>	<b>65,000</b>	<b>69,550</b>

Increase From 2020 1.07  
 Vehides/Direction 34,775  
 Avg Vehicles/Hour/Direction 1,449

Traffic Data Year = 2020

Caltrans 2020 AADT	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
SR 85 - MOUNTAIN VIEW, JCT. RTE. 101	65,000	1,300	438	100	26	736
			33.69%	7.69%	2.00%	56.62%

Percent of Total Vehicles 2.00% 0.67% 0.15% 0.04% 1.13%  
 Traffic Increase per Year (%) = 1.00%

1,300 Trucks  
 1.3% HDT  
 0.7% MDT  
 2.00% Total  
 98.0% Other

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Southbound Interchange Ramps  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2027

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	43.7	3.4	60	17,388
DPM_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	43.7	3.4	60	17,388
									Total	34,775

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00043			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and DPM Emissions - DPM\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	155	7.90E-06	9	4.99%	867	4.43E-05	17	8.18%	1423	7.27E-05
2	0.48%	83	4.26E-06	10	4.83%	840	4.30E-05	18	8.05%	1399	7.15E-05
3	0.31%	54	2.76E-06	11	5.22%	907	4.64E-05	19	6.71%	1167	5.96E-05
4	0.22%	38	1.95E-06	12	5.92%	1030	5.26E-05	20	5.20%	903	4.62E-05
5	0.29%	51	2.59E-06	13	6.66%	1158	5.92E-05	21	3.98%	692	3.54E-05
6	0.68%	118	6.03E-06	14	7.07%	1229	6.28E-05	22	3.18%	554	2.83E-05
7	1.76%	307	1.57E-05	15	8.85%	1538	7.87E-05	23	2.39%	416	2.13E-05
8	3.93%	683	3.49E-05	16	8.71%	1515	7.74E-05	24	1.50%	261	1.33E-05
Total										17,388	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	155	1.04E-05	9	4.99%	867	5.82E-05	17	8.18%	1423	9.54E-05
2	0.48%	83	5.59E-06	10	4.83%	840	5.64E-05	18	8.05%	1399	9.39E-05
3	0.31%	54	3.62E-06	11	5.22%	907	6.09E-05	19	6.71%	1167	7.83E-05
4	0.22%	38	2.56E-06	12	5.92%	1030	6.91E-05	20	5.20%	903	6.06E-05
5	0.29%	51	3.41E-06	13	6.66%	1158	7.77E-05	21	3.98%	692	4.65E-05
6	0.68%	118	7.91E-06	14	7.07%	1229	8.24E-05	22	3.18%	554	3.71E-05
7	1.76%	307	2.06E-05	15	8.85%	1538	1.03E-04	23	2.39%	416	2.79E-05
8	3.93%	683	4.58E-05	16	8.71%	1515	1.02E-04	24	1.50%	261	1.75E-05
Total										17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Northbound Interchange Ramps  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2027

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	43.7	3.4	60	17,388
DPM_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	43.7	3.4	60	17,388
									Total	34,775

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.00043			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	229	9.58E-06	9	6.35%	1104	4.61E-05	17	6.75%	1174	4.90E-05
2	1.47%	255	1.06E-05	10	5.65%	982	4.10E-05	18	6.70%	1164	4.86E-05
3	1.50%	262	1.09E-05	11	5.57%	969	4.04E-05	19	5.46%	949	3.96E-05
4	1.43%	248	1.03E-05	12	5.84%	1016	4.24E-05	20	4.10%	712	2.97E-05
5	1.31%	228	9.52E-06	13	6.02%	1046	4.36E-05	21	3.11%	541	2.26E-05
6	3.00%	521	2.17E-05	14	5.90%	1025	4.28E-05	22	2.43%	422	1.76E-05
7	4.66%	811	3.38E-05	15	6.01%	1046	4.36E-05	23	1.62%	282	1.18E-05
8	5.79%	1007	4.20E-05	16	6.76%	1175	4.90E-05	24	1.26%	220	9.17E-06
Total										17,388	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	229	1.42E-05	9	6.35%	1104	6.82E-05	17	6.75%	1174	7.25E-05
2	1.47%	255	1.58E-05	10	5.65%	982	6.07E-05	18	6.70%	1164	7.19E-05
3	1.50%	262	1.62E-05	11	5.57%	969	5.98E-05	19	5.46%	949	5.86E-05
4	1.43%	248	1.53E-05	12	5.84%	1016	6.27E-05	20	4.10%	712	4.40E-05
5	1.31%	228	1.41E-05	13	6.02%	1046	6.46E-05	21	3.11%	541	3.34E-05
6	3.00%	521	3.22E-05	14	5.90%	1025	6.33E-05	22	2.43%	422	2.61E-05
7	4.66%	811	5.01E-05	15	6.01%	1046	6.46E-05	23	1.62%	282	1.74E-05
8	5.79%	1007	6.22E-05	16	6.76%	1175	7.26E-05	24	1.26%	220	1.36E-05
Total										17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Southbound Interchange Ramps  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2027

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	17,388
PM25_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.001244			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	155	2.31E-05	9	4.99%	867	1.30E-04	17	8.18%	1423	2.13E-04
2	0.48%	83	1.25E-05	10	4.83%	840	1.26E-04	18	8.05%	1399	2.09E-04
3	0.31%	54	8.07E-06	11	5.22%	907	1.36E-04	19	6.71%	1167	1.75E-04
4	0.22%	38	5.72E-06	12	5.92%	1030	1.54E-04	20	5.20%	903	1.35E-04
5	0.29%	51	7.60E-06	13	6.66%	1158	1.73E-04	21	3.98%	692	1.04E-04
6	0.68%	118	1.77E-05	14	7.07%	1229	1.84E-04	22	3.18%	554	8.29E-05
7	1.76%	307	4.59E-05	15	8.85%	1538	2.30E-04	23	2.39%	416	6.23E-05
8	3.93%	683	1.02E-04	16	8.71%	1515	2.27E-04	24	1.50%	261	3.90E-05
										Total	17,388

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	155	3.03E-05	9	4.99%	867	1.70E-04	17	8.18%	1423	2.79E-04
2	0.48%	83	1.64E-05	10	4.83%	840	1.65E-04	18	8.05%	1399	2.75E-04
3	0.31%	54	1.06E-05	11	5.22%	907	1.78E-04	19	6.71%	1167	2.29E-04
4	0.22%	38	7.50E-06	12	5.92%	1030	2.02E-04	20	5.20%	903	1.77E-04
5	0.29%	51	9.97E-06	13	6.66%	1158	2.27E-04	21	3.98%	692	1.36E-04
6	0.68%	118	2.32E-05	14	7.07%	1229	2.41E-04	22	3.18%	554	1.09E-04
7	1.76%	307	6.03E-05	15	8.85%	1538	3.02E-04	23	2.39%	416	8.18E-05
8	3.93%	683	1.34E-04	16	8.71%	1515	2.97E-04	24	1.50%	261	5.12E-05
										Total	17,388

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Northbound Interchange Ramps  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2027

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	17,388
PM25_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.001244			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	229	2.80E-05	9	6.35%	1104	1.35E-04	17	6.75%	1174	1.43E-04
2	1.47%	255	3.12E-05	10	5.65%	982	1.20E-04	18	6.70%	1164	1.42E-04
3	1.50%	262	3.19E-05	11	5.57%	969	1.18E-04	19	5.46%	949	1.16E-04
4	1.43%	248	3.03E-05	12	5.84%	1016	1.24E-04	20	4.10%	712	8.70E-05
5	1.31%	228	2.79E-05	13	6.02%	1046	1.28E-04	21	3.11%	541	6.61E-05
6	3.00%	521	6.36E-05	14	5.90%	1025	1.25E-04	22	2.43%	422	5.16E-05
7	4.66%	811	9.91E-05	15	6.01%	1046	1.28E-04	23	1.62%	282	3.44E-05
8	5.79%	1007	1.23E-04	16	6.76%	1175	1.44E-04	24	1.26%	220	2.68E-05
									Total	17,388	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	229	4.15E-05	9	6.35%	1104	2.00E-04	17	6.75%	1174	2.12E-04
2	1.47%	255	4.61E-05	10	5.65%	982	1.78E-04	18	6.70%	1164	2.11E-04
3	1.50%	262	4.73E-05	11	5.57%	969	1.75E-04	19	5.46%	949	1.72E-04
4	1.43%	248	4.48E-05	12	5.84%	1016	1.84E-04	20	4.10%	712	1.29E-04
5	1.31%	228	4.12E-05	13	6.02%	1046	1.89E-04	21	3.11%	541	9.78E-05
6	3.00%	521	9.42E-05	14	5.90%	1025	1.85E-04	22	2.43%	422	7.64E-05
7	4.66%	811	1.47E-04	15	6.01%	1046	1.89E-04	23	1.62%	282	5.10E-05
8	5.79%	1007	1.82E-04	16	6.76%	1175	2.12E-04	24	1.26%	220	3.97E-05
									Total	17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Southbound Interchange Ramps  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2027

