

GOOGLE MIDDLEFIELD PARK MASTER PLAN AIR QUALITY ASSESSMENT

Mountain View, California

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INTRODUCTION

The purpose of this report is to address air quality and community health risk impacts associated with the proposed mixed-use Google Middlefield Park Master Plan project located in Mountain View, California. The air quality impacts from this project would be associated with demolition of the existing land uses, construction of the new buildings and infrastructure, and operation of the project. Air pollutants associated with construction and operation of the project were predicted using appropriate models. In addition, the potential project health risk impacts (includes construction and operation) and the impact of existing toxic air contaminant (TAC) sources affecting the nearby and proposed sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

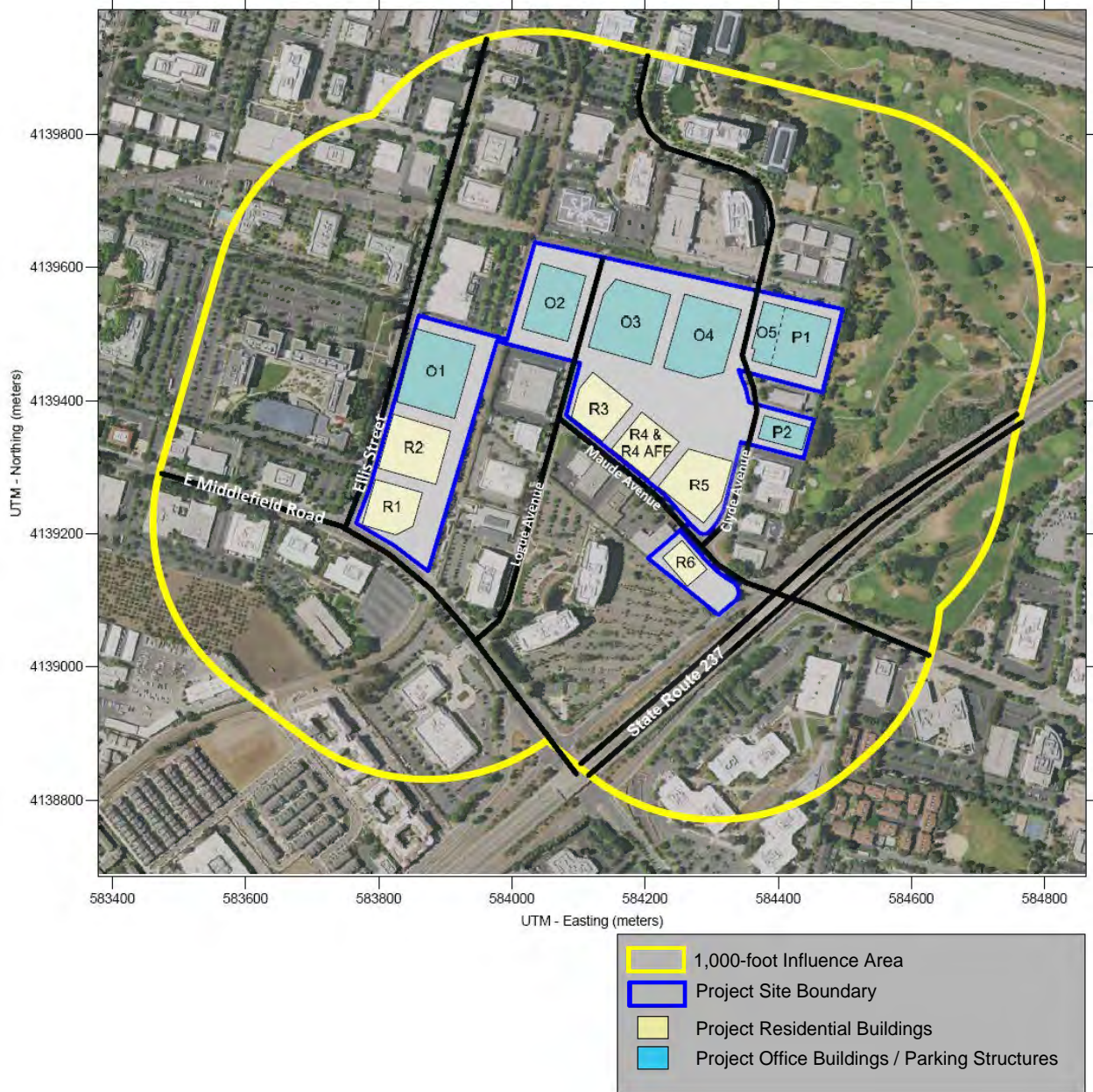
PROJECT DESCRIPTION

The proposed Middlefield Park Master Plan (MPMP) area is located to the northeast of the Ellis Street and East Middlefield Road intersection, within the Mixed-Use Character Area of the East Whisman Precise Plan (EWPP). Figure 1 shows the MPMP. The MPMP area totals approximately 40 acres and consists of 14 parcels. Implementation of the proposed MPMP would allow for the demolition of the existing improvements (i.e., approximately 684,646 square feet of office uses, related surface parking areas, and landscaping) and development of:

- Five office buildings totaling 1,317,000 square feet of office uses (see buildings O1 through O5 on Figure 1) and resulting in 632,355 square feet of net new office square footage;
- Two affordable residential buildings (see buildings R4 AFF and R6 AFF) and five residential mixed-use buildings (R1 through R5) with a total of up to 1,900 residential units (including up to 380 affordable units in Building R4 AFF and Building R6 AFF), up to 30,000 square feet of ground floor retail space, and 20,000 square feet of community/civic uses (see buildings R1 through R5 on Figure 1);
- Two parking structures for shared district parking within MPMP (see buildings P1 and P2 on Figure 1);
- Dedication of land for three new public parks totaling approximately 7.28 acres (see Maude Park, Canopy Walk, and Gateway Park) and a 2.87-acre privately owned and publicly accessible park developed by the applicant (see Ellis Park). In total, this is up to 10.15 acres of park open space within the MPMP; and
- New vehicular circulation, including up to six private streets and a modification to Logue Avenue (a public street), new on-street and off-street bicycle and pedestrian improvements, and new landscaping and trees.
- As a project option, the applicant is considering development of a private district utilities system with underground utility lines to serve some buildings within the MPMP with water, wastewater, recycled water, thermal energy (heating and cooling), and electric power (refer to Section 1.2.6). If the District Utilities System Option is selected, one of the office building (O1) would contain a 45,000 square foot Central Utility Plant (CUP).

¹ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*, May. Web: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Figure 1. Google MPMP and 1,000-foot Area



In addition to the improvements identified, the project includes a Vesting Tentative Map to create up to 18 lots, up to 1,900 condominium lots, and up to 140 vertical lots within the MPMP, as well as a Development Agreement to grant implementation of entitlements over a 20-year period. Other aspects of the MPMP include green building and emissions reduction features; construction activities; heritage trees and landscaping; site access, circulation, and parking; and Transportation Demand Management (TDM) plan – all of which are described below.

Master Plan Buildings

A summary of the proposed buildings is included in Table 1. The maximum building heights would range from 60 to 125 feet. The maximum excavation depth would range from 20 to 50 feet. Parking for all of the office and residential buildings would be provided in surface, above ground, and/or below ground parking facilities.

Parks and Open Space

The MPMP includes a network of privately-owned publicly accessible open space, dedicated public space, and private open space. Four parks (Ellis Park, Maude Park, Canopy Walk, and Gateway Park, totaling up to 10.15 acres) are planned within the MPMP as described below. In particular, the land dedicated to the City as Canopy Walk is anticipated for a future bicycle/pedestrian overcrossing of the VTA light rail line. The overcrossing would be located adjacent to the northeast corner of Building O1 and would connect the existing Hetch-Hetchy/TOD Trail from Stevens Creek through the master plan area into Sunnyvale via Maude Avenue. The MPMP also includes 2.23 acres of private open space around the buildings that would consist of landscaping.

Utilities

The preferred option for the proposed project is to connect to existing utility lines in Ellis Street, East Middlefield Road, Logue Avenue, Maude Avenue, and Clyde Avenue for water, stormwater, wastewater, and stormwater service. The project would connect to the existing electrical transmission infrastructure for electrical service. Ground floor commercial areas of Buildings R1 and R2 would connect to existing PG&E natural gas lines in Ellis Street. The remaining residential and commercial buildings in the MPMP area would be 100 percent electric. Based on the anticipated increase in load demand for the project, PG&E will extend 12kV underground circuits to the project site via a connection at Ellis Street for distribution to the rest of the MPMP. A private nitrogen gas line that runs through the project site will be relocated during project construction. Additionally, the project would include undergrounding of some existing electrical utility lines within the project boundaries.

Alternatively, the project has a design option to construct a private district utility system with underground utility lines to serve some buildings within the MPMP with water, wastewater, recycled water, thermal energy (heating and cooling), and electric power. The District Utility System would include four components: 1) a central utilities plant (CUP), 2) temporary air sourced heat pump (ASHP), 3) district distribution system, and 4) microgrid system. These components are described in detail below.

Table 1. Proposed MPMP Buildings

Building	Uses	Gross SF	Units	Vehicle Parking Provided
O1	Office	441,939	--	450 spaces (two levels below ground)
O2	Office	190,000	--	250 spaces (one level above ground)
O3	Office	310,000	--	150 spaces (one level above ground)
O4	Office	292,212	--	150 spaces (one level above ground)
O5/P1	Office	82,849	--	1,364 spaces (one level below, four above ground)
P2	Community/ Civic ²	4,000	--	300 spaces (four levels above ground)
R1	Residential	320,000	400	354 spaces (one below ground, one above ground)
	Retail	18,308	--	
R2	Residential	363,000	450	337 spaces (one level below, one level above ground)
	Retail	4,200	--	
	Community/ Civic	8,434	--	
R3	Residential	263,000	270	244 spaces (one level below ground, one level above ground)
	Retail	2,877	--	
	Community/Civic	1,666	--	
R4 AFF	Residential (Affordable)	190,000	210	168 spaces (one level below ground and one level above ground)
R4	Residential	95,000	90	92 spaces (one level below ground, one level above ground)
	Retail	1,955	--	
	Community/Civic	1,666	--	
R5	Residential	340,000	310	311 spaces (one level below ground, one level above ground)
	Retail	2,660	--	
	Community/Civic	3,234	--	
R6 AFF	Residential (affordable)	155,000	170	136 spaces (one level below ground, one level above ground)
Fairchild Barns in Ellis Park	Community/ Civic	1,000	--	N/A
--	Office	1,317,000	--	--
--	Community/ Civic	20,000	--	--
--	Residential	1,726,000	1,900	--
--	Retail	30,000	--	--

² Civic/community space would include uses such as community meeting space or space occupied by non-profit organizations.

Central Utility Plant

With this alternative, the MPMP would include an approximately 45,000-square foot CUP, which would provide wastewater treatment, recycled water production, heating, and cooling for the majority of the buildings within the MPMP.³ The CUP would be located within Building O1 either at ground level or in one of the below ground parking levels. Cooling towers would be constructed on the rooftop of Building O1 to provide the additional heat rejection for the CUP. The air source heat pumps installed initially on the rooftops at R1/R2 in Phase I will be relocated to the rooftop of O1 in Phase II and would be 10 feet in height, and the rooftop open cooling towers would be approximately 20 feet in height and have a maximum screenwall height of approximately 130 feet above ground level.

Wastewater Treatment Plant and Recycled Water Generation

Under the District Utilities Systems option, the CUP would include a wastewater treatment plant that would have capacity to treat an average weather flow of approximately 250,000 gallons of wastewater per day. The proposed wastewater treatment plant would only serve wastewater generated by the connected buildings in the MPMP.

It is estimated that full build out of the MPMP would generate approximately 231,170 gallons per day of wastewater, which is 18,830 gallons per day in excess of the treatment capacity of the proposed wastewater treatment plant.

When the treatment plant has reached its daily capacity or in the event that the on-site treatment plant is offline, the excess wastewater generated by the MPMP would be discharged to the City's municipal wastewater conveyance system and treated at the Palo Alto Regional Water Quality Control Plant (RWQCP) via existing sanitary sewer lines located in Ellis Street. Solids produced by the wastewater treatment plan on the project site would either be managed on-site, hauled to a disposal facility or combined with excess wastewater generated by the MPMP and discharged through the City's municipal wastewater conveyance system.

Wastewater generated by the MPMP would be conveyed via gravity from each building through a series of sanitary sewer lines within the MPMP area to the proposed CUP/wastewater treatment plant. Once at the wastewater treatment plant, wastewater would undergo a multi-step treatment process including screening, primary filtration, secondary biological treatment, tertiary treatment, and disinfection to remove solids, pollutants, and harmful pathogens.

Recycled water produced by the wastewater treatment plant would achieve recycled water standards as described under Title 22 of the California Code of Regulations and would be used for non-potable demands on-site including toilet flushing, cooling, and irrigation. Excess recycled water generated at the CUP would be stored in multiple tanks totaling 125,000 gallons within the basement of Building O1 and could be made available to adjacent properties outside of the MPMP area or open spaces within the MPMP area in order to further reduce potable water use.

³ Building R4 AFF and R6 AFF would be served by municipal utilities under the District Utilities System option.

Appropriate measures and technology solutions would be designed and implemented to ensure objectionable odors generated by the wastewater treatment plant are within the Bay Area Air Quality Management District (BAAQMD) compliance limits and do not impact the public. Odor controls would be designed using the best available technology and consistent with regulatory requirements. The most odorous processes resulting in the production of hydrogen sulfide and ammonia would be enclosed and critically controlled. The project would also include regular monitoring of complaints and reporting on the success of odor controls to regulatory agencies. Specific solutions may include:

- Active ventilation (foul air blowers) to odor control units (e.g., carbon absorption, biofiltration, or ammonia scrubbers);
- House odorous processes in a ventilated enclosure;
- Wastewater screenings and grit would be washed, dewatered, and compacted before being stored in enclosed, odor-proof refuse containers;
- Haul any stored residuals off-site at regular intervals; and
- Ferrous chloride injection for hydrogen sulfide removal in primary sedimentation tanks to chemically enhanced primary treatment as needed for odor control at specific wastewater treatments processes.

Buildings R4 AFF and R6 AFF would not be served by the on-site wastewater treatment plant and would connect directly to the City's municipal wastewater conveyance system. All other buildings within the proposed MPMP would be served by the on-site wastewater treatment plant and have a backup connection to the City's municipal wastewater conveyance system, which could be used as a primary connection should future owners or building occupants choose not to operate the on-site wastewater treatment plant. Wastewater would be collected at each building via a low-pressure sewer network and routed to the wastewater treatment plant within the CUP. The wastewater treatment plant would be installed in Phase II of construction. During Phase I of construction, a temporary connection to the municipal sewer system will be required.

Building Heating and Cooling

Heating and cooling for all MPMP buildings would be provided by geothermal energy and a combination of heat recovery chillers, air source heat pumps and cooling towers. The geothermal system would include tubing installed within dedicated bores under the various buildings connected to pipes in the district utility distribution system, through which water circulates below the ground surface (BGS). Because ground temperatures remain relatively stable throughout the year, water within the pipes underground is warmer or cooler than the average air temperature, when water is circulated through the pipes from beneath the ground throughout the building, it provides a passive warming or cooling effect in the building. The ASHP would be located on the roof of Building O1 and would distribute hot or chilled water to the various buildings. Heat recovery chillers would be located in a mechanical room within the Building O1.

Construction of the geothermal system would include drilling and installation of the vertical geo bores beneath each of the proposed MPMP buildings and connection of the distribution system. It is estimated that approximately 2,820 vertical bores of six inches in diameter and spaced 18 feet apart would be drilled approximately 85 to 110 feet BGS of each proposed building.

A temporary set of ASHP units would be installed on the rooftop of Buildings R1 and R2 to provide temporary heating and cooling for buildings R1 and R2 prior to construction of the CUP (which is to be constructed in Phase II). Those ASHP would then be transferred to the rooftop of Building O1 during Phase II of construction.