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	17,388
TEXH_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02119			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	155	3.94E-04	9	4.99%	867	2.21E-03	17	8.18%	1423	3.63E-03
2	0.48%	83	2.13E-04	10	4.83%	840	2.14E-03	18	8.05%	1399	3.57E-03
3	0.31%	54	1.38E-04	11	5.22%	907	2.31E-03	19	6.71%	1167	2.97E-03
4	0.22%	38	9.74E-05	12	5.92%	1030	2.63E-03	20	5.20%	903	2.30E-03
5	0.29%	51	1.29E-04	13	6.66%	1158	2.95E-03	21	3.98%	692	1.77E-03
6	0.68%	118	3.01E-04	14	7.07%	1229	3.13E-03	22	3.18%	554	1.41E-03
7	1.76%	307	7.82E-04	15	8.85%	1538	3.92E-03	23	2.39%	416	1.06E-03
8	3.93%	683	1.74E-03	16	8.71%	1515	3.86E-03	24	1.50%	261	6.65E-04
										Total	17,388

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	155	5.17E-04	9	4.99%	867	2.90E-03	17	8.18%	1423	4.76E-03
2	0.48%	83	2.79E-04	10	4.83%	840	2.81E-03	18	8.05%	1399	4.68E-03
3	0.31%	54	1.80E-04	11	5.22%	907	3.03E-03	19	6.71%	1167	3.90E-03
4	0.22%	38	1.28E-04	12	5.92%	1030	3.45E-03	20	5.20%	903	3.02E-03
5	0.29%	51	1.70E-04	13	6.66%	1158	3.87E-03	21	3.98%	692	2.32E-03
6	0.68%	118	3.95E-04	14	7.07%	1229	4.11E-03	22	3.18%	554	1.85E-03
7	1.76%	307	1.03E-03	15	8.85%	1538	5.15E-03	23	2.39%	416	1.39E-03
8	3.93%	683	2.28E-03	16	8.71%	1515	5.07E-03	24	1.50%	261	8.73E-04
										Total	17,388

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Northbound Interchange Ramps  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2027

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	17,388
TEXH_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle (g/VMT)	0.02119			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	229	4.78E-04	9	6.35%	1104	2.30E-03	17	6.75%	1174	2.44E-03
2	1.47%	255	5.31E-04	10	5.65%	982	2.04E-03	18	6.70%	1164	2.42E-03
3	1.50%	262	5.44E-04	11	5.57%	969	2.02E-03	19	5.46%	949	1.98E-03
4	1.43%	248	5.16E-04	12	5.84%	1016	2.11E-03	20	4.10%	712	1.48E-03
5	1.31%	228	4.75E-04	13	6.02%	1046	2.18E-03	21	3.11%	541	1.13E-03
6	3.00%	521	1.08E-03	14	5.90%	1025	2.13E-03	22	2.43%	422	8.79E-04
7	4.66%	811	1.69E-03	15	6.01%	1046	2.18E-03	23	1.62%	282	5.86E-04
8	5.79%	1007	2.10E-03	16	6.76%	1175	2.45E-03	24	1.26%	220	4.57E-04
										Total	17,388

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	229	7.07E-04	9	6.35%	1104	3.40E-03	17	6.75%	1174	3.62E-03
2	1.47%	255	7.86E-04	10	5.65%	982	3.03E-03	18	6.70%	1164	3.59E-03
3	1.50%	262	8.06E-04	11	5.57%	969	2.98E-03	19	5.46%	949	2.92E-03
4	1.43%	248	7.63E-04	12	5.84%	1016	3.13E-03	20	4.10%	712	2.19E-03
5	1.31%	228	7.02E-04	13	6.02%	1046	3.22E-03	21	3.11%	541	1.67E-03
6	3.00%	521	1.61E-03	14	5.90%	1025	3.16E-03	22	2.43%	422	1.30E-03
7	4.66%	811	2.50E-03	15	6.01%	1046	3.22E-03	23	1.62%	282	8.68E-04
8	5.79%	1007	3.10E-03	16	6.76%	1175	3.62E-03	24	1.26%	220	6.77E-04
										Total	17,388



Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Southbound Interchange Ramps  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2027

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	17,388
TEVAP_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	17,388
Total										34,775

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.15625			
Emissions per Vehicle per Mile (g/VMT)	0.01927			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	155	3.58E-04	9	4.99%	867	2.01E-03	17	8.18%	1423	3.30E-03
2	0.48%	83	1.93E-04	10	4.83%	840	1.95E-03	18	8.05%	1399	3.24E-03
3	0.31%	54	1.25E-04	11	5.22%	907	2.10E-03	19	6.71%	1167	2.70E-03
4	0.22%	38	8.85E-05	12	5.92%	1030	2.39E-03	20	5.20%	903	2.09E-03
5	0.29%	51	1.18E-04	13	6.66%	1158	2.68E-03	21	3.98%	692	1.61E-03
6	0.68%	118	2.73E-04	14	7.07%	1229	2.85E-03	22	3.18%	554	1.28E-03
7	1.76%	307	7.11E-04	15	8.85%	1538	3.57E-03	23	2.39%	416	9.65E-04
8	3.93%	683	1.58E-03	16	8.71%	1515	3.51E-03	24	1.50%	261	6.05E-04
Total										17,388	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	155	4.70E-04	9	4.99%	867	2.64E-03	17	8.18%	1423	4.33E-03
2	0.48%	83	2.54E-04	10	4.83%	840	2.56E-03	18	8.05%	1399	4.26E-03
3	0.31%	54	1.64E-04	11	5.22%	907	2.76E-03	19	6.71%	1167	3.55E-03
4	0.22%	38	1.16E-04	12	5.92%	1030	3.13E-03	20	5.20%	903	2.75E-03
5	0.29%	51	1.54E-04	13	6.66%	1158	3.52E-03	21	3.98%	692	2.11E-03
6	0.68%	118	3.59E-04	14	7.07%	1229	3.74E-03	22	3.18%	554	1.68E-03
7	1.76%	307	9.34E-04	15	8.85%	1538	4.68E-03	23	2.39%	416	1.27E-03
8	3.93%	683	2.08E-03	16	8.71%	1515	4.61E-03	24	1.50%	261	7.94E-04
Total										17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Northbound Interchange Ramps  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2027