Microgrid System

The proposed MPMP buildings, with the exception of R1 and R2, would be all electric – no natural gas would be used. Natural gas connections would be provided in the ground floors of Building R1 and R2 only for commercial/restaurant uses.⁴

It is estimated that the MPMP would use a total of approximately 35,700,000 kWh per year of electricity. Approximately 20 percent of the electricity demand for the proposed MPMP would be generated on-site by rooftop photovoltaic panels located on each of the proposed buildings under the project without District Utilities System Option. Under the District Utilities System Option, a greater rooftop surface area would be available for photovoltaic panels because mechanical equipment for building heating and cooling which is traditionally located on the roof would be located in the CUP under this project option, allowing for maximum solar generation on-site. Under the project with District Utilities System Option, approximately 30 percent (or 10.7 million kWh per year) of the electricity demand for the proposed project would be generated on-site by rooftop photovoltaic panels located on each of the proposed buildings. The project's remaining electricity demand (under either option) would be supplied by the PG&E distribution network. Solar energy generated on-site would be stored within on-site battery storage units. The battery units would be located within the CUP either in the basement of Building O1 or in an enclosure adjacent to the building at grade and would be pad-mounted and seismically restrained on the finished grade/floor per manufacturer recommendations and include proper catchment systems designed for protection from coolant leakage and fire.⁵

District Distribution System and Building Connections

In order to transport wastewater, recycled water, hot and chilled water, and electricity to each of the buildings and parks in the Master Plan, a district distribution system consisting of underground cabling and a series of below ground insulated pipes ranging from four to 16 inches in diameter, would be constructed. The underground cabling and pipes would connect and provide service between the buildings, CUP, and microgrid system. Additionally, each building would include a connection room with pumping and energy transfer equipment for the thermal network as well as break-out tank and backflow preventers for the recycled water supply. Each connection room will also include metering and control equipment to track overall consumption, monitor efficiency and enable integrated control.

⁴ Per Municipal Code Chapters 8, 14, and 24, all new construction buildings are required to be electric. Natural gas may be used for commercial spaces with specialized equipment that cannot operate with electric service (e.g., a restaurant with a pizza oven) subject to City approval.

⁵ Battery space selection and design shall be coordinated with the City Fire Marshal's office for fire hazard protection.

Emergency Generators

The MPMP would include 11 emergency back-up generators located within the basements of Buildings R1 through R3, R4/R4 AFF, R5, R6 AFF, and O1 through O5. All generators would be diesel powered. The seven generators located within the proposed residential buildings would have a power rating of 500 kilowatts (kW) and the generators within the proposed office buildings would have a power rating of 900 kW.

Green Building and Emissions Reduction Features

Consistent with the Development Standards and Bonus FAR Standards for non-residential development projects within the EWPP area, the proposed office buildings would meet the intent of Leadership in Energy and Environmental Design (LEED) Platinum. Residential buildings requesting Bonus FAR would achieve the equivalent of a GreenPoint rating of 120 points or better. In addition to the Green Building standards required by the EWPP, the preferred project would also incorporate the following green building features:

Photovoltaic System: At least 50 percent of the rooftops of each building within the MPMP area would be equipped with rooftop photovoltaic systems. It is estimated that approximately 20 percent of the MPMP's electricity demand would be provided by solar power generated on-site.

Water Efficient Landscaping: Water efficient irrigation systems would support native, drought tolerant plants compatible with recycled water through the MPMP area.

If the District Utilities System is selected, the project would also include the following green building measures:

Geothermal System: The MPMP would include a district thermal system which would provide heating and cooling to the proposed buildings via a closed loop system to optimize efficiency as described above.

Microgrid System: Each building would be equipped with a rooftop photovoltaic system. Solar energy generated on-site would be transported via electric lines below ground to the battery units in Building O1.

Water Efficient Building Systems: The MPMP would include an on-site wastewater treatment plant which would supply recycled water to the project. All buildings will be dual plumbed, served by recycled water supplies for mechanical operations, irrigation, and toilet flushing.

To meet current building requirements, residential units would include heating and ventilation, air conditioning (HAVAC) systems with enhanced filtration that is rated MERV13 or greater.

Construction Activities and Phasing

Construction activities associated with the MPMP would include demolition, site preparation, grading and excavation, building construction, architectural coatings, paving, and landscaping. The build out of the MPMP would occur over four phases and take a total of approximately eight years and five months. The maximum depth of excavation required would range from five- to 50-foot BGS for the proposed buildings and 85 to 110 feet BGS for geothermal bores under the District Utilities System Option. Approximately 749,423 cubic yards of soil would be exported from the site to accommodate the proposed below ground parking, building foundations and footings, and utilities. If the District Utilities System Option is selected, the project would require export of up to 789,423 cubic yards of soil to accommodate the below ground parking, building foundations and footings, and utilities (including geo bores). Construction staging and parking would primarily occur on-site, with the exception of Phase I construction, when two parcels located at 405 Clyde Avenue and 580 Clyde Avenue, adjacent to the project site, would be used for construction staging and parking.

Transportation Demand Management

The EWPP requires office and R&D projects with new construction or additions greater than 10,000 square feet provide a TDM plan with programs and measures to reduce vehicle trips. Pursuant to the Precise Plan, the proposed project is required to incorporate the following TDM measures:

Nonresidential TDM Requirements

- **TDM Plan Site Requirements:** The following site design features shall be in the project to adhere to the required trip cap:
 - Priority parking for carpools and vanpools.
 - Bicycle parking and shower and changing facilities as defined by Chapter 3 of the Precise Plan.
 - Maximum parking and carshare parking as defined by Chapter 3 of the Precise Plan.
 - Site design that supports alternative modes, such as orienting building entrances toward sidewalks, transit stops, and bicycle facilities.
- **TDM Plan Operational Requirements:** The TDM plan shall include the following minimum operational measures though other measures may be needed to achieve the required trip caps:
 - The property owner shall join the Mountain View Transportation Management Association (MVTMA). Tenants may join in lieu of property owners, but if a tenant is unable to maintain membership, the property owner shall be responsible.
 - Monetary incentives for alternative modes, such as subsidized transit passes, bike-share or carpools for office employees.
 - Monetary incentives for alternative modes, such as subsidized transit passes or bike-share and/or unbundled parking for residents.

- **TDM Plan Alternative Requirements:** The TDM plan may include other measures to reach required trip targets, including but not limited to:
 - Shared bicycles if a bikeshare service is not available nearby
 - Parking cash-out, paid parking, or other parking monetization
 - Guaranteed ride home program
 - Telecommute support
 - Alternative work schedules
- **Parking Rationale:** The TDM plan shall demonstrate the parking provided is adequate to serve the needs of the development and shall consider the project’s trip-reduction measures.
- **Implementation:** The TDM plan shall identify how the required measures would be implemented and describe other measures proposed to meet or exceed trip reduction goals.
- **Trip Cap:** The Precise Plan established a long-term vehicle trip cap across the entire East Whisman area of 0.83 a.m. and 0.72 p.m. peak-hour trips per 1,000 net new square feet across all office and R&D sites.⁶ This area wide trip cap is implemented through a site-specific trip cap, as established through the Precise Plan’s Office Trip Cap Phasing Program and Administrative Guidelines. The proposed project would implement a trip cap of 1,097 a.m. peak hour trips and 952 p.m. peak hour trips.

Monitoring and Enforcement: Annual monitoring of the TDM plan shall be conducted through a third party and paid for by the property owner or their representative. It shall include driveway counts and a survey of employee travel modes.

Residential TDM Requirements

- **TMA Membership:** New residential developments with at least 100 units shall become Mountain View TMA members.
- **TDM Plan Site Requirements:** New residential development shall include the following TDM site measures:
 - Maximum parking and carshare parking as defined by Chapter 3 of the Precise Plan
 - Bicycle parking as defined by Chapter 3 of the Precise Plan
 - Residential projects over 100 units shall provide a shared, common, collaborative workspace available to residents and their guest, which can be offered in partnership with nearby residences or businesses.
 - Site design that supports alternative modes, such as orienting building entrances toward sidewalks, transit stops, and bicycle facilities
 - Accessible, secure storage space for grocery and package delivery shall be provided

⁶ The Precise Plan identifies an area-wide average of 0.95 a.m. and 0.88 p.m. peak-hour trips per 1,000 square feet of office and R&D sites to minimize vehicle trips into and out of East Whisman gateways. The 600 Ellis Street transportation analysis, prepared by Fehr Peers dated September 2020, analyzed the combination of existing (legacy) office development not subject to TDM requirements and future new office development that would be subject to TDM requirements in order to refine the trip generation rate necessary for future new office development to be compliant with the gateway trip cap volumes. The resulting trip cap for new office development is 0.83 a.m. and 0.72 p.m., which includes the incorporation of TDM measures required by the Precise Plan.

in multifamily development.

- **TDM Plan Operational Requirements:** The TDM plan shall include the following operational measures, or equivalent:
 - Property managers or homeowner associations (HOAs) shall provide access to shared bicycles if bikeshare service is not available nearby.
 - Property managers or HOAs shall provide local transportation information to all residents through a website, leasing office, or initial leasing information.
 - Property managers or HOAs shall support Safe Routes to Schools programs including facilitating parent gatherings and coordination of walking school buses and/or bike trains.
 - Monetary incentives for alternative modes, such as subsidized transit passes or bike-share for residents and/or unbundled parking.
- **Parking Rationale:** The TDM plan shall demonstrate the parking provided is adequate to serve the needs of the development and shall consider the project's trip-reduction measures.
- **TDM Monitoring:** Annual TDM monitoring shall be conducted by a third party and paid for by the property owner or their representative. It shall include parking counts to measure the peak parking demand and resulting parking rate. The monitoring results shall be submitted to the City.

In addition to TDM measures required in the Precise Plan, the project would implement the following measures:

- **Design Elements:** The project would fund and construct (or some combination of both) area bicycle and pedestrian network improvements on project site street frontages along Ellis Street, East Middlefield Road, and Logue, Maude, and Clyde Avenues. The mixed-use character of the project would reduce the need for vehicle trips due to increased employment and housing opportunities within a half-mile of the existing Middlefield light rail station combined with potential on-site food, retail, services, and recreation opportunities.
- **Operational Elements:** The project would include commuter shuttle services for office uses, carshare services, first-mile/last-mile micro mobility services, an on-site transportation coordinator, flexible work schedules for employees, marketing and information for the proposed TDM program, pre-tax commuter benefits, biking incentives, bike buddy program, bike loaner program, rideshare matching services, and an expanded carpool matching program.

Air Pollutants and Contaminants

Air pollutants are governed by multiple federal and state standards to regulate and mitigate health impacts. At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been established: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), suspended particulate matter (PM: PM_{2.5} and PM₁₀), and sulfur dioxide (SO₂). California sets standards, similar to the NAAQS as California Ambient Air Quality Standards (CAAQS). Health effects of the primary criteria pollutants (i.e., the NAAQS) and their potential sources are described below and summarized in Table 2. Note that California includes pollutants or contaminants that are specific to certain industries and not associated with this project. These include hydrogen sulfide and vinyl chloride.

Ozone

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

Carbon Monoxide

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

Nitrogen Dioxide

Nitrogen Dioxide is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ also contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO₂ decreases lung

function and may reduce resistance to infection. On January 22, 2010 the U.S. Environmental Protection Agency (EPA) strengthened the health-based NAAQS for NO₂.

Sulfur Dioxide

Sulfur dioxide is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO₂ levels in the region. SO₂ irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are larger than 2.5 microns but smaller than 10 microns (PM₁₀). PM_{2.5} refers to fine suspended particulate matter with an aerodynamic diameter of 2.5 microns or less that is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM₁₀ and PM_{2.5}. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Lead

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

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

Toxic Air Contaminants (TACs)

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

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

Table 2. Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood functions and nerve construction. • Behavioral and hearing problems in children.
Suspended Particulate Matter (PM _{2.5} and PM ₁₀)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardiorespiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Toxic Air Contaminants	<ul style="list-style-type: none"> • Cars and trucks, especially diesels. • Industrial sources such as chrome platers. • Neighborhood businesses such as dry cleaners and service stations. • Building materials and product. 	<ul style="list-style-type: none"> • Cancer. • Chronic eye, lung, or skin irritation. • Neurological and reproductive disorders.

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

Setting

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

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

Local Climate and Air Quality

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

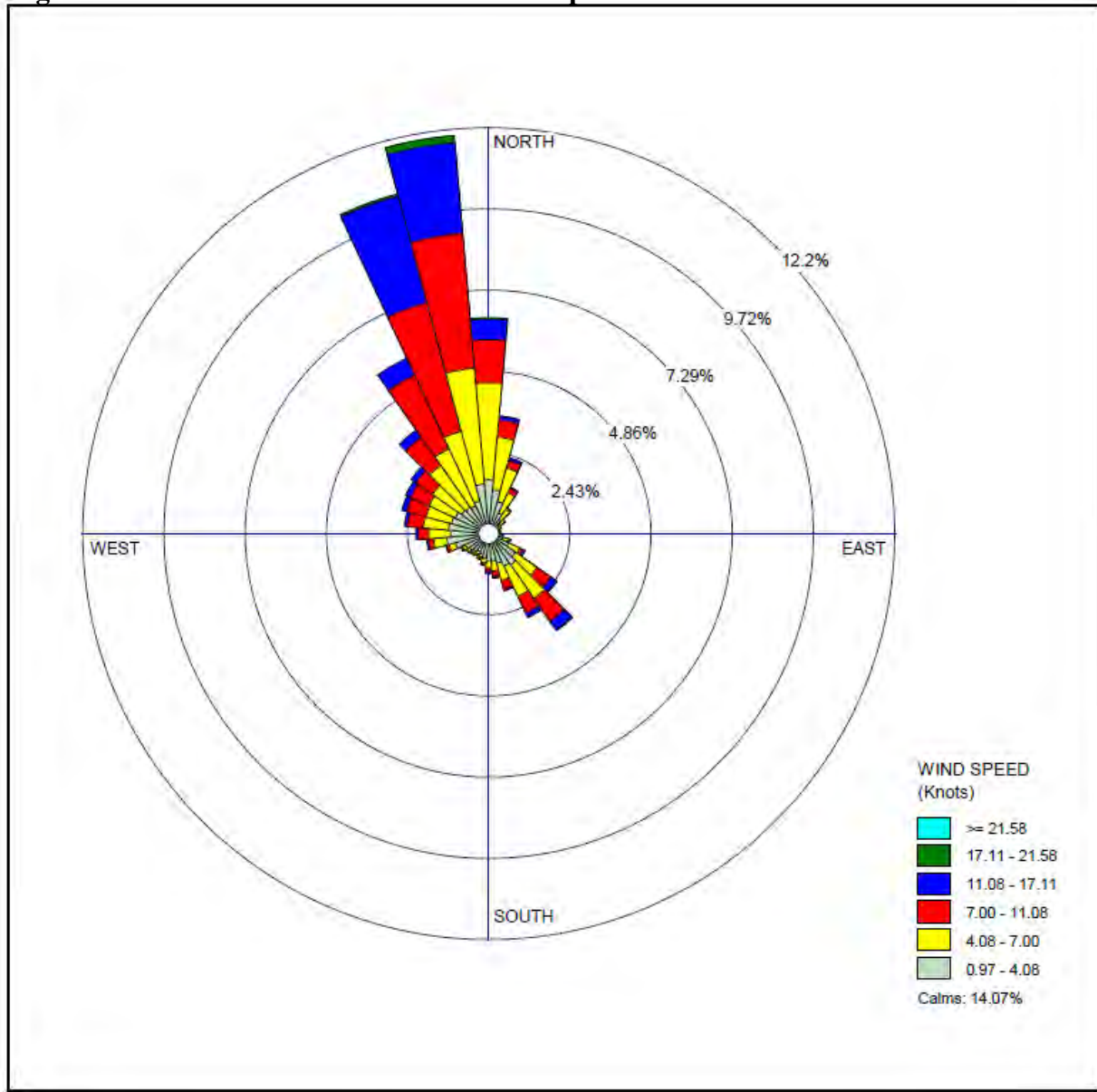
Climate and Meteorology

During the summer, mostly clear skies result in warm daytime temperatures and cool nights in the Santa Clara Valley. Winter temperatures are mild, except for very cool but generally frost-less mornings. Further inland where the moderating effect of the bay is not as strong, temperature extremes are greater. Rainfall amounts are modest, ranging from 13 inches in the lowlands to 20 inches in the hills. Wind patterns are influenced by local terrain, with a northwesterly breeze in response to the sea breeze infiltrating San Francisco Bay typically developing during the daytime. Winds are usually stronger in the spring and summer. The southerly winds experienced are more common in late fall and winter. The wind rose shown in Figure 2 describes the patterns and frequency of winds at the project site. Wind data were collected from 2013 through 2017.

Air Pollution Potential

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

Figure 2. Windrose for Moffett Field Airport Years 2013-17



Notes: Based on data provided by BAAQMD

Attainment Status Designations

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all state standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

Table 3 shows the state and federal standards for criteria pollutants and provides a summary of the attainment status for the San Francisco Bay Area with respect to national and state ambient air quality standards.

Table 3. NAAQS, CAAQS, and San Francisco Bay Area Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m ³)	Attainment	9 ppm (10 mg/m ³)	Attainment
	1-Hour	20 ppm (23 mg/m ³)	Attainment	35 ppm (40 mg/m ³)	Attainment
Nitrogen Dioxide (NO ₂)	Annual Mean	0.030 ppm (57 mg/m ³)	Attainment	0.053 ppm (100 µg/m ³)	Attainment
	1-Hour	0.18 ppm (338 µg/m ³)	Attainment	0.100 ppm	Unclassified
Ozone (O ₃)	8-Hour	0.07 ppm (137 µg/m ³)	Nonattainment	0.070 ppm	Nonattainment
	1-Hour	0.09 ppm (180 µg/m ³)	Nonattainment	Not Applicable	Not Applicable
Suspended Particulate Matter (PM ₁₀)	Annual Mean	20 µg/m ³	Nonattainment	Not Applicable	Not Applicable
	24-Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Unclassified
Suspended Particulate Matter (PM _{2.5})	Annual Mean	12 µg/m ³	Nonattainment	12 µg/m ³	Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m ³	Nonattainment
Sulfur Dioxide (SO ₂)	Annual Mean	Not Applicable	Not Applicable	80 µg/m ³ (0.03 ppm)	Attainment
	24-Hour	0.04 ppm (105 µg/m ³)	Attainment	365 µg/m ³ (0.14 ppm)	Attainment
	1-Hour	0.25 ppm (655 µg/m ³)	Attainment	0.075 ppm (196 µg/m ³)	Attainment

Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s. ppm = parts per million, mg/m³ = milligrams per cubic meter, µg/m³ = micrograms per cubic meter

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

Existing Air Pollutant Levels

BAAQMD monitors air pollution at various sites within the Bay Area. The closest air monitoring station (158 Jackson Street) that monitored O₃, CO, NO, NO₂, PM₁₀, and PM_{2.5} over the past 5 years (2015 through 2019) is in the City of San José, approximately 9 miles southeast of the project site. The data shows that during the past few years, the project area has exceeded the state and/or federal O₃, PM₁₀, and PM_{2.5} ambient air quality standards. Table 4 lists air quality trends in data collected for the past 5 years and published by the BAAQMD and CARB, which is the most recent time-period available. Ozone standards (includes 1-hr concentration and 8-hr concentration) were exceeded on 0 to 4 days annually in San José and 3 to 15 days throughout the Bay Area. Measured 24-hour PM₁₀ and PM_{2.5} concentrations are exceeded on 0 to 6 monitoring days in San José and

up to 18 days at any place in the Bay Area (note these levels were influenced by smoke from wildfires).

Table 4. Ambient Air Quality Concentrations from 2015 through 2019

Pollutant		Standard	2015	2016	2017	2018	2019
Ozone							
Max 1-hr concentration			94 ppb	87 ppb	121 ppb	78 ppb	95 ppb
No. days exceeded:		90 ppb	0	0	3	0	1
CAAQS							
Max 8-hr concentration			81 ppb	66 ppb	98 ppb	61 ppb	81 ppb
No. days exceeded:	CAAQS	70 ppb	2	0	4	0	2
	NAAQS	70 ppb	2	0	4	0	2
Carbon Monoxide							
Max 1-hr concentration			2.4 ppm	2.0 ppm	2.1 ppm	2.5 ppm	1.7 ppm
No. days exceeded:	CAAQS	20 ppm	0	0	0	0	0
	NAAQS	35 ppm	0	0	0	0	0
Max 8-hr concentration			1.8 ppm	1.4 ppm	1.8 ppm	2.1 ppm	1.3 ppm
No. days exceeded:	CAAQS	9.0 ppm	0	0	0	0	0
	NAAQS	9 ppm	0	0	0	0	0
PM₁₀							
Max 24-hr concentration			58 µg/m ³	41 µg/m ³	70 µg/m ³	122 µg/m ³	77 µg/m ³
No. days exceeded:	CAAQS	50 µg/m ³	1	0	6	4	4
	NAAQS	150 µg/m ³	0	0	0	0	0
Max annual concentration			22.0 µg/m ³	18.5 µg/m ³	21.6 µg/m ³	23.1 µg/m ³	19.2 µg/m ³
No. days exceeded:	CAAQS	-	-	-	-	-	-
PM_{2.5}							
Max 24-hr concentration			49.4 µg/m ³	22.6 µg/m ³	49.7 µg/m ³	133.9 µg/m ³	27.6 µg/m ³
No. days exceeded:	NAAQS	35 µg/m ³	2	0	6	15	4
Annual Concentration			10.0 µg/m ³	8.4 µg/m ³	9.5 µg/m ³	12.8 µg/m ³	12.8 µg/m ³
No. days exceeded:	CAAQS	12 µg/m ³	-	-	-	-	-
	NAAQS	12 µg/m ³	-	-	-	-	-
Nitrogen Dioxide							
Max 1-hr concentration			49 ppb	51 ppb	68 ppb	86 ppb	60 ppb
No. days exceeded:	CAAQS	0.18 ppm	0	0	0	0	0
	NAAQS	0.100 ppm	0	0	0	0	0
Annual Concentration			13 ppb	11 ppb	12 ppb	13 ppb	11 ppb
No. days exceeded:	CAAQS	0.030 ppm	-	-	-	-	-
	NAAQS	0.053 ppm	-	-	-	-	-

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

Sensitive Receptors

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

The project site is surrounded by mostly office and light industrial uses that are not considered locations containing 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 future residences of the recently approved 400 Logue Avenue development immediately adjacent to the proposed Project. This project is currently planned through entitlements. The project was approved by the City of Mountain View on June 22, 2021. The Initial Study for the project indicates that construction would take 33 to 35 months to complete. Therefore, occupancy of the project could occur by late 2024. Future residences that may be occupied during construction are planned at 355 E. Middlefield. This multi-family project was approved by the City of Mountain View on May 5, 2020. Existing residences are located further away to the southwest across East Middlefield Road and even further south, there are some residences located about 1,000 feet southeast, on the other side of State Route 237. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. Note that there is a church (Mountain View Korean SDA Church) located just south of the project across Maude Avenue. Churches may include sensitive receptors at times. However, the exposure periods would be short and are not expected to lead to significant health risks. The project would include new residential dwellings that are considered sensitive receptors. Figure 3 shows existing and future sensitive receptors.

Regulatory Framework

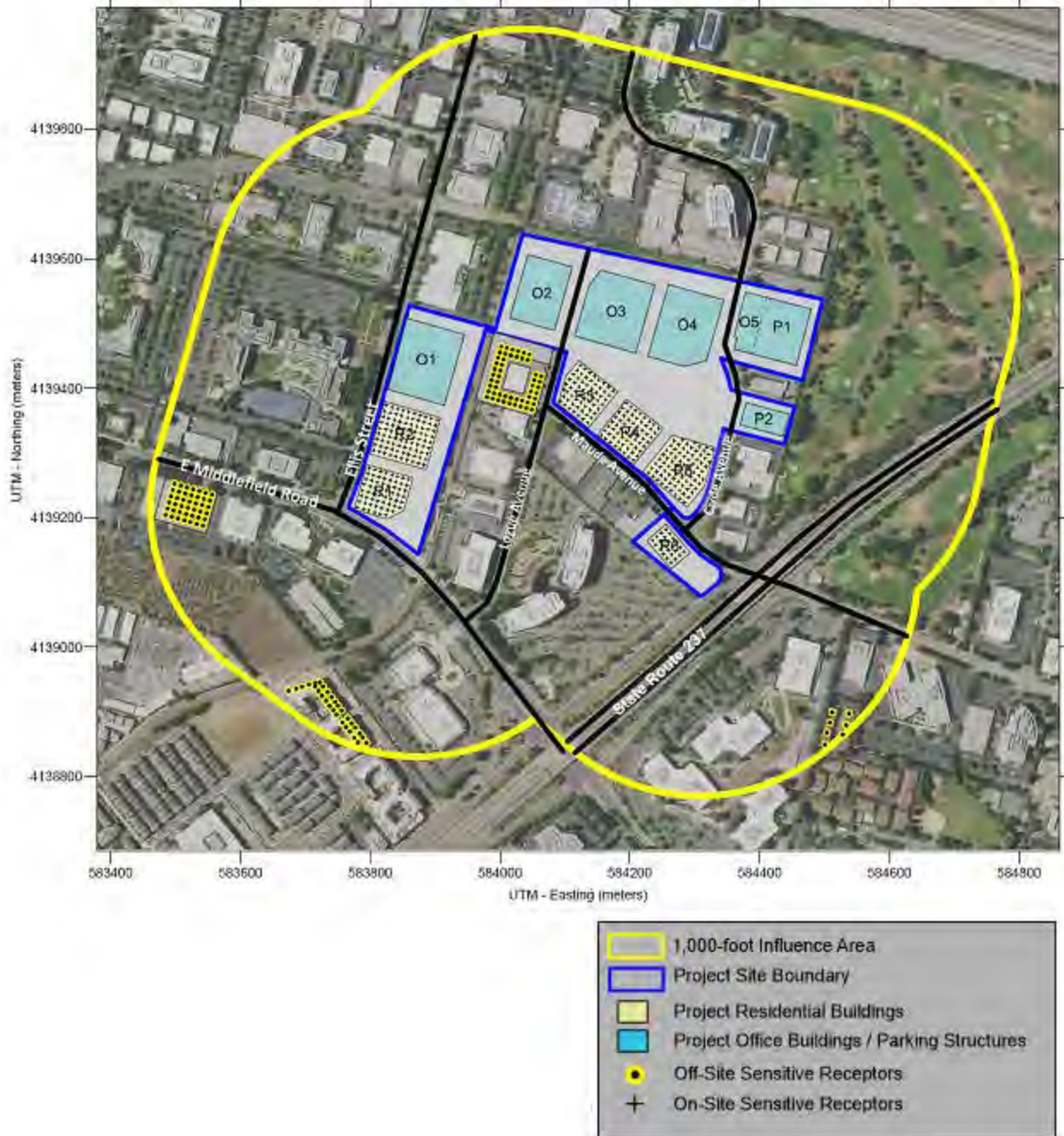
Pursuant to the Federal Clean Air Act (FCAA) of 1970, the EPA established the NAAQS. The NAAQS were established for major pollutants, termed “criteria” pollutants. Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards,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

Both the EPA and the CARB have established ambient air quality standards for common pollutants: CO, O₃, NO₂, SO₂, Pb, and PM. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the public with a reasonable margin of safety. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each criteria pollutant.

Federal Air Quality Regulations

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

Figure 3. Google MPMP Project Site, Sensitive Receptors and 1,000-foot Area



The FCAA required EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implement Plan (SIP). Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.⁷ The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area which imposes additional control measures. Failure to submit an approvable SIP or to implement the Plan within the mandated timeframe may result in the application of sanctions on transportation funding and stationary air pollution sources in the air basin.

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

State Air Quality Regulations

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

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

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area

⁷ See: U.S. Environmental Protection Agency, Web: <https://www.epa.gov/criteria-air-pollutants/naqs-table>, Accessed 13 August 2020

designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

California Clean Air Act

In 1988, the CCAA required that all air districts in the state endeavor to achieve and maintain CAAQS for CO, O₃, SO₂, and NO₂ by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the state standards for these pollutants are more stringent than the national standards.

California Air Resources Board Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.⁸ CARB subsequently developed an Air Quality and Land Use Handbook⁹ (Handbook) in 2005 that is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. The 2005 CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for “sensitive” land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds.

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

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

Truck and Bus Regulation

CARB is actively enforcing heavy-duty diesel vehicle regulations that require fleets to replace or retrofit heavy-duty diesel vehicles, with full implementation of the program scheduled for January

⁸ California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

⁹ California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

1, 2023. Compliance with the program is generally considered vehicles equipped with a 2010 or newer engine model year. As of January 1, 2020, the DMV cannot register any vehicle that does not meet the requirements of the Truck and Bus Regulation.

Other CARB diesel programs affecting heavy-duty diesel vehicles include:

- Idling limits of no more than 5 minutes with special exceptions.
- Emission Control Labels must be affixed to engines of all commercial heavy-duty diesel vehicles, and must be legible as proof the engine, at minimum, meets U.S. federal emissions standards for the engine model year.
- The Periodic Smoke Inspection Program requires owners of California-based fleets of two or more diesel vehicles to perform annual smoke opacity tests and to keep records for at least two years for each vehicle.
- The Heavy-Duty Vehicle Inspection Program uses random roadside inspections to verify that diesel engines do not smoke excessively and are tamper-free.

Off-Road Vehicle and Equipment Regulations

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

Fleet owners must report the vehicle and engine information for all vehicles within their fleets operating in California. Fleet owners must also report owner information. Fleet owners should report using DOORS, which is CARB's online reporting tool. CARB issues a unique Equipment Identification Number (EIN) that is assigned to each vehicle. The fleet owner must label their vehicles with the EIN.

Other CARB diesel programs affecting off-road vehicles and equipment include:

- Idling limits of no more than 5 minutes with special exceptions.
- Portable engines 50 hp or greater may require a permit or registration to legally operate. BAAQMD is responsible for taking enforcement action against individuals who own or operate portable equipment without a registration or permit.

Bay Area Air Quality Management District

The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB) through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for

the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan

The BAAQMD is responsible for developing a Clean Air Plan which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD's 2017 Clean Air Plan is the latest Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan, which was adopted on April 19, 2017 by the BAAQMD's board of directors:

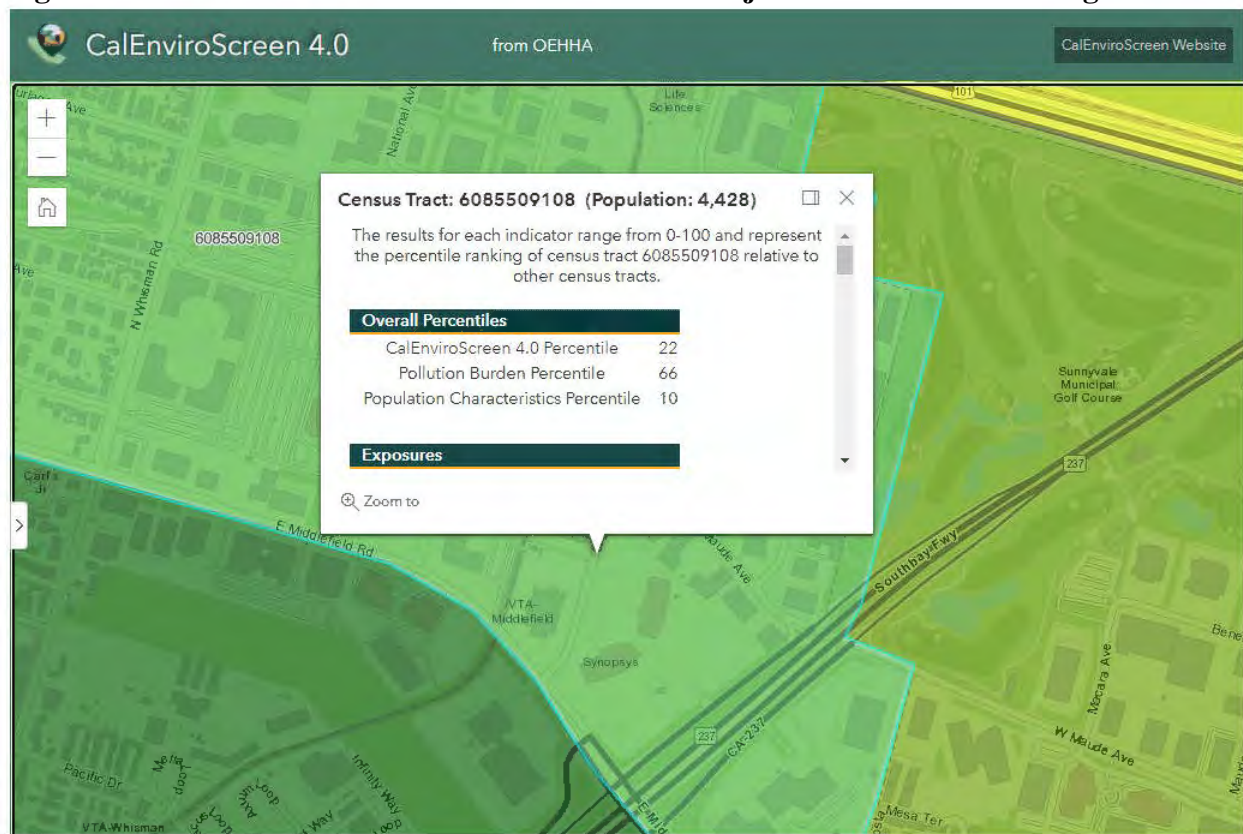
- Updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- Provides a control strategy to reduce ozone, particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
- Reviews progress in improving air quality in recent years; and
- Continues and updates emission control measures.

BAAQMD CARE Program

The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.¹⁰ The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. Recently, BAAQMD identifies an *overburdened* community as an area located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0, as having an overall CalEnviroScreen score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract. The project site is not within an identified overburdened community area. According to CalEnviroScreen, the census tracts containing the project site and environs within 1,000 feet of the project have an overall score of 8 to 22 (see Figure 4).