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	17,388
TEVAP_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Emissions per Vehicle per Hour (g/hour)	1.15625			
Emissions per Vehicle per Mile (g/VMT)	0.01927			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	229	4.34E-04	9	6.35%	1104	2.09E-03	17	6.75%	1174	2.22E-03
2	1.47%	255	4.83E-04	10	5.65%	982	1.86E-03	18	6.70%	1164	2.20E-03
3	1.50%	262	4.95E-04	11	5.57%	969	1.83E-03	19	5.46%	949	1.80E-03
4	1.43%	248	4.69E-04	12	5.84%	1016	1.92E-03	20	4.10%	712	1.35E-03
5	1.31%	228	4.31E-04	13	6.02%	1046	1.98E-03	21	3.11%	541	1.02E-03
6	3.00%	521	9.86E-04	14	5.90%	1025	1.94E-03	22	2.43%	422	7.99E-04
7	4.66%	811	1.53E-03	15	6.01%	1046	1.98E-03	23	1.62%	282	5.33E-04
8	5.79%	1007	1.91E-03	16	6.76%	1175	2.22E-03	24	1.26%	220	4.16E-04
									Total	17,388	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	229	6.43E-04	9	6.35%	1104	3.09E-03	17	6.75%	1174	3.29E-03
2	1.47%	255	7.15E-04	10	5.65%	982	2.75E-03	18	6.70%	1164	3.26E-03
3	1.50%	262	7.32E-04	11	5.57%	969	2.71E-03	19	5.46%	949	2.66E-03
4	1.43%	248	6.94E-04	12	5.84%	1016	2.84E-03	20	4.10%	712	2.00E-03
5	1.31%	228	6.39E-04	13	6.02%	1046	2.93E-03	21	3.11%	541	1.51E-03
6	3.00%	521	1.46E-03	14	5.90%	1025	2.87E-03	22	2.43%	422	1.18E-03
7	4.66%	811	2.27E-03	15	6.01%	1046	2.93E-03	23	1.62%	282	7.89E-04
8	5.79%	1007	2.82E-03	16	6.76%	1175	3.29E-03	24	1.26%	220	6.15E-04
									Total	17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Southbound Interchange Ramps  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2027

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_SB_85A	S.R. 85 Ramp A Southbound	SB-A	2	697.0	0.43	13.3	44	1.3	60	17,388
FUG_SB_85B	S.R. 85 Ramp B Southbound	SB-B	2	914.6	0.57	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01650			
Road Dust - Emissions per Vehicle (g/VMT)	0.00697			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02554			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_SB\_85A

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.89%	155	4.75E-04	9	4.99%	867	2.66E-03	17	8.18%	1423	4.37E-03
2	0.48%	83	2.56E-04	10	4.83%	840	2.58E-03	18	8.05%	1399	4.30E-03
3	0.31%	54	1.66E-04	11	5.22%	907	2.79E-03	19	6.71%	1167	3.58E-03
4	0.22%	38	1.17E-04	12	5.92%	1030	3.16E-03	20	5.20%	903	2.78E-03
5	0.29%	51	1.56E-04	13	6.66%	1158	3.56E-03	21	3.98%	692	2.13E-03
6	0.68%	118	3.62E-04	14	7.07%	1229	3.78E-03	22	3.18%	554	1.70E-03
7	1.76%	307	9.43E-04	15	8.85%	1538	4.73E-03	23	2.39%	416	1.28E-03
8	3.93%	683	2.10E-03	16	8.71%	1515	4.65E-03	24	1.50%	261	8.02E-04
									Total	17,388	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_85B

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.89%	155	6.23E-04	9	4.99%	867	3.50E-03	17	8.18%	1423	5.74E-03
2	0.48%	83	3.36E-04	10	4.83%	840	3.39E-03	18	8.05%	1399	5.64E-03
3	0.31%	54	2.17E-04	11	5.22%	907	3.66E-03	19	6.71%	1167	4.70E-03
4	0.22%	38	1.54E-04	12	5.92%	1030	4.15E-03	20	5.20%	903	3.64E-03
5	0.29%	51	2.05E-04	13	6.66%	1158	4.67E-03	21	3.98%	692	2.79E-03
6	0.68%	118	4.76E-04	14	7.07%	1229	4.95E-03	22	3.18%	554	2.23E-03
7	1.76%	307	1.24E-03	15	8.85%	1538	6.20E-03	23	2.39%	416	1.68E-03
8	3.93%	683	2.75E-03	16	8.71%	1515	6.11E-03	24	1.50%	261	1.05E-03
									Total	17,388	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - S.R. 85 Northbound Interchange Ramps  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2027

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_85C	S.R. 85 Ramp C Northbound	NB-C	2	568.9	0.35	13.3	44	1.3	60	17,388
FUG_NB_85D	S.R. 85 Ramp D Northbound	NB-D	2	842.1	0.52	13.3	44	1.3	60	17,388
									Total	34,775

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	60			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00207			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01650			
Road Dust - Emissions per Vehicle (g/VMT)	0.00697			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02554			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_85C

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.32%	229	5.76E-04	9	6.35%	1104	2.77E-03	17	6.75%	1174	2.94E-03
2	1.47%	255	6.40E-04	10	5.65%	982	2.46E-03	18	6.70%	1164	2.92E-03
3	1.50%	262	6.56E-04	11	5.57%	969	2.43E-03	19	5.46%	949	2.38E-03
4	1.43%	248	6.22E-04	12	5.84%	1016	2.55E-03	20	4.10%	712	1.79E-03
5	1.31%	228	5.72E-04	13	6.02%	1046	2.62E-03	21	3.11%	541	1.36E-03
6	3.00%	521	1.31E-03	14	5.90%	1025	2.57E-03	22	2.43%	422	1.06E-03
7	4.66%	811	2.03E-03	15	6.01%	1046	2.62E-03	23	1.62%	282	7.07E-04
8	5.79%	1007	2.53E-03	16	6.76%	1175	2.95E-03	24	1.26%	220	5.51E-04
									Total	17,388	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_NB\_85D

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.32%	229	8.52E-04	9	6.35%	1104	4.10E-03	17	6.75%	1174	4.36E-03
2	1.47%	255	9.47E-04	10	5.65%	982	3.65E-03	18	6.70%	1164	4.32E-03
3	1.50%	262	9.71E-04	11	5.57%	969	3.60E-03	19	5.46%	949	3.52E-03
4	1.43%	248	9.20E-04	12	5.84%	1016	3.77E-03	20	4.10%	712	2.65E-03
5	1.31%	228	8.47E-04	13	6.02%	1046	3.88E-03	21	3.11%	541	2.01E-03
6	3.00%	521	1.93E-03	14	5.90%	1025	3.81E-03	22	2.43%	422	1.57E-03
7	4.66%	811	3.01E-03	15	6.01%	1046	3.88E-03	23	1.62%	282	1.05E-03
8	5.79%	1007	3.74E-03	16	6.76%	1175	4.36E-03	24	1.26%	220	8.16E-04
									Total	17,388	

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0058	0.3333	0.3029

1st Floor

**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	0.4214	0.4019	0.0195

1st Floor

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0058	0.3333	0.3029	0.946	0.313	0.0167	1.28
2	1	1 - 2	2028	10	0.0058	0.3333	0.3029	0.946	0.313	0.0167	1.28
3	1	2 - 3	2029	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
4	1	3 - 4	2030	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
5	1	4 - 5	2031	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
6	1	5 - 6	2032	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
7	1	6 - 7	2033	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
8	1	7 - 8	2034	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
9	1	8 - 9	2035	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
10	1	9 - 10	2036	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
11	1	10 - 11	2037	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
12	1	11 - 12	2038	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
13	1	12 - 13	2039	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
14	1	13 - 14	2040	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
15	1	14 - 15	2041	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
16	1	15 - 16	2042	3	0.0058	0.3333	0.3029	0.149	0.049	0.0026	0.20
17	1	16 - 17	2043	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
18	1	17 - 18	2044	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
19	1	18 - 19	2045	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
20	1	19 - 20	2046	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
21	1	20 - 21	2047	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
22	1	21 - 22	2048	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
23	1	22 - 23	2049	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
24	1	23 - 24	2050	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
25	1	24 - 25	2051	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
26	1	25 - 26	2052	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
27	1	26 - 27	2053	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
28	1	27 - 28	2054	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
29	1	28 - 29	2055	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
30	1	29 - 30	2056	1	0.0058	0.3333	0.3029	0.017	0.005	0.0003	0.02
<b>Total Increased Cancer Risk</b>								4.29	1.416	0.076	<b>5.78</b>

\* Third trimester of pregnancy

Maximum  
Hazard Index 0.001 Fugitive PM2.5 0.40 Total PM2.5 0.42

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 90  
 Receptor Height 1st (1.5m) & 2nd (6.4m) Floors  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**  
 BAQMD Moffett Fed Airfield 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	0.0048	0.2656	0.2413	1st Floor
2013-2017	0.0039	0.2053	0.1865	2nd Floor