¹⁰ See BAAQMD: <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program>, accessed 2/18/2021.

Figure 4. CalEnviroScreen 4.0 Results for the Project Site and Surrounding Areas



Planning Healthy Places

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

BAAQMD California Environmental Quality Act Air Quality Guidelines

The BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines¹¹ were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of their CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were

¹¹ Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

amended to include a risk and hazards threshold for new receptors and modify procedures for assessing impacts related to risk and hazard impacts. A recent update to the Guidelines was published in May 2017.

Projects that have TAC emissions that could adversely affect sensitive receptors prepare health risk assessments to quantify the potential and, if appropriate, identify mitigation measures to reduce impacts. This report includes a health risk assessment that evaluates impacts from temporary project construction, long-term use of stationary equipment, and long-term traffic activity generated by the project.

BAAQMD Rules and Regulations

Combustion equipment associated with the proposed project that includes new diesel engines to power generators and possibly cooling towers would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators and some minor emissions from cooling towers. Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to project operation include:

- Regulation 1 – General Provisions
 - Rule 1-30: Public Nuisance
- Regulation 2 – Permits
 - Rule 2-1: General Requirements
 - Rule 2-2: New Source Review
 - Rule 2-5: New Source Review of Toxic Air Contaminants
- Regulation 6 – Particulate Matter and Visible Emissions
 - Rule 6-2: Commercial Cooking Equipment
 - Rule 6-3: Wood-Burning Devices
 - Rule 6-7: Odorous Substances
- Regulation 9 – Inorganic Gaseous Pollutants
 - Rule 9-1: Sulfur Dioxide
 - Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
 - Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits

Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an Authority to Construct (ATC).

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a Permit to Operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting. At the proposed facility, the diesel fuel storage tanks are expected to be exempt from permitting.

New Source Review

Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NO_x, SO₂, PM₁₀, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NO_x emissions from the diesel-fueled generator engines.

BACT for Diesel Generator Engines

Since the generators will be used exclusively for emergency use during involuntary loss of power, the BACT levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. These are provided for two separate size ranges of diesel engines:

I.C. Engine – Compression Ignition >50hp and <1,000hp: BAAQMD applies BACT 2 emission limits based on the ACTM for stationary emergency standby diesel engines larger than 50 brake-horsepower (BHP). NO_x emission factor limit is subject to the CARB ACTM that ranges from 3.0 to 3.5 grams per horsepower hour (g/hp-hr). The PM (PM₁₀ or PM_{2.5}) limit is 0.15 g/hp-hr per CARB's ACTM.

I.C. Engine – Compression Ignition >999hp: BAAQMD applies specific BACT emission limits for stationary emergency standby diesel engines equal or larger than 1,000 brake-horsepower (BHP). NO_x emission factor limit is 0.5 g/hp-hr. The PM (PM₁₀ or PM_{2.5}) limit is 0.02 g/hp-hr. POC (i.e., ROG) limits are 0.14 g/hp-hr.

Offsets

Rule 2-2-302 require that offsets be provided for a new or modified source that emits more than 10 tons per year of NO_x or precursor organic compounds. It is not expected that emissions of any pollutant will exceed the offset thresholds. Thus, is not expected that offsets for the proposed project would be required.

Rule 2-5 applies to new and modified sources of TAC emissions. BAAQMD evaluates the TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Toxics BACT (or TBACT) is applied to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million and/or a chronic hazard index greater than 0.20. Permits are not issued for any new or modified source that has risks or net project risks that exceed a cancer risk of 10.0 in one million or a chronic or acute hazard index of 1.0.

Prohibitory Rules

Regulation 6 pertains to particulate matter and visible emissions. Although the engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 6-3 applies to emissions from wood-burning devices. Effective November 1, 2016, no person or builder shall install a wood-burning device in a new building construction. Project plans do not depict fireplaces.

Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds when the District receives odor complaints. The regulation prohibits discharge of odorous substance that causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air and places limits on certain odorous compounds or family of compounds.

Rule 9-1 applies to sulfur dioxide. The engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NO_x CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour

Rule 9-8 prescribes NO_x and CO emission limits for stationary internal combustion engines. Since the proposed engines will be used with emergency standby generators, Regulation 9-8-110 exempts the engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and testing). The engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

Air Pollutants of Concern in the Bay Area

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

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants in the Bay Area

Toxic air contaminants are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. 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 new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.¹² The 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.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the state level, the CARB (a part of the California EPA) oversees regional air district activities and regulates air quality at the state level. The BAAQMD has published CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.¹³ Projects that have TAC emissions that could adversely affect sensitive receptors prepare health risk assessments to quantify the potential and, if appropriate, identify mitigation measures to reduce impacts. This report includes a health risk assessment that evaluates impacts from temporary project construction, long-term use of stationary equipment, and long-term traffic activity generated by the project. The detailed health risk modeling methodology used in this assessment is contained in *Attachment 1*.

¹² Available online: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>. Accessed: November 21, 2014.

¹³ Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

City of Mountain View

City of Mountain View 2030 General Plan

The Mountain View 2030 General Plan¹⁴ 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

- 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.

East Whisman Precise Plan

In 2019, the City Council adopted the East Whisman Precise Plan, or EWPP, to implement the 2030 General Plan goals and policies for the area allowing new residential land uses and expanded commercial land uses, open spaces, and multi-modal connectivity in the area. The General Plan identifies East Whisman as a highly sustainable, transit-oriented employment center with a diversity of land uses. The EWPP includes development standards, such as building setbacks and height limits, allowed land uses, urban design guidelines, locations for new public open space, and other public improvements for the area.

¹⁴ City of Mountain View, *Mountain View 2030 General Plan*, July 10, 2012. Web: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10702>

The EIR for the EWPP computed air pollutant and greenhouse gas (GHG) emissions associated with build-out of the plan. The increase in emissions was estimated at about 29 tons of ROG, 43 tons of NO_x, 10 tons of PM₁₀ and 4 tons of PM_{2.5}. These increases in emissions were considered less than significant since the rate of increased vehicle miles travelled (VMT) was less than the increase in population growth and the project would not interfere with implementation of the 2017 BAAQMD CAP measures.

The EIR evaluated sources of TACs both in and near the EWPP that included freeways such as U.S. 101 and State Route 237, as well as busy local roadways and stationary sources. Impacts from U.S. 101 in terms of increased cancer risk, annual PM_{2.5} concentrations and health hazards were not found to be significant at the proposed Project site with the following exceptions:

1. Within 75 feet of E. Middlefield Road.
2. Within 45 feet of Ellis Street.
3. Near stationary sources permitted by BAAQMD.

Significant impacts were identified that required construction emissions analysis and health risk assessments to show EWPP projects would not cause significant health risks to existing sensitive receptors or expose new sensitive receptors to substantial levels of TACs and PM_{2.5}.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 CEQA Air Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 5. Impacts above these thresholds are considered significant.

Table 5. BAAQMD CEQA Exceedance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual PM _{2.5}	0.3 µg/m ³	0.8 µg/m ³	

Note: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM_{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

Source: Bay Area Air Quality Management District, 2017

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Air pollutant emissions and associated health risks were predicted using emissions and dispersion models along with emission rate and cancer risk computations. For construction and operational land use emissions, the latest version of the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to compute annual emissions, combined with motor vehicle emission factors produced by CARB's latest version of the EMFAC model, EMFAC2021 Version 1.0.1. Computation methods and emission factors developed by CARB, and various air districts were used to compute emissions from cooling towers and restaurant char broilers. Dispersion modeling was conducted using the U.S. EPA's AERMOD dispersion model.

Build-out of the project site includes two different scenarios:

1. Build-out assuming the proposed project is to connect to existing utility lines, referred to as the *City Utilities Option* and
2. Build Out assuming the proposed project would construct a private district utility system with underground utility lines to serve some buildings within the MPMP with water, wastewater, recycled water, thermal energy (heating and cooling), and electric power. This is referred to as the *District Utility Option*. This option would include four components: 1) a central utilities plant (CUP), 2) temporary air sourced heat pump (ASHP), 3) district distribution system, and 4) microgrid system.

This air quality analysis is based on construction and operation of the *District Utility Option* since it would lead to the greatest impacts in terms of construction activity and operation of the on-site utility components. Construction emissions would be slightly higher with this option compared to the City Utility Option. Operational impacts of the project would be similar under both options, although the District Utility Option would have additional localized air quality impacts from operation of the wastewater treatment system and cooling towers.

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

The Bay Area is considered a non-attainment area for ground-level ozone and PM_{2.5} under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from construction and operation of the project assuming full build-out conditions. The project land use types and size were input to CalEEMod. The project applicant provided some information regarding the construction schedule but CalEEMod defaults for a project of this size and type were primarily used in this analysis. The CARB Emission FACTors 2021 model (EMFAC2021) model was used to predict emissions from construction truck traffic and trips.¹⁵ The model output from CalEEMod is included in *Attachment 2* and EMFAC2021 emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Use Inputs

Modeling of project construction impacts were based on nine CalEEMod modeling scenarios that each represented a phase of construction. The proposed project land uses were entered into CalEEMod as described in Table 6. The land uses for both scenarios evaluated (i.e., with City Utilities and with District Utilities or the CUP) were essentially the same.

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on information provided by the project applicant for each construction phase. Some equipment listed would be electric powered (e.g., building cranes). To account for this equipment, the number of hours of operation was set to 0 since electric equipment does not produce exhaust air pollutant emissions.

The construction schedule assumed that the earliest possible start date would be November 2022 and the project would be built out six days a week over 8 years and be completed in early to mid-2031. Table 7 describes the schedule for construction phases modeled. The construction equipment worksheet provided included the schedule for each phase and subphases. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. Table 7 provides the hauling volume inputs to CalEEMod that produced truck hauling trips. Total annual worker, vendor and haul truck trips predicted by CalEEMod were combined with the EMFAC2021 emission database to compute vehicle emissions.

¹⁵ See CARB's EMFAC2021 Emissions Inventory at <https://arb.ca.gov/emfac/emissions-inventory>

Table 6. Project Land Uses Entered into CalEEMod

Project Land Uses	Size	Units	Square Feet	Acreage
Phase 1 (R1 + R2)				
Apartments Mid Rise	750	Dwellings	692,434	6.20
Strip Mall	22.51	1,000 sf	22,508	
Enclosed Parking with Elevator	838	Spaces	343,000	
Standby Diesel Generator (2)	500	kw	Note: 670 hp	
Phase 1 (Affordable R6)				
Apartments Mid Rise	170	Dwellings	155,000	1.64
Enclosed Parking with Elevator	170	Spaces	34,000	
Standby Diesel Generator (1)	500	kw	Note: 670 hp	
Phase 2 (O1, O2)				
General Office	631.94	1,000 sf	631,939	8.68
Enclosed Parking with Elevator	700	Spaces	218,576	
Standby Diesel Generator (2)	900	kw	Note: 1,206 hp	
Phase 3 (R3, R4b, R5)				
Apartments Mid Rise	770	Dwellings	704,566	9.54
Strip Mall	7.49	1,000 sf	7,492	
Enclosed Parking with Elevator	799	Spaces	237,000	
Standby Diesel Generator (3)	500	kw	Note: 670 hp	
Phase 3 (Affordable R4a)				
Apartments Mid Rise	210	Dwellings	190,000	1.32
Enclosed Parking with Elevator	210	Spaces	64,000	
Phase 4 (O3, O4, O5, P1, P2)				
General Office	689.06	1,000 sf	631,940	12.33
Enclosed Parking with Elevator	1,969	Spaces	420,000	
Standby Diesel Generator (3)	900	kw	Note: 1,206 hp	
Phase 1 - Infrastructure				
Other Non-Asphalt Surfaces	1	Acre	--	1
Phase 2 Infrastructure				
Other Non-Asphalt Surfaces	1	Acre	--	1
Phase 3 Infrastructure				
Other Non-Asphalt Surfaces	1	Acre	--	1
Phase 4 Infrastructure				
Other Non-Asphalt Surfaces	1	Acre	--	1

Table 7. Project Construction Phasing and Hauling Volumes¹

Construction Phase	Hauling Volumes	
	City Utilities	District Utilities
Phase 1 Residential	Demolition: 149,337 sf Demolition: 5,848 tons Soil Export: 201,721 cy	Demolition: 149,337 sf Demolition: 5,848 tons Soil Export: 201,721 cy Geo Boring Soil Export: 1,713 cy
Phase 1 Affordable Residential	Demolition: 25,570 sf Demolition: 500 tons Soil Export: 23,536 cy	Demolition: 25,570 sf Demolition: 500 tons Soil Export: 23,536 cy
Phase 2 Office including Infrastructure work	Demolition: 264,881 sf Demolition: 2,831 tons Soil Export: 230,040 cy Soil Export: 34,000 cy	Demolition: 264,881 sf Demolition: 2,831 tons Soil Export: 230,040 cy Soil Export: 34,000 cy Geo Boring Soil Export: 1,713 cy
Phase 3 Residential including the Affordable Residential and Infrastructure work	Demolition: 58,692 sf Demolition: 8,033 tons Soil Export: 140,384 cy	Demolition: 58,692 sf Demolition: 8,033 tons Soil Export: 140,384 cy Geo Boring Soil Export: 1,713 cy
Phase 3 Affordable Residential	Demolition: 53,170 sf Demolition: 1,000 tons Soil Export: 42,787 cy	Demolition: 53,170 sf Demolition: 1,000 tons Soil Export: 42,787 cy
Phase 4 Office including Infrastructure work	Demolition: 132,996 sf Demolition: 10,106 tons Soil Export: 110,949 cy	Demolition: 132,996 sf Demolition: 10,106 tons Soil Export: 110,949 cy Geo Boring Soil Export: 1,713 cy

¹Does not include vendor trucks assumed to import building materials.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and site preparation, trenching, and grading were estimated by CalEEMod using the provided demolition and soil hauling volumes.

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 large trucks (EMFAC category MHDT and HHDT) and haul trucks are comprised of the largest truck category (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). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates for the year 2023 for Santa Clara County were used.

Construction Dewatering Pumps

Dewatering pumps would be required for extended periods of time during construction. These pumps would operate 24 hours per day during the trenching phases. Pumps were modeled using emission rates from CalEEMod for generators. The emission rates were dependent on the year for unmitigated conditions and the engine tier level for mitigation (i.e., Tier 4 final).

Summary of Computed Construction Period Emissions

Both City Utilities and District Utilities construction emissions were calculated in CalEEMod. The District Utilities had slightly higher emissions compared to the City Utilities due to slightly higher amount of equipment usage and material movement. Therefore, only the District Utilities construction emissions are reported in Table 8.

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 8 shows the annualized average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction of the project.

As indicated in Table 8, annualized project construction ROG and NO_x emissions are predicted to exceed the BAAQMD significance thresholds for ROG during the year 2028 and NO_x during the years 2022-2023, 2026, and 2027. However, with implementation of *Mitigation Measures AQ-1 through AQ-3*, the ROG and NO_x emissions would be reduced to levels below the thresholds of 54 pounds per day. All other construction criteria pollutants emissions are below the BAAQMD thresholds.

Table 8. Construction Period Emissions (City Utilities and District Utilities)

Year	ROG		NOx		PM ₁₀ Exhaust		PM _{2.5} Exhaust	
Construction Emissions Per Year (Tons)								
Year	Unmit	Mit	Unmit	Mit	Unmit	Mit	Unmit	Mit
2022-2023	1.44	0.54	12.20	2.92	0.63	0.14	0.54	0.08
2024	0.52	0.32	3.83	1.71	0.22	0.11	0.16	0.05
2025	7.13	1.65	8.48	2.52	0.40	0.12	0.33	0.07
2026	2.12	0.91	17.62	4.94	0.85	0.25	0.70	0.13
2027	2.69	1.02	11.26	4.03	0.59	0.26	0.44	0.12
2028	12.99	3.04	7.40	3.37	0.43	0.24	0.29	0.11
2029	0.82	0.52	3.54	2.36	0.24	0.18	0.13	0.08
2030	0.21	0.17	1.29	0.98	0.08	0.07	0.03	0.03
2031	0.06	0.05	0.37	0.28	0.02	0.02	0.01	0.01
Annualized Daily Construction Emissions (pounds/day)								
Year (Number of Workdays)	Unmit	Mit	Unmit	Mit	Unmit	Mit	Unmit	Mit
2022-23 (366 workdays)	7.85	2.94	66.67	15.95	3.42	0.76	2.94	0.43
2024 (314 workdays)	3.33	2.04	24.37	10.89	1.42	0.71	0.99	0.32
2025 (313 workdays)	45.56	10.54	54.17	16.08	2.55	0.78	2.08	0.43
2026 (313 workdays)	13.53	5.81	112.61	31.59	5.43	1.60	4.45	0.86
2027 (313 workdays)	17.16	6.53	71.98	25.74	3.78	1.66	2.81	0.79
2028 (314 workdays)	82.76	19.39	47.15	21.49	2.76	1.52	1.85	0.67
2029 (313 workdays)	5.22	3.31	22.64	15.07	1.51	1.15	0.83	0.48
2030 (313 workdays)	1.34	1.09	8.25	6.24	0.49	0.46	0.22	0.19
2031 (93 workdays)	1.25	1.01	7.86	5.93	0.46	0.43	0.21	0.18
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day		54 lbs./day		82 lbs./day		54 lbs./day	
Exceed Threshold?	Yes (2028)	No	Yes (2022-2023, 2026, 2027)	No	No	No	No	No

Notes: Unmit = Unmitigated, Mit = Mitigated

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

Mitigation Measure AQ-1: Implement BAAQMD-Recommended Measures to Control Particulate Matter Emissions during Construction. Measures to reduce DPM and PM₁₀ from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

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 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. 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.
7. 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.
8. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries.
9. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.
10. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
11. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
12. Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.
13. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent

Effectiveness of Mitigation AQ-1:

These measures are consistent with recommendations in the BAAMQD CEQA Guidance for providing “best management practices” and enhanced measures to control construction emissions from project with Significant emissions.

Mitigation Measure AQ-2: Use Construction equipment that has zero or low diesel particulate matter exhaust and NO_x emissions. Exhaust Emission (NO_x and PM) Control Measures:

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 NO_x and PM (PM₁₀ and PM_{2.5}), if feasible, otherwise,
 - a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 85-percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).
 - b. Use of alternatively fueled equipment with lower NO_x emissions that meet the NO_x and PM reduction requirements above.
2. Use electric equipment such as aerial lifts, air compressors, cement mortar mixers, concrete/industrial saws, cranes, and welders.
3. Diesel engines, whether for off-road equipment or on-road vehicles, shall not be left idling for more than 2 minutes, except as provided in exceptions to the applicable state regulations (e.g., traffic conditions, safe operating conditions). The construction sites shall have posted legible and visible signs in designated queuing areas and at the construction site to clearly notify operators of idling limit.
4. Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment.

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

The project shall use low volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 80 percent of all residential and nonresidential interior paints and 80 percent of exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project’s operational lifetime. At least 80 percent of coatings applied must meet a “super-compliant” VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project’s operational lifetime, the Declaration of Covenants, Conditions,

and Restrictions shall contain a stipulation for low VOC coatings to be used. Examples of “super-compliant” coatings are contained in the South Coast Air Quality Management District’s website.¹⁶

Effectiveness of Mitigation AQ-2 and AQ-3

The effectiveness of MM AQ-2 and AQ-3 were based on additional modeling. The CalEEMod model was used to estimate the effectiveness of MM AQ-2 using Tier 4 final construction equipment. In addition, the CalEEMod model was used to estimate the effectiveness of MM AQ-3 using 80 percent interior and exterior super-compliant VOC coatings. These measures together were found to reduce on-site construction ROG emissions by 70-percent and NO_x emissions by 62-percent. Both ROG and NO_x emissions would be reduced below the significant thresholds.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees, customers, and vendors. 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 Land Uses

A complete operational model scenario for year 2032 was developed for CalEEMod. Inputs are summarized in Table 9.

Table 9. Operational Land Uses Entered into CalEEMod

Project Land Uses	Size	Units	Square Feet	Acreage
Proposed Project Land Uses				
Apartments Mid Rise	1,900	Dwellings	1,726,000	40
General Office Building	1,317,000	1,000 sf	1,317,000	
Strip Mall	41.00	1,000 sf	41,000	
Standby Diesel Generator (6)	670	hp	--	
Standby Diesel Generator (5)	1,206	hp	--	
Proposed Project Parking				
Enclosed Parking with Elevator	2,507	Spaces	833,000	
Unenclosed Parking with Elevator	1,969	spaces	420,000	
Existing Uses				
General Office Building	685,000	1,000 sf	685,000	16

Operational Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. The project-specific daily trip generation rate provided by the traffic consultant was entered into the model.¹⁷ Using ITE Trip

¹⁶ SCAQMD: <http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings>

¹⁷ Hexagon Transportation Consultants, Inc., “Trip Generation and Trip Distribution for the Proposed Google Middlefield Park Master Plan in Mountain View, California”, September 21, 2021.

Generation Manual, 10th Edition 2017, the project would produce 17,084 daily trips. The daily trip generation estimates were provided for the multifamily housing, general office buildings, and retail (Shopping Center) developments and then adjusted to account for *Housing and Employment Mixed-Use Reduction, Housing and Retail Mixed-Use Reduction, Transit Reduction, and VMT Reduction*. Note that daily passby and diverted trip adjustments were based on CalEEMod default conditions. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate. The default trip lengths and trip types specified by CalEEMod were used.

The trip generation rates reflect TDM requirements, as the EWPP specifies office and R&D projects with new construction or additions greater than 10,000 square feet are required to provide a TDM plan with programs and measures to reduce vehicle trips. Additionally, the proposed Project includes design and operational elements to reduce traffic. The MPMP would fund and construct (or some combination of both) area bicycle and pedestrian network improvements on Project site street frontages along Ellis Street, East Middlefield Road, Logue, Maude, and Clyde Avenues. The mixed-use character of the MPMP, which would increase employment and housing opportunities within a half-mile of the existing Middlefield Light Rail Station, which combined with potential on-site features and services such as on-site food, fitness center, banking, childcare, and bicycle repair services would reduce the need for vehicle trips. Operationally, the MPMP would include commuter shuttle services for office uses, carshare services, first-mile/last-mile micro mobility services, an on-site transportation coordinator, flexible work schedules for employees, marketing and information for the proposed TDM program, pre-tax commuter benefits, biking incentives, bike buddy program, bike loaner program, rideshare matching services, and an expanded carpool matching program. These additional measures were not reflected in the project trip generation estimates that were input to CalEEMod.

EMFAC2021 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod vehicle emission factors were updated with the emission rates from EMFAC2021. On road emission rates from Santa Clara County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.¹⁸

TDM Measures

The project will be required to implement the EWPP TDM Plan. The applicant proposes TDM measures that address these requirements and includes additional programs designed to improve circulation, minimize traffic impacts, and promote multimodal accessibility for workers and residents. This plan would reduce both local and regional travel from office and residential travel.¹⁹

¹⁸ See CARB 2021: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac>

The effect of the required TDM measures is reflected in the Project trip generation reported in the Transportation Analysis and used in this modeling. No adjustments were made in CalEEMod for TDM.

Consumer Product Adjustment

CalEEMod computes emissions associated with consumer products for all land uses, regardless of their types.²⁰ However, the emission rate in the model has not been updated since the development of CalEEMod in 2011 that used data published in 2008. ROG emissions from consumer products are forecasted to decrease, as shown in the CARB county emissions forecasts for 2010 through 2030. A factor to adjust the ROG consumer was developed based on the change in the per population ROG consumer emissions between 2008 and 2030. Essentially, the 2030 rate is anticipated to be less than 80 percent of the 2008 rate that CalEEMod uses. A General Category ROG emission factor of 0.0000171 grams per square foot per day was to predict consumer product emissions.

Energy

Residential and office buildings were assumed to be powered by electricity using PG&E. Only retail uses were assigned CalEEMod default natural gas usage.

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 3.²¹ Therefore, the number of woodstoves and woodburning fireplaces in CalEEMod were set to zero and assigned as natural gas.

Project Generators

The project proposes to include eleven stand-by emergency generators powered by diesel. The project proposes one generator in each building, excluding parking structures. Specific generators have not been identified at this time but the maximum size would be 500 kW for residential buildings and 900 kW for office buildings. The engine size estimated to power these generators is 670 hp for the residential buildings and 1,206 hp for the office building generators. The generators would be located within the basements of the buildings. These generators would be tested periodically and power the buildings in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated primarily for testing and maintenance purposes that require about one to two hours per month of operation. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. The modeling

²⁰ Per the CalEEMod User's Guide: "Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products"

²¹ 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

assumed that total operation of the generators would be 50 hours per year. The engines would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod. Additionally, the generators would have to meet BAAQMD BACT requirements for IC Engine-Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump sources. These include emission limits similar to U.S. EPA Tier 2 engines for generator engines smaller than 1,000 hp that would be used in residential buildings and Tier 4 standards for the engines larger than 1,000 hp used in office buildings. Table 6, above, describes the generators modeled for each phase.

Cooling Towers

The project would include a mechanical draft cooling tower with three cooling tower cells, on the roof/penthouse of Building O1. Particulate matter emissions from evaporative cooling can occur and are a result of evaporation of liquid water entrained in the discharge air stream and carried out of the tower as “drift” droplets that contain dissolved solids in the water. Drift droplets that evaporate can produce small particulate matter (i.e., PM₁₀ and PM_{2.5}) emissions. These emissions are generated when the drift droplets evaporate and leave the particulate matter formed by crystallization of dissolved solids. Since these cooling towers would not use process water (typically used in refineries), ROG emissions would be negligible.

The PM₁₀ and PM_{2.5} emissions from evaporative cooling were calculated based on design assumptions provided by the applicant including use of evaporative cooling for 2,100 hours per year a recirculating water flow rate of 6,765 gallons per minute (gpm), use of 0.005 percent drift eliminators, an influent water total dissolved solids (TDS) concentration of 830 ppm and recirculating water concentration of 2,490 ppm, with a cooling tower drift of 0.34 gpm.²² The cooling towers are not expected to produce emissions of volatile organic compounds (VOCs) or other criteria pollutants.²³ The particulate matter emissions for the proposed cooling towers are included in *Attachment 4*.

Food Charbroiling

The proposed Project includes restaurants or cafeterias that would cook food. As a worst-case analysis, these facilities were assumed to charbroil meat. Based on applicant-provided data, the restaurants could cook a total of 291 pounds per day of hamburger, chicken, salmon, and steak for five restaurants (average total of 233 pounds per day per restaurant). TAC emissions from charbroiling were estimated using the default emission factors provided in Section 2.3.4.2 of SJVAPCD’s *Guidance for Air Dispersion Modeling*. The primary TAC emissions from charbroilers are polycyclic aromatic hydrocarbons (PAHs). Emission data for use of a under-fired charbroiler was assumed given that specific restaurant types have not been identified for the project location.

²² Recirculating water flow rate and maximum TDS concentration provided by the applicant.

²³ South Coast AQMD, *Guidelines for Calculating Emissions from Cooling Towers*, November 2019. Web: <https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelines-for-calculating-emissions-from-cooling-towers---november-2017-final.pdf?sfvrsn=12>

Criteria pollutant emissions factors in pounds of pollutant per ton of meat cooked were obtained from the SJVAPCD's *2006 Area Source Emissions Inventory Methodology: 690 – Commercial Cooking Operations*, which used the emissions factors from the U.S. EPA's 2002 National Emissions Inventory (NEI). Emissions factors were provided for PM₁₀, PM_{2.5}, and VOCs for cooking of steak, hamburger, poultry, and seafood. Restaurant emissions were considered to have controls since these would not be open-air cooking operation and would be subject to BAAQMD Regulation 6, Rule 2 that applies to commercial cooking equipment. Controls include the use of catalytic oxidizers that remove over 80 percent of volatile organic compounds (similar to ROG) and particulate matter (i.e., PM₁₀ and PM_{2.5}). The criteria and TAC emissions for charbroiling are included in *Attachment 4*.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100 percent aerobic conditions to represent wastewater treatment plant conditions. The project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The project site is currently occupied by existing office buildings and parking facilities. Approximately 685,000 sf of office buildings that generate 6,272 trips per day would be removed. Emissions associated with these buildings were also modeled using CalEEMod. Removal of existing uses would likely remove stationary sources that have emissions of criteria air pollutants and TACs; however, the emissions of these sources are not known and were not included in the modeling.

Summary of Computed Operational Emissions

Annual emissions were calculated using CalEEMod and daily emissions were calculated assuming 365 days of operation. As shown in Table 10, operational emissions would exceed the BAAQMD significance thresholds for ROG during operation of the project. This would be a significant impact. Implementation of Mitigation Measure AQ-4 would reduce this impact. With mitigation measures, ROG emissions would remain significant.

Table 10. Unmitigated Annual and Daily Operational Period Emissions

Scenario	ROG	NOx	PM ₁₀	PM _{2.5}
<i>Operational Emissions Per Year (Tons)</i>				
2021 Existing Emissions	6.57	3.43	1.89	0.53
Unmitigated 2032 Annual Operational Emissions (tons/year)				
Area	12.08	0.16	0.08	0.08
Energy	0.12	1.05	0.08	0.08
Mobile	6.82	4.15	5.56	1.45
Stationary	0.41	0.58	0.03	0.03
Waste	--	--	--	--
Water	--	--	--	--
Cooling Towers	--	--	0.31	0.19
Char broilers	0.04	--	0.49	0.48
TDM Reduction	-0.00	-0.00	-0.00	-0.00
Unmitigated PROJECT TOTAL	19.47	4.90	6.47	2.23
Mitigated PROJECT Total	18.25	--	--	--
Net Increase Unmitigated	12.90	1.47	4.58	1.70
Net Increase Mitigated	11.68	--	--	--
<i>BAAQMD Thresholds (tons /year)</i>	<i>10 tons</i>	<i>10 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<i>Exceed Threshold?</i>				
Unmitigated	Yes	<i>No</i>	<i>No</i>	<i>No</i>
Mitigated	Yes	<i>No</i>	<i>No</i>	<i>No</i>
<i>Annualized Daily Operational Emissions (pounds/day)¹</i>				
Unmitigated Daily Net Emissions – (lbs/day)	70.69	8.03	25.11	9.29
Mitigated Daily Net Emissions – (lbs/day)	64.00	--	--	--
<i>BAAQMD Thresholds (pounds/day)</i>	<i>54 lbs.</i>	<i>54 lbs.</i>	<i>82 lbs.</i>	<i>54 lbs.</i>
<i>Exceed Threshold?</i>				
Unmitigated	Yes	<i>No</i>	<i>No</i>	<i>No</i>
Mitigated	Yes	<i>No</i>	<i>No</i>	<i>No</i>
Notes: ¹ Assumes 365-day operation.				

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

See Mitigation Measure AQ-3 above.

Effectiveness of Mitigation Measure AQ-3 on Operational Emissions.

It is assumed that only exterior paint applications could be fully controlled through this mitigation measure since residential and office occupants would likely independently choose their own architectural coatings. Interior coatings were assumed to have a 50-percent reduction. During operation, the implementation of MM AQ-4 would reduce total ROG emissions by 6 percent or 1.2 tons per year. Consumer product and mobile sources would continue to make up a majority of the ROG emissions.

Significant ROG Emissions during Project Operation

When evaluated using the thresholds contained in the 2017 version of the BAAQMD CEQA Air Quality Guidelines the project would have significant emissions of ozone precursor pollutants, ROG, during operation. These emissions cannot be feasibly reduced further, as the proposed Project includes features and mitigation measures to minimize these emissions. Such features include a mix-use project near transit, implementation of an enhanced TDM plan, and mitigation measures to reduce evaporative ROG emissions from architectural coatings. Emissions of ROG associated with consumer product use would be the overwhelming contributor to project ROG emissions. These emissions cannot be controlled by the proposed Project.

Significant emissions of these pollutants result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable ambient air quality standard. Because the project would have emissions of ROG that would exceed emission-based significance thresholds, the project would result in a cumulatively considerable net increase in pollutant emissions that contribute to elevated ozone concentrations that exceed ambient air quality standards.

Ozone is a powerful oxidant that is harmful to public health at high concentrations. Ozone, at high levels, can damage the tissues of the lungs and respiratory tract. High concentrations of ozone irritate the nose, throat, and respiratory system and constrict the airways.²⁴ Ozone also can aggravate other respiratory conditions such as asthma, bronchitis, and emphysema, causing increased hospital admissions. Repeated exposure to high ozone levels can make people more susceptible to respiratory infection and lung inflammation and permanently damage lung tissue. Ozone can also have negative cardiovascular impacts, including chronic hardening of the arteries and acute triggering of heart attacks. Children are most at risk, as they tend to be active and outdoors in the summer, when ozone levels are highest. Seniors and people with respiratory illnesses are also especially sensitive to ozone's effects. Even healthy adults, working or exercising outdoors during high ozone levels, can be affected. Ozone is not emitted directly from pollution sources. Instead, ozone is formed in the atmosphere through complex chemical reactions in the presence of sunlight between two types of precursor chemicals: hydrocarbons, often referred to as ROG and NOx. As air temperatures rise, the formation of ground level ozone increases at an accelerated pace. Ozone levels are usually highest on clear, hot, windless summer afternoons, especially in inland valleys that are downwind of pollution sources.