**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	0.3358	0.3202	0.0156	1st Floor
2013-2017	0.2596	0.2476	0.0120	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0048	0.2656	0.2413	0.792	0.249	0.0133	1.05
2	1	1 - 2	2028	10	0.0048	0.2656	0.2413	0.792	0.249	0.0133	1.05
3	1	2 - 3	2029	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
4	1	3 - 4	2030	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
5	1	4 - 5	2031	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
6	1	5 - 6	2032	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
7	1	6 - 7	2033	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
8	1	7 - 8	2034	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
9	1	8 - 9	2035	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
10	1	9 - 10	2036	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
11	1	10 - 11	2037	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
12	1	11 - 12	2038	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
13	1	12 - 13	2039	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
14	1	13 - 14	2040	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
15	1	14 - 15	2041	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
16	1	15 - 16	2042	3	0.0048	0.2656	0.2413	0.125	0.039	0.0021	0.17
17	1	16 - 17	2043	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
18	1	17 - 18	2044	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
19	1	18 - 19	2045	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
20	1	19 - 20	2046	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
21	1	20 - 21	2047	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
22	1	21 - 22	2048	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
23	1	22 - 23	2049	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
24	1	23 - 24	2050	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
25	1	24 - 25	2051	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
26	1	25 - 26	2052	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
27	1	26 - 27	2053	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
28	1	27 - 28	2054	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
29	1	28 - 29	2055	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
30	1	29 - 30	2056	1	0.0048	0.2656	0.2413	0.014	0.004	0.0002	0.02
<b>Total Increased Cancer Risk</b>								3.59	1.128	0.060	<b>4.78</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.001  
**Fugitive PM2.5** 0.32  
**Total PM2.5** 0.34



**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5 Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0039	0.2053	0.1865	0.642	0.193	0.0103	0.85
2	1	1 - 2	2028	10	0.0039	0.2053	0.1865	0.642	0.193	0.0103	0.85
3	1	2 - 3	2029	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
4	1	3 - 4	2030	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
5	1	4 - 5	2031	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
6	1	5 - 6	2032	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
7	1	6 - 7	2033	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
8	1	7 - 8	2034	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
9	1	8 - 9	2035	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
10	1	9 - 10	2036	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
11	1	10 - 11	2037	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
12	1	11 - 12	2038	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
13	1	12 - 13	2039	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
14	1	13 - 14	2040	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
15	1	14 - 15	2041	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
16	1	15 - 16	2042	3	0.0039	0.2053	0.1865	0.101	0.030	0.0016	0.13
17	1	16 - 17	2043	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
18	1	17 - 18	2044	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
19	1	18 - 19	2045	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
20	1	19 - 20	2046	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
21	1	20 - 21	2047	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
22	1	21 - 22	2048	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
23	1	22 - 23	2049	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
24	1	23 - 24	2050	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
25	1	24 - 25	2051	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
26	1	25 - 26	2052	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
27	1	26 - 27	2053	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
28	1	27 - 28	2054	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
29	1	28 - 29	2055	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
30	1	29 - 30	2056	1	0.0039	0.2053	0.1865	0.011	0.003	0.0002	0.01
<b>Total Increased Cancer Risk</b>								2.91	0.872	0.047	<b>3.83</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.0008  
 Fugitive PM2.5 0.25  
 Total PM2.5 0.26

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration  
 On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0012	0.3333	0.3029

1st Floor

**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	0.0843	0.0804	0.0039

1st Floor

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0012	0.3333	0.3029	0.189	0.313	0.0167	0.52
2	1	1 - 2	2028	10	0.0012	0.3333	0.3029	0.189	0.313	0.0167	0.52
3	1	2 - 3	2029	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
4	1	3 - 4	2030	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
5	1	4 - 5	2031	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
6	1	5 - 6	2032	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
7	1	6 - 7	2033	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
8	1	7 - 8	2034	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
9	1	8 - 9	2035	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
10	1	9 - 10	2036	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
11	1	10 - 11	2037	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
12	1	11 - 12	2038	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
13	1	12 - 13	2039	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
14	1	13 - 14	2040	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
15	1	14 - 15	2041	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
16	1	15 - 16	2042	3	0.0012	0.3333	0.3029	0.030	0.049	0.0026	0.08
17	1	16 - 17	2043	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
18	1	17 - 18	2044	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
19	1	18 - 19	2045	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
20	1	19 - 20	2046	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
21	1	20 - 21	2047	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
22	1	21 - 22	2048	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
23	1	22 - 23	2049	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
24	1	23 - 24	2050	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
25	1	24 - 25	2051	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
26	1	25 - 26	2052	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
27	1	26 - 27	2053	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
28	1	27 - 28	2054	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
29	1	28 - 29	2055	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
30	1	29 - 30	2056	1	0.0012	0.3333	0.3029	0.003	0.005	0.0003	0.01
<b>Total Increased Cancer Risk</b>								0.86	1.416	0.076	<b>2.35</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.0002  
 Fugitive PM2.5 0.08  
 Total PM2.5 0.08

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Traffic - TACs & PM2.5 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

<b>Emission Year</b>	2027
<b>Receptor Information</b>	Maximum On-Site Receptor
Number of Receptors	90
Receptor Height	1st (1.5m) & 2nd (6.4m) Floors
Receptor Distances	7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0010	0.2656	0.2413	1st Floor
2013-2017	0.0008	0.2053	0.1865	2nd Floor

**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	0.0672	0.0640	0.0031	1st Floor
2013-2017	0.0519	0.0495	0.0024	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0010	0.2656	0.2413	0.158	0.249	0.0133	0.42
2	1	1 - 2	2028	10	0.0010	0.2656	0.2413	0.158	0.249	0.0133	0.42
3	1	2 - 3	2029	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
4	1	3 - 4	2030	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
5	1	4 - 5	2031	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
6	1	5 - 6	2032	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
7	1	6 - 7	2033	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
8	1	7 - 8	2034	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
9	1	8 - 9	2035	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
10	1	9 - 10	2036	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
11	1	10 - 11	2037	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
12	1	11 - 12	2038	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
13	1	12 - 13	2039	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
14	1	13 - 14	2040	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
15	1	14 - 15	2041	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
16	1	15 - 16	2042	3	0.0010	0.2656	0.2413	0.025	0.039	0.0021	0.07
17	1	16 - 17	2043	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
18	1	17 - 18	2044	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
19	1	18 - 19	2045	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
20	1	19 - 20	2046	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
21	1	20 - 21	2047	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
22	1	21 - 22	2048	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
23	1	22 - 23	2049	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
24	1	23 - 24	2050	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
25	1	24 - 25	2051	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
26	1	25 - 26	2052	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
27	1	26 - 27	2053	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
28	1	27 - 28	2054	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
29	1	28 - 29	2055	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
30	1	29 - 30	2056	1	0.0010	0.2656	0.2413	0.003	0.004	0.0002	0.01
<b>Total Increased Cancer Risk</b>								0.72	1.128	0.060	<b>1.91</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.0002  
**Fugitive PM2.5** 0.06  
**Total PM2.5** 0.07

**Terra Bella Housing and Storage, Mountain View, CA - SR 85 Ramps Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0008	0.2053	0.1865	0.128	0.193	0.0103	0.33
2	1	1 - 2	2028	10	0.0008	0.2053	0.1865	0.128	0.193	0.0103	0.33
3	1	2 - 3	2029	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
4	1	3 - 4	2030	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
5	1	4 - 5	2031	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
6	1	5 - 6	2032	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
7	1	6 - 7	2033	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
8	1	7 - 8	2034	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
9	1	8 - 9	2035	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
10	1	9 - 10	2036	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
11	1	10 - 11	2037	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
12	1	11 - 12	2038	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
13	1	12 - 13	2039	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
14	1	13 - 14	2040	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
15	1	14 - 15	2041	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
16	1	15 - 16	2042	3	0.0008	0.2053	0.1865	0.020	0.030	0.0016	0.05
17	1	16 - 17	2043	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
18	1	17 - 18	2044	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
19	1	18 - 19	2045	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
20	1	19 - 20	2046	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
21	1	20 - 21	2047	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
22	1	21 - 22	2048	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
23	1	22 - 23	2049	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
24	1	23 - 24	2050	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
25	1	24 - 25	2051	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
26	1	25 - 26	2052	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
27	1	26 - 27	2053	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
28	1	27 - 28	2054	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
29	1	28 - 29	2055	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
30	1	29 - 30	2056	1	0.0008	0.2053	0.1865	0.002	0.003	0.0002	0.01
<b>Total Increased Cancer Risk</b>								0.58	0.872	0.047	<b>1.50</b>

\* Third trimester of pregnancy

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

Shoreline Blvd CT-EMFAC2017 Emissions Factors for Santa Clara County 2027 & Traffic Emissions and Health Risk Calculations

File Name: Shoreline Terra Bella - Santa Clara (SF) - 2027 - Annual.EF  
 CT-EMFAC2017 Version: 1.0.2.27401  
 Run Date: 8/15/2022 11:48  
 Area: Santa Clara (SF)  
 Analysis Year: 2027  
 Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.014	0.513	0.487
Truck 2	0.021	0.934	0.05
Non-Truck	0.965	0.015	0.947

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	0.007689	0.004985	0.003381	0.002418	0.001835	0.001483	0.001278	0.001175
TOG	0.156497	0.10271	0.069024	0.048886	0.037067	0.029657	0.024905	0.021934
Diesel PM	0.000674	0.000567	0.000446	0.000362	0.000316	0.000299	0.000306	0.000333

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

Pollutant Name	Emission Factor
TOG	1.164145

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

Pollutant Name	Emission Factor
PM2.5	0.002113

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

Pollutant Name	Emission Factor
PM2.5	0.016799

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

Pollutant Name	Emission Factor
PM2.5	0.014902

=====END=====



**Analysis Year = 2027**

<b>Vehicle Type</b>	<b>2022 Caltrans Vehicles (veh/day)</b>	<b>2027 Vehicles (veh/day)</b>
<b>Total</b>	<b>28,475</b>	<b>29,899</b>

Increase From 2022 1.05  
**Vehicles/Direction** **14,949**  
 Avg Vehicles/Hour/Direction 623

**Traffic Data Year = 2022**

<b>Project Traffic Data - Background Plus Project ADT</b>	<b>AADT Total</b>	<b>Total Truck</b>
Shoreline Blvd & Terra Bella Ave	28,475	999

Percent of Total Vehicles 3.51%

Traffic Increase per Year (%) = 1.00%

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - Shoreline Boulevard  
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions  
 Year = 2027

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	43.7	3.4	30	14,949
DPM_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	43.7	3.4	30	14,949
									Total	29,899

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.00030			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and DPM Emissions - DPM\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	591	1.48E-05	9	6.40%	957	2.39E-05	17	5.61%	839	2.09E-05
2	2.66%	397	9.91E-06	10	7.41%	1108	2.77E-05	18	3.24%	484	1.21E-05
3	2.88%	431	1.08E-05	11	6.34%	947	2.37E-05	19	2.21%	331	8.26E-06
4	3.28%	490	1.22E-05	12	6.96%	1040	2.60E-05	20	0.86%	128	3.20E-06
5	2.15%	321	8.01E-06	13	6.22%	931	2.32E-05	21	3.06%	458	1.14E-05
6	3.28%	490	1.22E-05	14	6.17%	922	2.30E-05	22	4.19%	626	1.56E-05
7	6.06%	905	2.26E-05	15	5.16%	772	1.93E-05	23	2.61%	390	9.74E-06
8	4.54%	679	1.69E-05	16	3.92%	586	1.46E-05	24	0.85%	127	3.16E-06
Total										14,949	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	591	1.39E-05	9	6.40%	957	2.26E-05	17	5.61%	839	1.98E-05
2	2.66%	397	9.36E-06	10	7.41%	1108	2.61E-05	18	3.24%	484	1.14E-05
3	2.88%	431	1.02E-05	11	6.34%	947	2.23E-05	19	2.21%	331	7.80E-06
4	3.28%	490	1.16E-05	12	6.96%	1040	2.45E-05	20	0.86%	128	3.02E-06
5	2.15%	321	7.57E-06	13	6.22%	931	2.19E-05	21	3.06%	458	1.08E-05
6	3.28%	490	1.16E-05	14	6.17%	922	2.17E-05	22	4.19%	626	1.48E-05
7	6.06%	905	2.13E-05	15	5.16%	772	1.82E-05	23	2.61%	390	9.20E-06
8	4.54%	679	1.60E-05	16	3.92%	586	1.38E-05	24	0.85%	127	2.99E-06
Total										14,949	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - Shoreline Boulevard  
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions  
 Year = 2027

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,949
PM25_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,949
									Total	29,898

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.001483			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	172	2.13E-05	9	7.11%	1063	1.32E-04	17	7.39%	1105	1.37E-04
2	0.42%	63	7.76E-06	10	4.39%	656	8.13E-05	18	8.18%	1222	1.51E-04
3	0.40%	60	7.48E-06	11	4.66%	697	8.63E-05	19	5.69%	851	1.05E-04
4	0.26%	39	4.84E-06	12	5.89%	880	1.09E-04	20	4.27%	639	7.91E-05
5	0.49%	74	9.15E-06	13	6.15%	920	1.14E-04	21	3.26%	487	6.03E-05
6	0.90%	135	1.67E-05	14	6.04%	903	1.12E-04	22	3.30%	493	6.10E-05
7	3.79%	566	7.01E-05	15	7.01%	1048	1.30E-04	23	2.46%	368	4.56E-05
8	7.76%	1161	1.44E-04	16	7.14%	1067	1.32E-04	24	1.87%	279	3.45E-05
									Total	14,949	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	172	2.02E-05	9	7.11%	1063	1.24E-04	17	7.39%	1105	1.29E-04
2	0.42%	63	7.33E-06	10	4.39%	656	7.68E-05	18	8.18%	1222	1.43E-04
3	0.40%	60	7.07E-06	11	4.66%	697	8.15E-05	19	5.69%	851	9.96E-05
4	0.26%	39	4.57E-06	12	5.89%	880	1.03E-04	20	4.27%	639	7.47E-05
5	0.49%	74	8.65E-06	13	6.15%	920	1.08E-04	21	3.26%	487	5.69E-05
6	0.90%	135	1.58E-05	14	6.04%	903	1.06E-04	22	3.30%	493	5.77E-05
7	3.79%	566	6.62E-05	15	7.01%	1048	1.23E-04	23	2.46%	368	4.31E-05
8	7.76%	1161	1.36E-04	16	7.14%	1067	1.25E-04	24	1.87%	279	3.26E-05
									Total	14,949	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - Shoreline Boulevard  
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions  
 Year = 2027

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,949
TEXH_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,949
									Total	29,899

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle (g/VMT)	0.02966			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	172	4.27E-04	9	7.11%	1063	2.63E-03	17	7.39%	1105	2.73E-03
2	0.42%	63	1.55E-04	10	4.39%	656	1.62E-03	18	8.18%	1222	3.03E-03
3	0.40%	60	1.50E-04	11	4.66%	697	1.73E-03	19	5.69%	851	2.11E-03
4	0.26%	39	9.67E-05	12	5.89%	880	2.18E-03	20	4.27%	639	1.58E-03
5	0.49%	74	1.83E-04	13	6.15%	920	2.28E-03	21	3.26%	487	1.21E-03
6	0.90%	135	3.35E-04	14	6.04%	903	2.23E-03	22	3.30%	493	1.22E-03
7	3.79%	566	1.40E-03	15	7.01%	1048	2.60E-03	23	2.46%	368	9.12E-04
8	7.76%	1161	2.87E-03	16	7.14%	1067	2.64E-03	24	1.87%	279	6.90E-04
										Total	14,949

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	172	4.03E-04	9	7.11%	1063	2.49E-03	17	7.39%	1105	2.58E-03
2	0.42%	63	1.47E-04	10	4.39%	656	1.54E-03	18	8.18%	1222	2.86E-03
3	0.40%	60	1.41E-04	11	4.66%	697	1.63E-03	19	5.69%	851	1.99E-03
4	0.26%	39	9.14E-05	12	5.89%	880	2.06E-03	20	4.27%	639	1.49E-03
5	0.49%	74	1.73E-04	13	6.15%	920	2.15E-03	21	3.26%	487	1.14E-03
6	0.90%	135	3.16E-04	14	6.04%	903	2.11E-03	22	3.30%	493	1.15E-03
7	3.79%	566	1.32E-03	15	7.01%	1048	2.45E-03	23	2.46%	368	8.62E-04
8	7.76%	1161	2.71E-03	16	7.14%	1067	2.50E-03	24	1.87%	279	6.52E-04
										Total	14,949