Ozone is a regional pollutant. Emissions of ROG and NOx throughout the Bay Area contribute to ozone formation. Because emissions in one part of the region can impact air quality miles downwind, efforts to reduce ozone levels focus on reducing emissions of ROG and NOx throughout the region. The relationship between ROG and NOx in ozone formation is complex; the ratio between the precursor pollutants influences how ozone forms. BAAQMD's ozone modeling indicates that the Bay Area is "ROG-limited" for ozone formation. This means that reducing ROG emissions in the Bay Area will be more productive in reducing ozone, at least in the near term. However, modeling also suggests that large reductions in NOx emissions will be needed to achieve the ozone reductions required to attain the current health-based ozone standards.

²⁴ See: California Air Resource Board, Web: <https://ww2.arb.ca.gov/resources/ozone-and-health>

A certain amount of ozone formation occurs naturally, even in the absence of anthropogenic emissions of ROG and NO_x.²⁵

As stated in the BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project’s contribution to the cumulative impact is considerable, then the project’s impact on air quality is considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions.

The project emissions from operation are compared against regional emissions that lead to elevated concentrations of ozone in Table 11. By comparing project emissions to regional emissions, one gets the sense of the magnitude of the project effects on regional air quality. Project operational emissions in comparison to regional emissions are a small portion of the regional inventory (i.e., 0.02 percent unmitigated) that the effect of the project would not cause regional pollutant levels to measurably change. As a result, the project would not measurably increase ozone levels. Therefore, the health effects associated with the project ROG emissions would not be measurable. Therefore, potential health impacts caused by Project ROG emissions are not measurable. However, the Project would increase emissions above the threshold of 54 pounds per average day, such that the emissions would be cumulatively considerable. This results in significant adverse air quality impacts to the region’s existing air quality conditions.

Table 11. Comparison of Project Emissions to Air Basin Emissions²⁶

Scenario	ROG
Bay Area Air Basin in 2020	203 tons/day
Bay Area Air Basin in 2030 ¹	200 tons/day
Mitigated Project Operation	0.03 tons/day (11.68 tons/year)
% of Basin in 2030	0.02%

¹Closest year of analysis to proposed Project operational year

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

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

²⁵ Bay Area Air Quality Management District, 2017. *Spare the Air Cool the Climate Final 2017 Clean Air Plan*. April. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a-proposed-final-cap-vol-1-pdf.pdf?la=en>

²⁶ CARB. 2021. 2016 SIP Emission Projection Data. See https://www.arb.ca.gov/app/emsmv/2017/emssumcat.php?_ga=2.50848289.940452654.1638212311-106250637.1504031780 accessed November 29, 2021 to estimate year 2020 and 2030 emissions.

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. This project operation would increase traffic in the area that would increase the air pollutant and TAC emissions in the area. In addition, the project would include the installation of emergency generators powered by diesel engines, cooling towers, and charbroilers that would also have TACs and air pollutants 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 impacts of the existing sources of TACs were 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_{2.5} concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, stand-by emergency generator operation, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period is typically used, per BAAQMD guidance,²⁷ with the residential sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

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

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

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes future residences of the recently approved 400 Logue Avenue and 355 East Middlefield Road, as well as existing sensitive receptors to the southwest, south, and southeast (see Figure 3). A separate analysis of on-site sensitive receptors was also conducted at locations of the residential buildings (i.e., R1, R2, R3, R4, R5, and R6). Cancer risk computations assumed third-trimester fetus, infant, child, and adult exposure periods over 30 years at residential receptors. No schools or daycare facilities were identified within 1,000 feet of the project site.

²⁷ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

Health Risks from Project Construction – On-Site Construction and Hauling Activities

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. A community risk assessment of the project’s construction activities, which includes on-site construction and hauling activity, was conducted. The assessment evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.²⁸ This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road construction worker, vendor, and hauling vehicles. Total emissions from all construction stages for the District Utilities construction scenario, including use of dewatering pumps, are reported in Table 12 and are on an annual basis.²⁹ The annual on-road emissions result from haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used for vehicle travel while at or near the construction site to represent localized vehicle emissions from construction. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive PM_{2.5} dust emissions were computed by CalEEMod for the overall construction period and are included as part of the total PM_{2.5} emissions reported in Table 12.

Table 12. Unmitigated Construction Emissions of DPM and Fugitive PM_{2.5} (tons)

Contaminant	2023	2024	2025	2026	2027	2028	2029	2030	2031
PM ₁₀ Exhaust	0.529	0.128	0.315	0.677	0.387	0.234	0.080	0.015	0.004
PM _{2.5} Fugitive	1.042	0.017	0.999	1.764	0.318	0.025	0.020	0.008	0.002

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} 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 of emission activities for CEQA projects.³⁰ Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM_{2.5} dust emissions.

²⁸ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

²⁹ Note that the District Utilities construction scenario had the highest emissions.

³⁰ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

Construction Sources

The AERMOD modeling utilized 14 area sources to represent the on-site construction emissions from the different construction phases (see Figure 5), seven areas for exhaust emissions of DPM and PM_{2.5} and seven areas for fugitive PM_{2.5} dust emissions. To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.³¹ 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 5.

For modeling fugitive PM_{2.5} emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All 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.

Construction dewatering pump engines were modeled as point sources using stack parameters (stack height, stack diameter, exhaust gas temperature and velocity) based on BAAQMD default parameters for diesel engines³². Annual average DPM and PM_{2.5} concentrations were modeled assuming that operation could occur at any time of the day (24 hours per day, 365 days per year). The approximate locations of the dewatering pumps were provided by the applicant and pumps were assumed to be positioned at the ground level. The Figure 5 includes the locations of modeled dewatering pump engine sources.

AERMOD Inputs and Meteorological Data

The modeling used a 5-year meteorological data set (2013-2017) from the Moffett Airfield prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring between 7:00 a.m. to 6:00 p.m. Monday through Saturday for the entire construction period. Construction dewatering pumps emissions were assumed to occur 24 hours

³¹ 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>

³² The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

per day. Annual DPM and PM_{2.5} concentrations from construction activities during the 2022/2023-2031 period were calculated using AERMOD. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptor locations. For off-site residential receptors, other than for the 400 Logue Avenue development, receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights of residents on the first and second floors in nearby multi-family homes, townhomes, and multi-story residential developments.³³ For the 400 Logue Avenue development, receptors heights of 1.5 meters and 18 feet (5.5 meters) were used for the first and second floor residential receptors.

Summary of Construction Community Risk Impacts

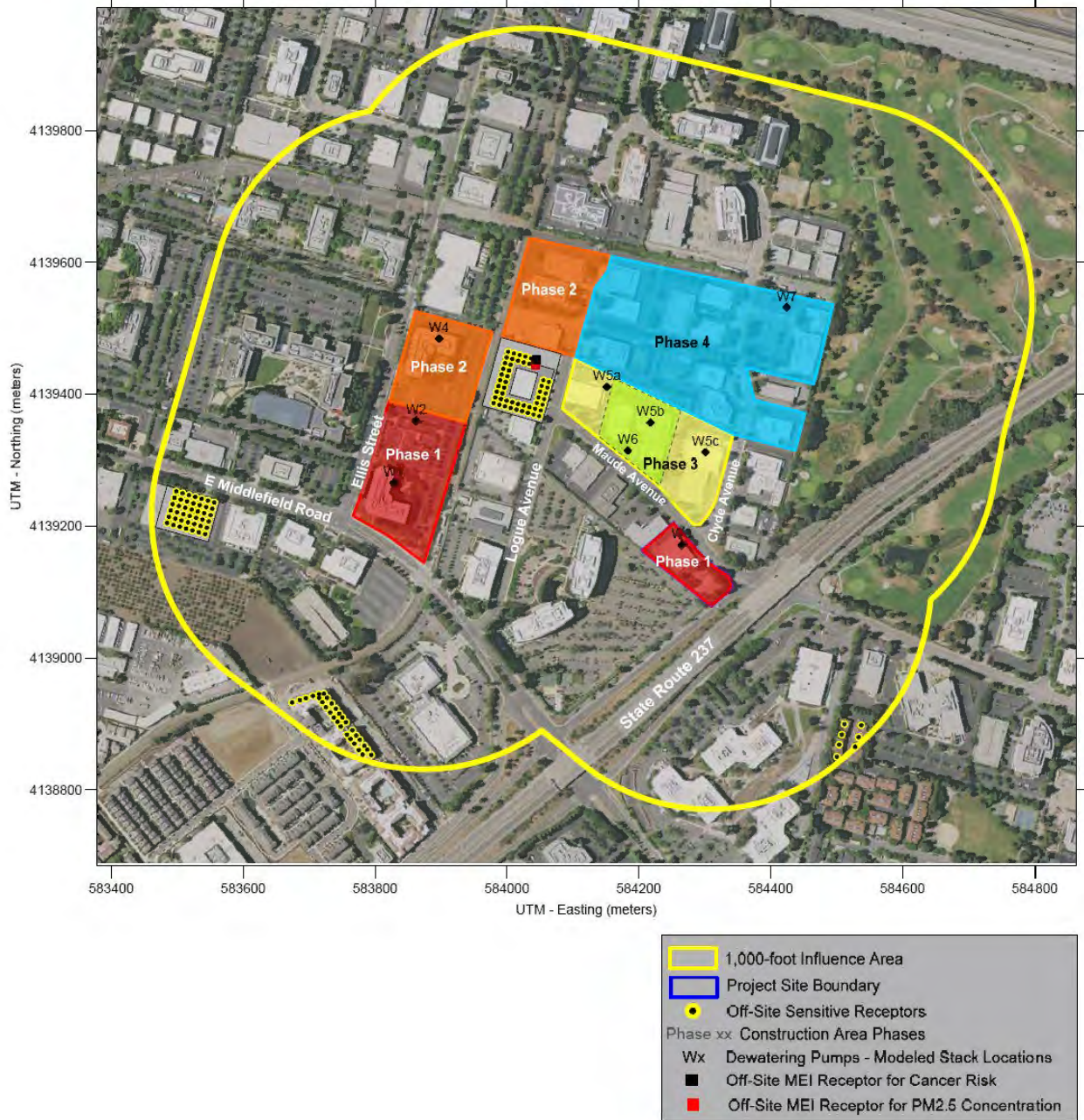
The increased cancer risk calculations were based on applying the BAAQMD recommended methods as described in *Attachment 1*. These methods include application of age sensitivity factors to the TAC concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

The maximum modeled annual PM_{2.5} concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum modeled DPM concentration and the chronic inhalation reference exposure level of 5 µg/m³.

The maximum modeled annual DPM and PM_{2.5} concentrations were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the construction MEIs were located at two adjacent receptor locations near the northeast corner of the 400 Logue Avenue development. The PM_{2.5} concentration MEI was located at a receptor on the first-floor level and cancer risk MEI was located at a receptor on the second floor level. The locations of the construction MEIs and nearby sensitive receptors are shown in Figure 5. Table 14 includes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes for project related construction activities. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

³³ Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

Figure 5. Project Construction Site and Locations of Off-Site Sensitive Receptors and Maximum Construction TAC Impacts



Health Risks from Project Operation – Traffic, Generators, Cooling Towers, Charbroilers

Operation of the project would have long-term emissions from mobile sources (e.g., traffic) and stationary sources (e.g., generators, cooling towers, charbroilers). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Project Operational Traffic

Most traffic generated by the project would be accommodated on five local roadways and State Route 237. An analysis was conducted of the local impacts of TACs and PM_{2.5} from increase in traffic on roadways due to the project. The project would generate 10,812 net daily trips.³⁴ A majority of these trips would be from light-duty, gasoline vehicles (i.e., passenger cars). To address the added community risks, the impact from this traffic was assessed using emission factors from the EMFAC2021 emissions model and the Caltrans CT-EMFAC2017 emissions model, the AERMOD dispersion model, and cancer risk calculations following BAAQMD methodology described in *Attachment 1*. Figure 6 shows the modeled roadway segment.

Traffic Emissions

This analysis involved the development of DPM, organic TACs, and PM_{2.5} emissions for traffic on roadways near the project site using the EMFAC2021 and the CT-EMFAC2017 emissions models. Running emission factors were developed for mobile source criteria pollutants and TACs, including

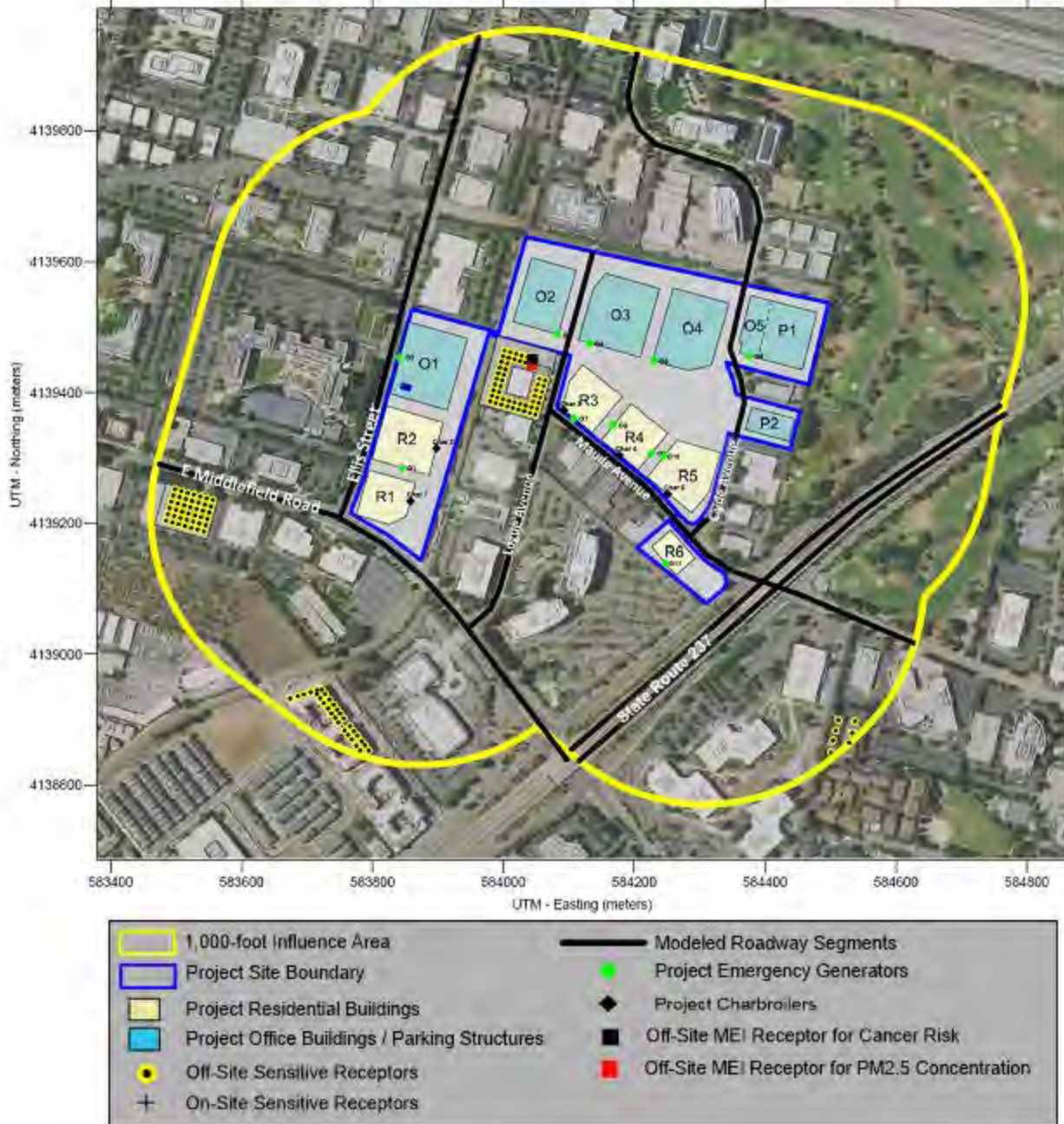
The latest version of CARB's EMFAC emissions model (EMFAC2021) was used to develop the emissions rates needed. However, because EMFAC2021 only produces emissions rates using county-wide vehicle populations and does not provide specific emissions rates for DPM, CT-EMFAC2017 was also used to aid in the development of emissions rates used in the analysis. CT-EMFAC2017 is the Caltrans version of the CARB's EMFAC2017 emissions model and provides emission factors for mobile source criteria pollutants and TACs, including DPM based on the specific truck fractions indicated above.

CT-EMFAC2017 was used to estimate the fraction of gasoline and diesel vehicles in three vehicle categories (i.e., Non-Truck, Truck 1, and Truck 2) based on the truck percentage for the roads. These CT-EMFAC2017 fractions were then applied to the EMFAC2021 emissions rates and aggregated to provide one emissions factor for each pollutant and speed needed. The ratio of DPM to PM_{2.5} produced by CT-EMFAC2017 was used to derive a DPM emissions rate using EMFAC2021 for each speed needed. Emission processes modeled include running exhaust for DPM, PM_{2.5} and TOG, running evaporative losses for TOG, and tire and brake wear and fugitive road dust for PM_{2.5}. Entrained roadway dust was computed using an average silt loading factor of 0.0435 grams per square meter (g/m²) for non-highway travel and 0.015 g/m² for SR 237.³⁵

³⁴ Hexagon Transportation Consultants, Inc., "Trip Generation and Trip Distribution for the Proposed Google Middlefield Park Master Plan in Mountain View, California", September 21, 2021

³⁵ CARB. 2021. *MISCELLANEOUS PROCESS METHODOLOGY 7.9, Entrained Road Travel, Paved Road Dust*. Revised and Updated March 2021. <https://ww2.arb.ca.gov/applications/emissions-county>

Figure 6. Locations of Modeled Project Stationary and Roadway Sources, Off-Site Sensitive Receptors, and Construction and Project Maximum TAC Impacts



Inputs to the model include region (i.e., Santa Clara County), truck percentage for non-state highways (local roads) in Santa Clara County (3.51 percent),³⁶ year of analysis (2026 – project initial operational year), and season (annual). Traffic information for State Route 237 was obtained

³⁶ Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

from Caltrans, which includes annual average daily traffic including truck fractions.³⁷ Traffic volumes were anticipated to increase by 1-percent per year from the year of the traffic count. Traffic speeds were assumed to be the local speed limits.

Project operation was assumed to begin in 2026 or thereafter and be fully operational in 2032. To calculate the increased cancer risk from increased traffic volumes due to the project traffic, the initial year of exposure to construction emissions that, when combined with the risks from project traffic, results in the maximum cancer risk at the MEI was identified. This was determined to be year 2025. Such that over a 30-year exposure period (2025-2054), the MEIs would be exposed to construction emissions for 7 years (2025-2031) and to roadway traffic for 29 years (2026-2054). In order to estimate TAC and PM_{2.5} emissions over the exposure period for calculating increased cancer risks to exiting residents from project traffic, the EMFAC2021 model was used to develop vehicle emission factors for the year 2026. Year 2026 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (29 years) from the roadway traffic, since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions will decrease in the future.

Hourly traffic distributions specific to the area of were obtained from Caltrans Performance Measurement System (PeMS) data for U.S. 101 and State Route 85. PeMS data is collected in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of California.³⁸ The fraction of traffic volume each hour was calculated and applied to the 2026 average daily traffic volumes estimate to estimate hourly traffic emission rates for the local roads and State Route 237.

For all hours of the day, the average vehicle travel speeds on the roadways were based on posted speed limits. A travel speed of 25 mph was used for Logue Avenue, Maude Avenue, and Clyde Avenue. Travel speeds of 35 mph, 40 mph, and 65 mph were used for E. Middlefield Road, Ellis Street, and State Route 237, respectively. Modeled average daily traffic (ADT) volumes are summarized in Table 13. The segments of the listed roadways within about 1,000 feet of the project site were evaluated.

Table 13. Summarized Daily Traffic Conditions

Roadway	Segment	ADT with Project	Project caused ADT
Ellis Street	north of Middlefield	11,540	2,430
E. Middlefield Road	east of SR 237	18,300	2,600
Logue Ave	north of Middlefield	4,650	1,750
Maude Ave	east of Logue	9,860	3,280
Clyde Ave	north of Maude	6,010	3,530

³⁷ Caltrans. 2021. *2020 Annual Average Daily Truck Traffic on the California State Highway System*.

³⁸ <https://dot.ca.gov/programs/traffic-operations/mpr/pems-source>

Dispersion Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was also conducted using the U.S. EPA AERMOD dispersion model (refer to Figure 6 for road segments modeled). Emissions from vehicle traffic were modeled in AERMOD using a series of area sources along a line (line area sources), with line segments used to represent the roadways. Other inputs to the model to represent these sources included road geometries and elevation, hourly traffic emissions, and receptor locations, elevations, and heights. Roadway and receptor elevations were based on USGS National Elevation Data (NED). The same BAAQMD Moffett Federal Airfield meteorological data used in the construction dispersion modeling were used for the roadway modeling.

Computed Risks and Hazards from Project Traffic

To calculate the increased cancer risk from the project traffic, the exposure duration was adjusted to 29 years to account for the MEIs being exposed to construction for one year of construction over the 30-year exposure period. Traffic exposure would begin at year 5 for 26 years of exposure. The risks and hazards from the project traffic upon the MEIs were calculated using BAAQMD recommended methods. Table 14 includes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes for project related traffic activities. The emission rates and roadway calculations used in the project impact analysis are shown in *Attachment 4*.

Operational Emergency Generator Modeling

As previously described, the project would include eleven standby diesel generators, one in each building except for residential Buildings R1 and R2 which would share a single generator. Residential buildings would use 500 kW generators and be powered by 670-hp diesel engines and office buildings would use 900 kW generators and be powered by larger 1,206-hp engines. The locations of the generators modeled are shown in Figure 6, above. The generators would be located in the basements of the buildings and the exhaust stacks were assumed to be located adjacent to the building facades at 12 feet above grade with horizontal discharge.

Operation of a diesel generator would be a source of TAC emissions in the form of DPM. The emissions from the operation of the generator were calculated using information from the CalEEMod model, as previously described. The generators were assumed to operate 50 hours per year. During testing periods, the engine would typically be run for less than one hour under light engine loads. The generator engines would be required to meet EPA emission standards and consume commercially available low sulfur diesel fuel.

These diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since they will be equipped with engines larger than 50-HP. BACT requirements would apply to these generators that would limit DPM emissions. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (BACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with

all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

Dispersion Modeling

To obtain an estimate of potential cancer risks and PM_{2.5} impacts from operation of the emergency generators the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby residences). The same receptors, breathing heights, and BAAQMD Moffett Federal Airfield meteorological data used in the construction dispersion modeling were used for the generator model. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators was based on BAAQMD default parameters for emergency generators.³⁹ Annual average DPM and PM_{2.5} concentrations were modeled assuming that generator testing could occur at any time of the day (24 hours per day, 365 days per year).

Computed Risks and Hazards from Project Generator

Increased cancer risks from use of the generator were calculated using the modeled maximum annual DPM concentrations and BAAQMD recommended risk assessment methods and parameters described in *Attachment 1*. The PM_{2.5} concentration and non-cancerous (i.e. Hazard Index) health risk impacts were also calculated. An exposure duration of 29 years for the generators (2026-2054) was used to calculate the increased cancer risk from the generator. Table 14 includes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes from the project generators. The emissions and health risk calculations for the proposed generators are included in *Attachment 4*.

Cooling Towers

The average daily PM_{2.5} emissions, of 1.0 pounds per day from cooling tower, were used to model concentrations using the U.S. EPA AERMOD dispersion model. The cooling tower would have 3 cells and each cell was modeled as a volume source. Volume source parameters for modeling the cooling tower cells were based on project-specific cooling tower parameters (i.e., length of side, release height, emission rate (flow rate, TDS, mist eliminator efficiency)). The cooling tower would be located at the top of Building O1, approximately 20 feet in height and have a maximum screen wall height of approximately 130 feet above ground level. Annual PM_{2.5} concentrations were modeled assuming that cooling tower could operate at any time of the day (24 hours per day, 365 days per year). Table 14 includes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes from the project cooling towers. *Attachment 4* included cooling tower modeling parameters.

Food Charbroiling

Annual emissions of PM_{2.5} of 0.48 tons per year from five new restaurants or cafeterias at the project, assumed to charbroil meat, were used to model concentrations at sensitive receptors using

³⁹ The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

the U.S. EPA AERMOD dispersion model. As discussed above, polycyclic aromatic hydrocarbons (PAHs) would be emitted in small quantities from restaurants at the project. PAHs are a group of over 100 chemicals and can be produced from cooking meat with charbroilers or griddles. PAHs are classified as a TAC with the potential to cause cancer. Two primary components of PAHs of concern with respect to cancer risk are benzo[a]pyrene and naphthalene. For purposes of calculating cancer risks in this assessment, PAH emissions as benzo[a]pyrene and naphthalene were used. TAC emissions from charbroiling were estimated using the default emission factors provided in Section 2.3.4.2 of SJVAPCD's *Guidance for Air Dispersion Modeling*. Emissions from restaurants were modeled as point sources using SJVAPCD-recommended source parameters. The project will include five new restaurants; therefore, 5 point sources were used in the modeling. These sources include a release height of 12 feet, stack diameter of 1.0 foot and discharge horizontally, exit gas temperature of 200° F and exit velocity of 20 feet per second. Table 14 includes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes from the project charbroilers. *Attachment 4* includes the emissions and dispersion modeling information.

Summary of Project-Related Community Risks at Off-Site Project MEIs

The sensitive receptors identified in Figure 6 as the MEIs for increased cancer risk and PM_{2.5} from construction are also the MEIs for both construction and operation. The unmitigated cancer risk MEI would be exposed to 1 year of construction cancer risks, 6 years of construction and operation, and 23 years of operation emissions. Operation includes project traffic, standby backup generators operation, cooling tower, and charbroiling emissions. The cancer risks from construction and operation of the project were summed together. The annual PM_{2.5} concentration and HI values are based on annual maximum levels for the entirety of the project, with the maximum values occurring during construction. Therefore, the construction and operational period PM_{2.5} MEI are the same.

As shown in Table 14, the unmitigated maximum cancer risks and annual PM_{2.5} concentration from construction and operation activities would exceed the single-source significance thresholds. As shown in Table 15, even with the best available mitigation measures implemented through *Mitigation Measures AQ-1 and AQ-2*, the project's cancer risk and annual PM_{2.5} concentration would still exceed the single-source thresholds due to the high amount of construction activity. The HI from unmitigated construction and operation activities would not exceed the single-source significance threshold.

Table 14. Unmitigated Maximum Project Health Risk Impacts at the Location of the Off-Site MEIs – District Utilities Scenario

Source	Maximum Cancer Risk (per million) ¹	PM _{2.5} concentration (µg/m ³) ²	Hazard Index ²
Unmitigated Conditions			
Construction	113.61	2.38	0.09
Traffic	0.22	0.02	<0.01
Emergency Generators	2.83	<0.01	<0.01
Restaurants (charbroilers)	0.01	<0.01	<0.01
Cooling Towers	0.00	0.01	0.00
Unmitigated PROJECT TOTAL	116.67	2.38	0.09
BAAQMD Single-Source Threshold	10	0.3	1.0
Exceed Threshold?	Unmitigated	Yes	No

¹ Maximum assuming third-trimester fetus, infant, child exposure for construction and child/adult exposure during operation for 30-year exposure.

² Maximum annual concentration for any year.

Table 15. Mitigated Maximum Project Health Risk Impacts at the Location of the Off-Site MEI – District Utilities Scenario

Source	Cancer Risk (per million) ¹	PM _{2.5} concentration (µg/m ³) ²	Hazard Index ²
Mitigated Conditions			
Construction ³	14.52	0.44	0.01
Traffic	0.22	0.02	<0.01
Emergency Generators	2.83	<0.01	<0.01
Restaurants (charbroilers)	0.01	<0.01	<0.01
Cooling Towers	0.00	0.01	0.00
Mitigated PROJECT TOTAL	17.58	0.44	0.01
BAAQMD Single-Source Threshold	10	0.3	1.0
Exceed Threshold?	Mitigated	Yes	No

¹ Maximum assuming third-trimester fetus, infant, child exposure for construction and child/adult exposure during operation for 30-year exposure.

² Maximum annual concentration for any year.

³ Assumes use of Tier 4 equipment.

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

Implement Mitigation Measures AQ-1 and AQ-2.

Mitigation Measure AQ-4: All diesel standby emergency generators powered by diesel fuel shall meet U.S. EPA Tier 4 engine standards.

Permanent stationary emergency generators installed on-site shall have engines that meet or exceed U.S. EPA Tier 4 standards for particulate matter emissions.

Effectiveness of Mitigation Measures AQ-1, AQ-2, and AQ-3

CalEEMod was used to compute mitigated emissions assuming that all equipment larger than 25 horsepower met U.S. EPA Tier 4 final standards or was electrified along with enhanced BAAQMD best management practices for construction were included. With these mitigation measures implemented, the project's construction off-site cancer risk levels would be reduced by 85 percent to 16.75 chances per million for the residential MEI. The project's annual PM_{2.5} concentrations from construction would be reduced by 81 percent to 0.44 µg/m³ at the maximum affected residence. Generators equipped with Tier 4 engines would reduce emissions by 85 percent compared to lower tiered engines. Generator engines powered by diesel that are 1,000 hp or larger are required to meet this standard per BAAQMD requirements. Table 15 shows the mitigated health risk assessment results. The mitigated project's risk impacts from construction would still exceed the BAAQMD single-source significance thresholds.

Significant and Unavoidable Construction Cancer Risk and Annual PM_{2.5} Concentration Impact

Mitigation Measure AQ-1 and AQ-2 would substantially reduce the cancer risk and annual PM_{2.5} concentration impacts posed by unmitigated construction activities and represent the best available measures to reduce project construction period emissions. However, the project cancer risk and PM_{2.5} concentration impacts would remain above the single source thresholds at receptors located at the 400 Logue Avenue due to the high amount of localized construction emissions. Cancer risks and annual PM_{2.5} concentrations at all other sensitive receptors would be reduced below the single-source thresholds.

Project risks and annual PM_{2.5} concentrations are predicted for outdoor air at the sensitive receptor positions. The 400 Logue Avenue project would be constructed to meet the latest Title 24 Building Standards that were adopted in January 2020. These standards now require that air filtration in mechanical ventilation systems for residential buildings use of MERV 13 filters or greater. This requirement also applies to the Project residential buildings. A properly installed and operated ventilation system with MERV-13 filters is expected to achieve an 80-percent reduction of ambient PM_{2.5} concentrations at indoor areas.⁴⁰ U.S. EPA studies indicate that most people spend 90 percent of their time indoors. Assuming exposure to 21 hours indoor filtered air and 3 hours outdoor air, the filtration in the ventilation systems would reduce overall exposure by 70 percent. In this case, mitigated cancer risk and annual PM_{2.5} concentrations would be reduced below the significance threshold for sensitive receptors in this new development. However, this assumption is based on the building owners maintaining the systems and residents being informed that the proper operation of the system (with windows closed during construction) is necessary to achieve adequate protection. Neither the applicant nor the City can reliably impose this requirement through mitigation measures. Additionally, the Precise Plan envisions additional residential land uses in the project vicinity. Therefore, even if the 400 Logue development were not constructed, other future developments would likely contain residential receptors resulting in similar cancer risk and PM_{2.5} concentrations at those receptors.

Note that this assessment assumes that sensitive receptors at 400 Logue Ave would be present during construction of Phase 2 that is immediately adjacent and subsequent phases. The Initial Study/Negative Declaration recently approved by the City describes that construction would take 33 to 35 months to complete with occupancy beginning late 2024. This assessment assumes the earliest possible occupation of the site when construction of Phase 2 that is adjacent occurs. If occupancy of those apartments occurs later, cancer risks and annual PM_{2.5} concentrations would be substantially lower because the receptors would not be present. In that scenario, the impacts would be mitigated such that cancer risk and annual PM_{2.5} concentrations would likely be reduced below the thresholds.

⁴⁰ 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

Cumulative Impact of All TAC Sources on the Off-Site Project MEI

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

Based on a review of the project area and traffic information provided by Hexagon Transportation Consultants, Inc., traffic on State Route 237, East Middlefield Road, and Ellis Street exceed 10,000 vehicles per day. Traffic on Maude Avenue approaches 10,000 ADT. Other nearby streets have traffic volumes less than 10,000 vehicles per day. A review of BAAQMD's stationary source Google Earth map tool identified numerous stationary sources within 1,000 feet and some of those are sources that would be removed by the proposed Project. Eleven of these sources would remain with the potential to affect the project MEIs. Figure 7 shows the location of the sources affecting the MEIs. Community risk impacts from these sources upon the MEIs reported in Table 16. Details of the modeling and community risk calculations are included in *Attachment 5*.

Roadways

The same inputs (with the exception of ADT) and modeling done to compute the risks and hazards risks from proposed Project traffic was conducted to assess cumulative traffic impacts on the unmitigated and mitigated project MEIs. An exposure period of 30-years was used with a start year of 2023 since the existing off-site receptors are already exposed to traffic along these local roadways.