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - Shoreline Boulevard  
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions  
 Year = 2027

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,949
TEVAP_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,949
									Total	29,899

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	30			
Emissions per Vehicle per Hour (g/hour)	1.16415			
Emissions per Vehicle per Mile (g/VMT)	0.03880			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	172	5.58E-04	9	7.11%	1063	3.44E-03	17	7.39%	1105	3.58E-03
2	0.42%	63	2.03E-04	10	4.39%	656	2.13E-03	18	8.18%	1222	3.96E-03
3	0.40%	60	1.96E-04	11	4.66%	697	2.26E-03	19	5.69%	851	2.76E-03
4	0.26%	39	1.27E-04	12	5.89%	880	2.85E-03	20	4.27%	639	2.07E-03
5	0.49%	74	2.39E-04	13	6.15%	920	2.98E-03	21	3.26%	487	1.58E-03
6	0.90%	135	4.38E-04	14	6.04%	903	2.92E-03	22	3.30%	493	1.60E-03
7	3.79%	566	1.83E-03	15	7.01%	1048	3.40E-03	23	2.46%	368	1.19E-03
8	7.76%	1161	3.76E-03	16	7.14%	1067	3.46E-03	24	1.87%	279	9.03E-04
									Total	14,949	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	172	5.27E-04	9	7.11%	1063	3.25E-03	17	7.39%	1105	3.38E-03
2	0.42%	63	1.92E-04	10	4.39%	656	2.01E-03	18	8.18%	1222	3.74E-03
3	0.40%	60	1.85E-04	11	4.66%	697	2.13E-03	19	5.69%	851	2.61E-03
4	0.26%	39	1.20E-04	12	5.89%	880	2.69E-03	20	4.27%	639	1.96E-03
5	0.49%	74	2.26E-04	13	6.15%	920	2.82E-03	21	3.26%	487	1.49E-03
6	0.90%	135	4.14E-04	14	6.04%	903	2.76E-03	22	3.30%	493	1.51E-03
7	3.79%	566	1.73E-03	15	7.01%	1048	3.21E-03	23	2.46%	368	1.13E-03
8	7.76%	1161	3.55E-03	16	7.14%	1067	3.27E-03	24	1.87%	279	8.53E-04
									Total	14,949	

Terra Bella Housing and Storage, Mountain View, CA - Offsite Residential Roadway Modeling  
 Project Operation - Shoreline Boulevard  
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions  
 Year = 2027

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_SHO	Shoreline Blvd Northbound	NB	2	483.7	0.30	13.3	44	1.3	30	14,949
FUG_SB_SHO	Shoreline Blvd Southbound	SB	2	457.0	0.28	13.3	44	1.3	30	14,949
									Total	29,899

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)	0.01490			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03381			

Emission Factors from CT-EMFAC2017

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG\_NB\_SHO

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	172	4.86E-04	9	7.11%	1063	3.00E-03	17	7.39%	1105	3.12E-03
2	0.42%	63	1.77E-04	10	4.39%	656	1.85E-03	18	8.18%	1222	3.45E-03
3	0.40%	60	1.71E-04	11	4.66%	697	1.97E-03	19	5.69%	851	2.40E-03
4	0.26%	39	1.10E-04	12	5.89%	880	2.49E-03	20	4.27%	639	1.80E-03
5	0.49%	74	2.09E-04	13	6.15%	920	2.60E-03	21	3.26%	487	1.37E-03
6	0.90%	135	3.82E-04	14	6.04%	903	2.55E-03	22	3.30%	493	1.39E-03
7	3.79%	566	1.60E-03	15	7.01%	1048	2.96E-03	23	2.46%	368	1.04E-03
8	7.76%	1161	3.28E-03	16	7.14%	1067	3.01E-03	24	1.87%	279	7.87E-04
									Total	14,949	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG\_SB\_SHO

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	172	4.60E-04	9	7.11%	1063	2.84E-03	17	7.39%	1105	2.95E-03
2	0.42%	63	1.67E-04	10	4.39%	656	1.75E-03	18	8.18%	1222	3.26E-03
3	0.40%	60	1.61E-04	11	4.66%	697	1.86E-03	19	5.69%	851	2.27E-03
4	0.26%	39	1.04E-04	12	5.89%	880	2.35E-03	20	4.27%	639	1.70E-03
5	0.49%	74	1.97E-04	13	6.15%	920	2.45E-03	21	3.26%	487	1.30E-03
6	0.90%	135	3.61E-04	14	6.04%	903	2.41E-03	22	3.30%	493	1.31E-03
7	3.79%	566	1.51E-03	15	7.01%	1048	2.80E-03	23	2.46%	368	9.83E-04
8	7.76%	1161	3.10E-03	16	7.14%	1067	2.85E-03	24	1.87%	279	7.44E-04
									Total	14,949	

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.0168	0.0220

1st Floor

**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	0.0200	0.0191	0.0008

1st Floor

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age →	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0002	0.0168	0.0220	0.030	0.016	0.0012	0.05
2	1	1 - 2	2028	10	0.0002	0.0168	0.0220	0.030	0.016	0.0012	0.05
3	1	2 - 3	2029	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
4	1	3 - 4	2030	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
5	1	4 - 5	2031	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
6	1	5 - 6	2032	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
7	1	6 - 7	2033	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
8	1	7 - 8	2034	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
9	1	8 - 9	2035	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
10	1	9 - 10	2036	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
11	1	10 - 11	2037	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
12	1	11 - 12	2038	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
13	1	12 - 13	2039	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
14	1	13 - 14	2040	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
15	1	14 - 15	2041	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
16	1	15 - 16	2042	3	0.0002	0.0168	0.0220	0.005	0.002	0.0002	0.01
17	1	16-17	2043	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0002	0.0168	0.0220	0.001	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.13	0.071	0.005	<b>0.21</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.00004  
**Fugitive PM2.5** 0.02  
**Total PM2.5** 0.02



**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Traffic - TACs & PM2.5  
 AERMOD Risk Modeling Parameters and Maximum Concentrations - Without MERV16 Filtration  
 On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 90  
 Receptor Height 1st (1.5m) & 2nd (6.4m) Floors  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**  
 BAQMD Moffett Fed Airfield 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	0.0180	0.0236	1st Floor
2013-2017	0.0002	0.0179	0.0235	2nd Floor

**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	0.0214	0.0205	0.0009	1st Floor
2013-2017	0.0213	0.0204	0.0009	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0002	0.0180	0.0236	0.002	0.001	0.0001	0.00
1	1	0 - 1	2027	10	0.0002	0.0180	0.0236	0.030	0.017	0.0013	0.05
2	1	1 - 2	2028	10	0.0002	0.0180	0.0236	0.030	0.017	0.0013	0.05
3	1	2 - 3	2029	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
4	1	3 - 4	2030	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
5	1	4 - 5	2031	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
6	1	5 - 6	2032	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
7	1	6 - 7	2033	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
8	1	7 - 8	2034	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
9	1	8 - 9	2035	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
10	1	9 - 10	2036	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
11	1	10 - 11	2037	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
12	1	11 - 12	2038	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
13	1	12 - 13	2039	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
14	1	13 - 14	2040	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
15	1	14 - 15	2041	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
16	1	15 - 16	2042	3	0.0002	0.0180	0.0236	0.005	0.003	0.0002	0.01
17	1	16 - 17	2043	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
18	1	17 - 18	2044	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
19	1	18 - 19	2045	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
20	1	19 - 20	2046	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
21	1	20 - 21	2047	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
22	1	21 - 22	2048	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
23	1	22 - 23	2049	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
24	1	23 - 24	2050	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
25	1	24 - 25	2051	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
26	1	25 - 26	2052	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
27	1	26 - 27	2053	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
28	1	27 - 28	2054	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
29	1	28 - 29	2055	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
30	1	29 - 30	2056	1	0.0002	0.0180	0.0236	0.001	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.13	0.077	0.006	<b>0.22</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.00004  
**Fugitive PM2.5** 0.02  
**Total PM2.5** 0.02

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights  
30 Year Residential Exposure - Without MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0002	0.0179	0.0235	0.031	0.017	0.0013	0.05
2	1	1 - 2	2028	10	0.0002	0.0179	0.0235	0.031	0.017	0.0013	0.05
3	1	2 - 3	2029	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
4	1	3 - 4	2030	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
5	1	4 - 5	2031	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
6	1	5 - 6	2032	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
7	1	6 - 7	2033	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
8	1	7 - 8	2034	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
9	1	8 - 9	2035	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
10	1	9 - 10	2036	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
11	1	10 - 11	2037	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
12	1	11 - 12	2038	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
13	1	12 - 13	2039	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
14	1	13 - 14	2040	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
15	1	14 - 15	2041	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
16	1	15 - 16	2042	3	0.0002	0.0179	0.0235	0.005	0.003	0.0002	0.01
17	1	16 - 17	2043	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
18	1	17 - 18	2044	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
19	1	18 - 19	2045	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
20	1	19 - 20	2046	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
21	1	20 - 21	2047	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
22	1	21 - 22	2048	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
23	1	22 - 23	2049	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
24	1	23 - 24	2050	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
25	1	24 - 25	2051	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
26	1	25 - 26	2052	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
27	1	26 - 27	2053	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
28	1	27 - 28	2054	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
29	1	28 - 29	2055	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
30	1	29 - 30	2056	1	0.0002	0.0179	0.0235	0.001	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.14	0.076	0.006	<b>0.22</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.00004  
 Fugitive PM2.5 0.02  
 Total PM2.5 0.02

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Traffic - TACs & PM2.5 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration On-Site Manager's Unite Storage Building 1 1st (1.5m) Floor Receptors Heights**

**Emission Year** 2027  
**Receptor Information** Maximum On-Site Receptor  
 Number of Receptors 1  
 Receptor Height 1st (1.5m)  
 Receptor Distances 7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.00004	0.0168	0.0220

1st Floor

**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	0.0040	0.0038	0.0002

1st Floor

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Manager's Unit Storage Building 1 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age →	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0000	0.0168	0.0220	0.006	0.016	0.0012	0.02
2	1	1 - 2	2028	10	0.0000	0.0168	0.0220	0.006	0.016	0.0012	0.02
3	1	2 - 3	2029	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
4	1	3 - 4	2030	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
5	1	4 - 5	2031	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
6	1	5 - 6	2032	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
7	1	6 - 7	2033	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
8	1	7 - 8	2034	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
9	1	8 - 9	2035	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
10	1	9 - 10	2036	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
11	1	10 - 11	2037	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
12	1	11 - 12	2038	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
13	1	12 - 13	2039	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
14	1	13 - 14	2040	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
15	1	14 - 15	2041	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
16	1	15 - 16	2042	3	0.0000	0.0168	0.0220	0.001	0.002	0.0002	0.00
17	1	16-17	2043	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0000	0.0168	0.0220	0.000	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.03	0.071	0.005	<b>0.10</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.00001  
**Fugitive PM2.5** 0.004  
**Total PM2.5** 0.004

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Traffic - TACs & PM2.5 AERMOD Risk Modeling Parameters and Maximum Concentrations - With MERV16 Filtration On-Site Residential Building 1st (1.5m) & 2nd (6.4m) Floor Receptors Heights**

<b>Emission Year</b>	2027
<b>Receptor Information</b>	Maximum On-Site Receptor
Number of Receptors	90
Receptor Height	1st (1.5m) & 2nd (6.4m) Floors
Receptor Distances	7 meter grid spacing in residential area

**Meteorological Conditions**

BAQMD Moffett Fed Airfield 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	0.00004	0.0180	0.0236	1st Floor
2013-2017	0.00004	0.0179	0.0235	2nd Floor

**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	0.0043	0.0041	0.0002	1st Floor
2013-2017	0.0043	0.0041	0.0002	2nd Floor

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 1st Floor Receptors - 1.5m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>  
 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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

- Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)  
 DBR = daily breathing rate (L/kg body weight-day)  
 A = Inhalation absorption factor  
 EF = Exposure frequency (days/year)  
 10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0000	0.0180	0.0236	0.000	0.001	0.0001	0.00
1	1	0 - 1	2027	10	0.0000	0.0180	0.0236	0.006	0.017	0.0013	0.02
2	1	1 - 2	2028	10	0.0000	0.0180	0.0236	0.006	0.017	0.0013	0.02
3	1	2 - 3	2029	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
4	1	3 - 4	2030	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
5	1	4 - 5	2031	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
6	1	5 - 6	2032	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
7	1	6 - 7	2033	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
8	1	7 - 8	2034	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
9	1	8 - 9	2035	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
10	1	9 - 10	2036	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
11	1	10 - 11	2037	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
12	1	11 - 12	2038	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
13	1	12 - 13	2039	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
14	1	13 - 14	2040	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
15	1	14 - 15	2041	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
16	1	15 - 16	2042	3	0.0000	0.0180	0.0236	0.001	0.003	0.0002	0.00
17	1	16 - 17	2043	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
18	1	17 - 18	2044	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
19	1	18 - 19	2045	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
20	1	19 - 20	2046	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
21	1	20 - 21	2047	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
22	1	21 - 22	2048	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
23	1	22 - 23	2049	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
24	1	23 - 24	2050	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
25	1	24 - 25	2051	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
26	1	25 - 26	2052	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
27	1	26 - 27	2053	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
28	1	27 - 28	2054	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
29	1	28 - 29	2055	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
30	1	29 - 30	2056	1	0.0000	0.0180	0.0236	0.000	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.03	0.077	0.006	<b>0.11</b>

\* Third trimester of pregnancy

Maximum  
 Hazard Index 0.00001  
 Fugitive PM2.5 0.004  
 Total PM2.5 0.004

**Terra Bella Housing and Storage, Mountain View, CA - Shoreline Blvd Cancer Risk & PM2.5  
Impacts at On-Site Residential Building 2nd Floor Receptors - 6.4m receptor heights  
30 Year Residential Exposure - With MERV16 Filtration**

**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-day)<sup>-1</sup>

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<sub>air</sub> x DBR x A x (EF/365) x 10<sup>-6</sup>

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10<sup>-6</sup> = Conversion factor

**Cancer Potency Factors (mg/kg-day)<sup>-1</sup>**

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

**Values**

Age → Parameter	Infant/Child			Adult
	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**

Exposure Year	Maximum - Exposure Information				Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
1	1	0 - 1	2027	10	0.0000	0.0179	0.0235	0.006	0.017	0.0013	0.02
2	1	1 - 2	2028	10	0.0000	0.0179	0.0235	0.006	0.017	0.0013	0.02
3	1	2 - 3	2029	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
4	1	3 - 4	2030	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
5	1	4 - 5	2031	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
6	1	5 - 6	2032	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
7	1	6 - 7	2033	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
8	1	7 - 8	2034	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
9	1	8 - 9	2035	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
10	1	9 - 10	2036	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
11	1	10 - 11	2037	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
12	1	11 - 12	2038	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
13	1	12 - 13	2039	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
14	1	13 - 14	2040	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
15	1	14 - 15	2041	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
16	1	15 - 16	2042	3	0.0000	0.0179	0.0235	0.001	0.003	0.0002	0.00
17	1	16 - 17	2043	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
18	1	17 - 18	2044	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
19	1	18 - 19	2045	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
20	1	19 - 20	2046	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
21	1	20 - 21	2047	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
22	1	21 - 22	2048	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
23	1	22 - 23	2049	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
24	1	23 - 24	2050	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
25	1	24 - 25	2051	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
26	1	25 - 26	2052	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
27	1	26 - 27	2053	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
28	1	27 - 28	2054	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
29	1	28 - 29	2055	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
30	1	29 - 30	2056	1	0.0000	0.0179	0.0235	0.000	0.000	0.0000	0.00
<b>Total Increased Cancer Risk</b>								0.03	0.076	0.006	<b>0.11</b>

\* Third trimester of pregnancy

Maximum  
**Hazard Index** 0.00001  
**Fugitive PM2.5** 0.004  
**Total PM2.5** 0.004





# 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 conducting 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	6/9/2022
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	<a href="mailto:cdivine@illingworthrodkin.com">cdivine@illingworthrodkin.com</a>
Project Name	Terra Bella Storage and Housing
Address	1040 Terra Bella Ave
City	Mountain View
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Storage, Residential
Project Size (# of units or building square feet)	409-ksf, 109 du
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 (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.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or [mhanson@baaqmd.gov](mailto:mhanson@baaqmd.gov)

**Table B: Google Earth data**

Table B: Google Earth data										Project MEI				
Distance from Receptor (feet) or MEI <sup>1</sup>	Plant No.	Facility Name	Address	Cancer Risk <sup>2</sup>	Hazard Risk <sup>2</sup>	PM <sub>2.5</sub> <sup>2</sup>	Source No. <sup>3</sup>	Type of Source <sup>4</sup>	Fuel Code <sup>5</sup>	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
+1000	1127	Teledyne Microwave	1274 Terra Bella Avenue	-	-	-		Semiconductor and Related Device Manufacturing Operation		2020 Dataset	0.13	#VALUE!	#VALUE!	#VALUE!
330	2867	Sankt Andreas Backhaus	958 San Leandro Boulevard	0.002	-	-		Exempt Wood Burning Brick Oven		2020 Dataset	0.49	0.001	#VALUE!	#VALUE!
+1000	13038	Santa Clara Valley Transportation Authority	1235 L'Avenida	6.12	0.01	-		(1) Auto Body Coating Operation, (1) Generator		2020 Dataset	0.04	0.24	0.0004	#VALUE!
+1000	22347	New Cingular Wireless PCS LLC dba AT&T Mobility	1235 La Avenida Street	1.18	-	-		Generators		2020 Dataset	0.04	0.05	#VALUE!	#VALUE!
+1000	111934	Santa Clara VTA	1235 L'Avenida Street	0.19	-	-		Gas Dispensing Facility		2020 Dataset	0.01	0.003	#VALUE!	#VALUE!
960	201699	Microsoft Corporation	1065 La Avenida Street	28.34	0.01	0.036		Generators		2020 Dataset	0.04	1.13	0.0003	0.001

**Footnotes:**

- Maximally exposed individual
- These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
- Each plant may have multiple permits and sources.
- Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
- Fuel codes: 98 = diesel, 189 = Natural Gas.
- If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
- The date that the HRSA was completed.
- Engineer who completed the HRSA. For District purposes only.
- All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
- The HRSA "Chronic Health" number represents the Hazard Index.
- Further information about common sources:
  - Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
  - 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 0.003 or
  - 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.
  - 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 instead should reflect
  - Gas stations can be adjusted using BAAQMD's Gas Station Distance Multiplier worksheet.
  - Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
  - This spray booth is considered to be insignificant.

Date last updated:  
03/13/2018

**Project Site**

Distance from Receptor (feet) or MEI <sup>1</sup>	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
+1000	1127	0.13	#VALUE!	#VALUE!	#VALUE!
+1000	2867	0.13	0.0002	#VALUE!	#VALUE!
630	13038	0.08	0.49	0.001	#VALUE!
900	22347	0.04	0.05	#VALUE!	#VALUE!
800	111934	0.02	0.004	#VALUE!	#VALUE!
600	201699	0.09	2.55	0.001	0.003

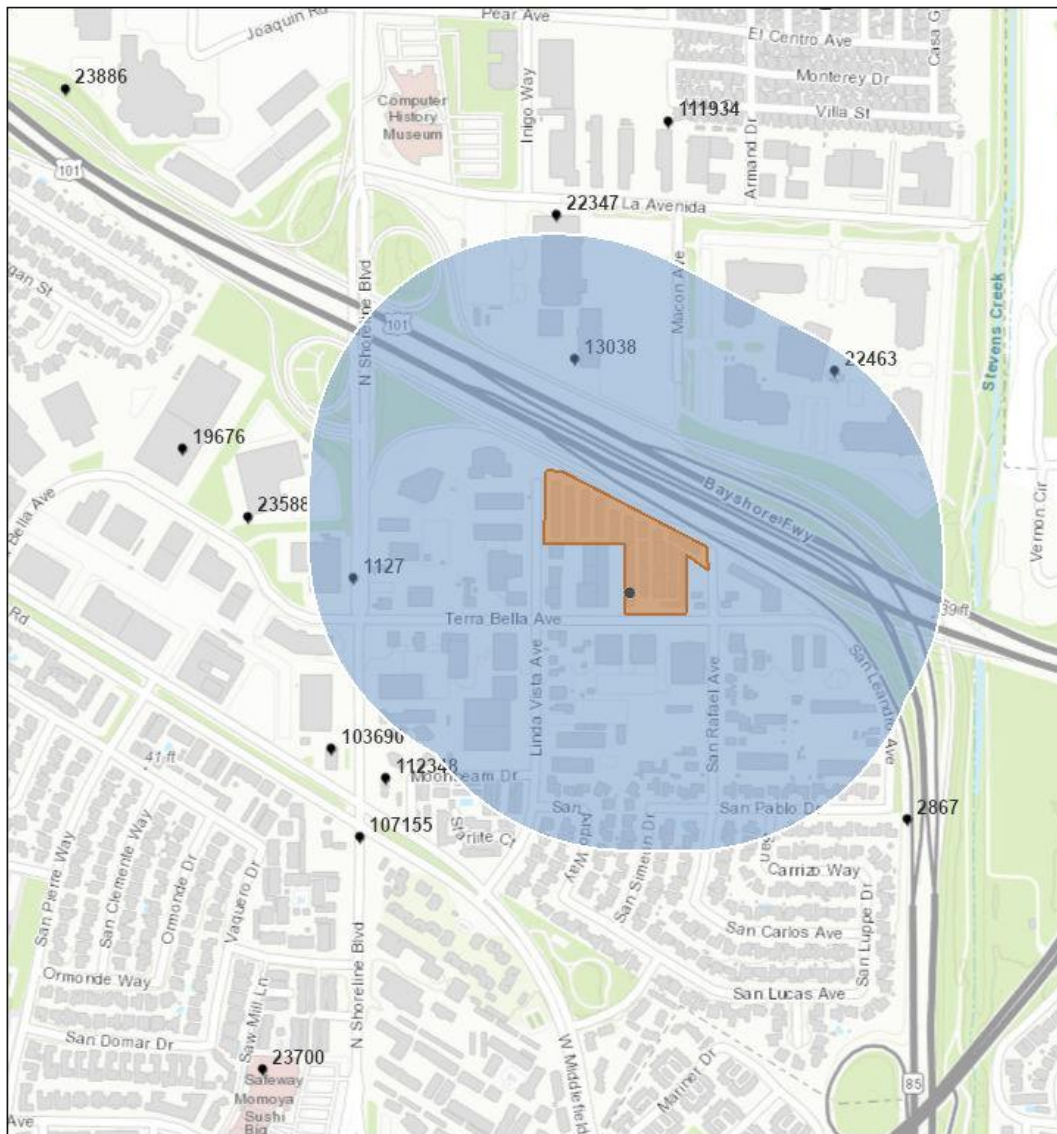


# Stationary Source Risk & Hazards Screening Report

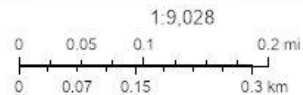
## Area of Interest (AOI) Information

Area : 5,474,346.01 ft<sup>2</sup>

May 23 2022 9:30:27 Pacific Daylight Time



● Permitted Facilities 2018



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

## Summary

Name	Count	Area(ft <sup>2</sup> )	Length(ft)
Permitted Facilities 2018	3	N/A	N/A

## Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	1127	Teledyne Microwave	1274 Terra Bella Avenue	Mountain View	CA
2	13038	Santa Clara Valley Transportation Authority	1235 L'Avenida	Mountain View	CA
3	22463	Microsoft Corporation	1065 La Avenida Street	Mountain View	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	94043	Santa Clara	0.000	0.000	0.000	Contact BAAQMD	1
2	94040	Santa Clara	2.730	0.000	0.000	Contact BAAQMD	1
3	94043	Santa Clara	159.130	0.070	0.210	Generators	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.

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