BAAQMD Permitted Stationary Sources

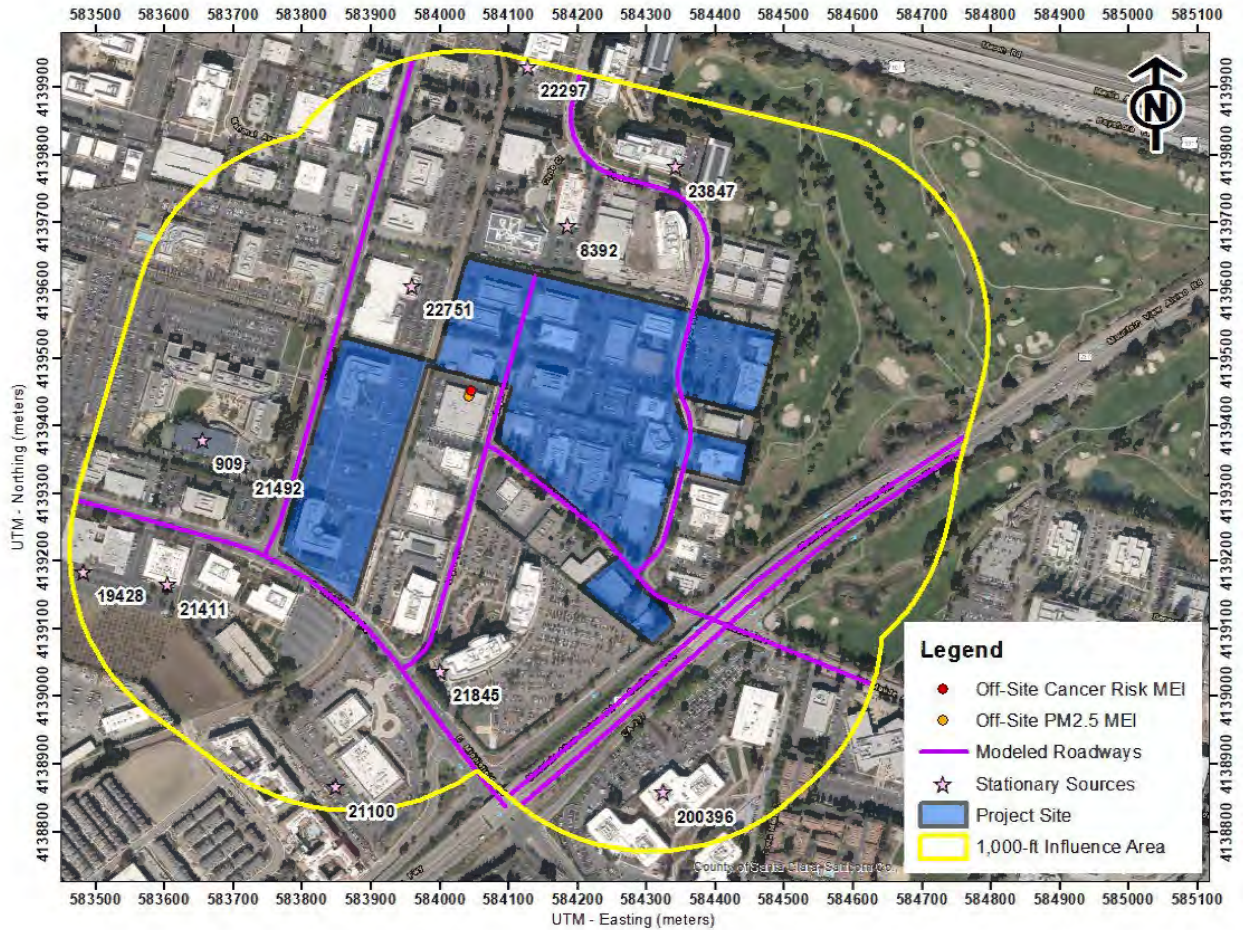
Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website, which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance.⁴¹ Numerous sources were identified using this tool. A stationary source information form (SSIF) was submitted to BAAQMD to verify the sources and their screening risk levels.⁴² Some sources were found to be located on-site while some others were beyond 1,000 feet from the site. Eleven sources were identified outside of the proposed site and within 1,000 feet. 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*. Community risk impacts from all stationary sources upon the MEI are reported in Table 16. The SSIF containing the list of sources and their screening levels is contained in *Attachment 5*.

⁴¹ BAAQMD,

<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

⁴² BAAQMD. 2021. *Email correspondence with Matthew Hanson, Environmental Planner III*. October 14, 2021.

Figure 7. Project Site and Nearby TAC and PM_{2.5} Sources within 1,000 feet



Summary of Cumulative TAC Risks at the Off-Site Project MEIs

Table 16 reports both the project and cumulative community risk impacts at the unmitigated and mitigated project MEIs. The project would have an exceedance with respect to community risk caused by project construction and operation activities, since the maximum unmitigated and mitigated cancer risk and PM_{2.5} concentration exceeds the BAAQMD single-source thresholds. While the combined unmitigated increased cancer risk and annual PM_{2.5} concentration values at the project MEIs would exceed the BAAQMD cumulative source thresholds, the combined mitigated increased cancer risk and annual PM_{2.5} concentration values would not exceed the cumulative source thresholds. The unmitigated and mitigated HI values do not exceed the single or cumulative thresholds. The project would not contribute to a cumulative increase in TAC emissions within the local area.

Table 16. Project and Cumulative Risk Impacts at the Location of the Off-Site MEI – District Utilities

Source	Maximum Cancer Risk (per million) ¹	PM _{2.5} concentration (µg/m ³) ²	Hazard Index ²
Project	Unmitigated	116.67	0.09
	Mitigated	17.58	0.01
Cumulative Traffic Sources	1.05	0.07	<0.01
Cumulative Stationary Sources	4.99	0.01	0.01
CUMULATIVE TOTAL			
Unmitigated	122.71	2.46	<0.11
Mitigated	23.62	0.52	<0.03
BAAQMD Cumulative-Source Threshold	100	0.8	10.0
Exceed Threshold?			
Unmitigated	<i>Yes</i>	<i>Yes</i>	<i>No</i>
Mitigated	<i>No</i>	<i>No</i>	<i>No</i>

¹ Maximum assuming third-trimester fetus, infant, child exposure for construction and child/adult exposure during operation for 30-year exposure.

² Maximum annual concentration for any year.

Non-CEQA Health Risk Impacts

A health risk assessment was completed to analyze the impact existing and proposed Project TAC sources would have on the new proposed sensitive receptors (i.e., residents) that that project would introduce. Per *CBIA v. BAAQMD*, lead agencies are not required to analyze the impacts of existing conditions on a project’s future residents. The City requires health risk assessments for new residential developments near sources of air pollution. Where risks are above thresholds, the City encourages the use of proper actions to reduce exposures. General Plan policies related to the exposure of new sensitive receptors to existing TAC sources are as follows:

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.

The same TAC sources identified to describe project impacts were used in this on-site health risk assessment. This included emissions from the proposed Project that include phased construction, build-out traffic (beginning in 2026), standby generator operation, charbroilers, and cooling towers. Figure 8 shows the on-site residential sensitive receptors that would be introduced by the project and the project TAC sources. In addition, the same existing nearby TAC sources identified above were used in this on-site health risk assessment. Figure 9 shows the on-site residential sensitive receptors and nearby existing TAC sources. All results are listed in Table 17. *Attachment 5* includes the dispersion modeling and risk calculations for TAC source impacts upon the proposed on-site sensitive receptors.

Cumulative Community Health Risk at Project Site

Community risk impacts from the existing and project TAC sources upon the project site are reported in Table 17. 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 sources' unmitigated cancer risk and PM_{2.5} concentration impacts exceed the single-source thresholds, but no longer exceed once mitigated. None of the sources exceed the cumulative-source thresholds.

Table 17. Impacts from Cumulative TAC Sources at the Project Site

Source	Maximum Cancer Risk (per million) ¹	PM _{2.5} concentration (µg/m ³) ²	Hazard Index ²
Project			
Unmitigated	46.80	0.67	0.10
Mitigated	8.79	0.14	0.01
Cumulative Traffic	1.45	0.04	<0.01
Cumulative Stationary	6.38	0.01	0.01
<i>BAAQMD Single-Source Threshold</i>	10	0.3	1.0
<i>Exceed Threshold?</i>			
<i>Unmitigated</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>
<i>Mitigated</i>	<i>No</i>	<i>No</i>	<i>No</i>
CUMULATIVE TOTAL			
Unmitigated	54.63	<0.72	<0.12
Mitigated	16.62	<0.19	<0.03
<i>BAAQMD Cumulative-Source Threshold</i>	100	0.8	10.0
<i>Exceed Threshold?</i>			
<i>Unmitigated</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Mitigated</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹ Maximum assuming third-trimester fetus, infant, child exposure for construction and child/adult exposure during operation for 30-year exposure.

² Maximum annual concentration for any year.

Figure 8. Locations of Modeled Project Stationary and Roadway Sources, On-Site Sensitive Receptors, and On-Site Construction and Project Maximum TAC Impacts

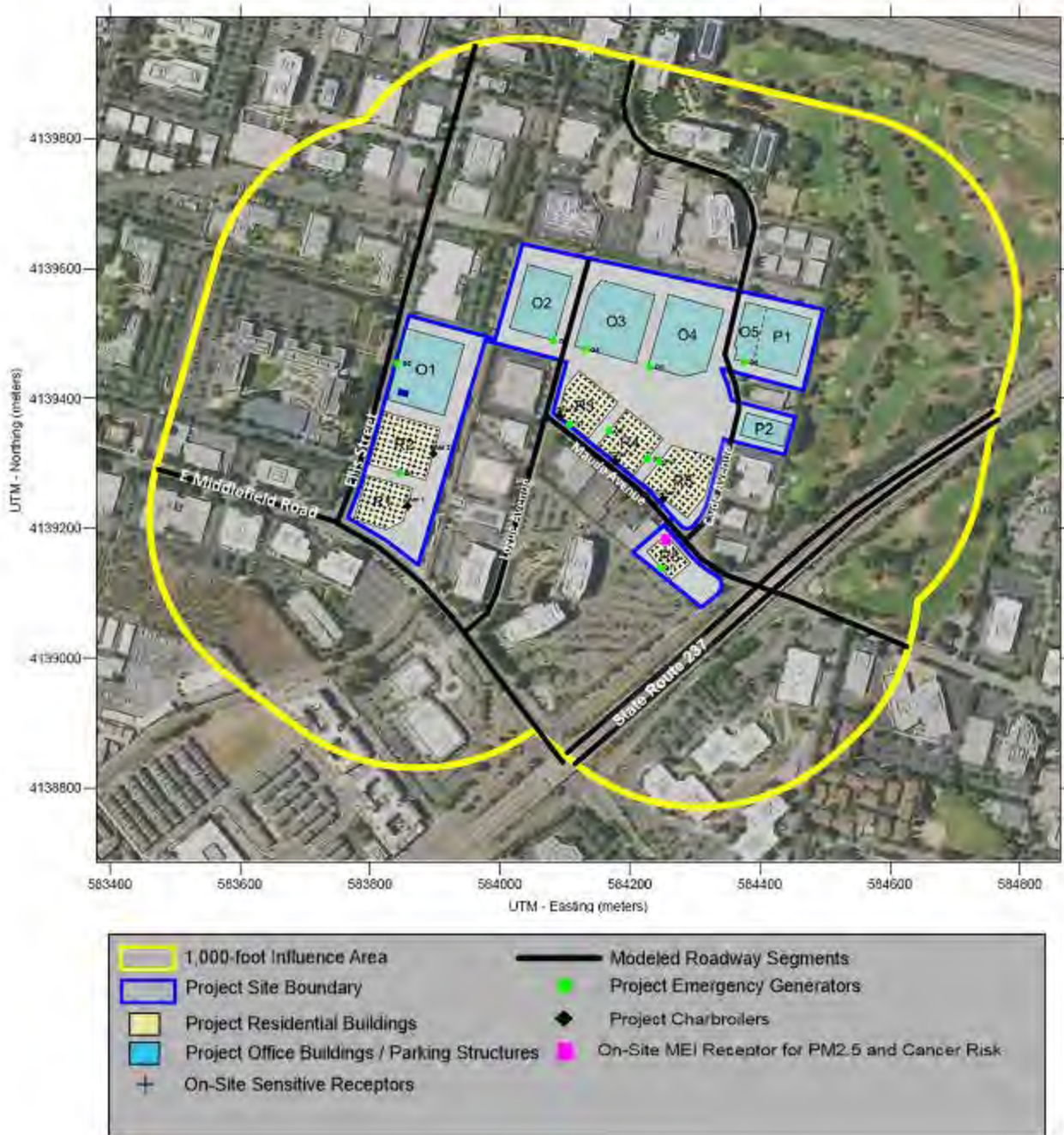


Figure 9. Project Site, On-Site Residential Receptors, Roadway Segments Evaluated, and Locations of Maximum TAC Impacts



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

Future construction activities in the Project area could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited. Therefore, odors from construction that could cause complaints from the general public and affect a substantial number of people are not expected.

The project proposes an alternative that would include a Central Utilities Plant (CUP), which would provide wastewater treatment, recycled water production, heating, and cooling for the majority of the buildings within the MPMP.⁴³ The CUP would be located either at ground level or the basement of Building O1. Under this alternative, the CUP would include a wastewater treatment plant that would have capacity to treat an average weather flow of approximately 250,000 gallons of wastewater per day. The proposed wastewater treatment plant would only serve wastewater generated by the connected buildings in the MPMP. When the plant reaches full capacity or goes offline, wastewater would be discharged to the City's municipal wastewater conveyance system and treated at the Palo Alto Regional Water Quality Control Plant (RWQCP).

BAAQMD has identified a variety of land uses and types of operations that produce emissions that may lead to odors in their CEQA Air Quality Guidelines. The identified land uses include wastewater treatment plants. Additionally, according to the BAAQMD CEQA Guidelines, an odor source with five or more confirmed complaints per year averaged over three years is considered to cause frequent odor complaints, and therefore, have a significant impact.

The wastewater treatment facility would generate odors from many phases of the treatment process. The anaerobic biological activity in the treatment system of the wastewater and solids produces most of the hydrogen sulfide and ammonia type odors, which are considered objectionable. Odors can be properly controlled through modern design, appropriate chemical treatment, proper ventilation, and facility maintenance. The wastewater treatment facility would be designed to be a completely enclosed system within the CUP. Likely a new pre-manufactured wastewater equipment would be equipped with modern technology that should minimize the release of any odors and the proposed treatment plant does not include any lagoons, exposed treatment water, or biosolid piles that would emit odors. The wastewater treatment odors would also be regulated by BAAQMD in the event of odor complaints.

The most odorous processes resulting in the production of hydrogen sulfide and ammonia would be enclosed and specifically controlled. The project would also include regular monitoring of complaints and reporting on the success of odor controls to regulatory agencies. Specific solutions may include:

- Active ventilation (foul air blowers) to odor control units (e.g., carbon absorption, biofiltration, or ammonia scrubbers);
- House odorous processes in a ventilated enclosure;

⁴³ Building R4 AFF and R6 AFF would be served by municipal utilities under the District Utilities System option.

- Screenings and grit washed, dewatered, and compacted before being stored in enclosed, odor-proof refuse containers;
- Haul any stored residuals off-site at regular intervals; and
- Ferrous chloride injection for hydrogen sulfide removal.

Also, the facility could divert wastewater to the regional plant if there are upset conditions.

Residences are located within buildings that are within about 100 feet of the project. Residences who are subjected to objectionable odors are most likely to complain. The BAAQMD CEQA Air Quality Guidelines include screening distances for various odor sources. These screening distances identify 2 miles for wastewater treatment facilities. However, these are applied to traditional open municipal facilities that have exposed headworks, open-air ponds, and treat large volumes of wastewater. The screening distances would not apply to this wastewater treatment plant that is small, modern, and has enclosed systems where exhaust air is treated. Nonetheless, odor issues could occur if there are upset conditions or improper handling of odor-producing solids or wastewater, improper operations, or poor maintenance. Adequately controlling odors requires all components of the facility to work properly.

Given the close proximity of residences, the project has the potential to cause odors and result in odor complaints. This would be considered a significant impact.

Mitigation Measure AQ-5: Develop and Implement Odor Control Plan

The Project shall develop an odor control plan that addresses plant design issues to control odors, operating and maintenance procedures to prevent odors, and an action plan to respond to upset conditions that could cause odors and measures to respond to odor complaints. The odor control plan shall describe the design elements and best management practices built into the facility that include:

- Ventilation of the system using carbon absorption, biofiltration, ammonia scrubbers, or other effective means to treat exhausted air from the enclosed facility;
- Odor proofing of refuse containers used to store and transport grit and screenings or biosolids; and
- Injection of chemicals to control hydrogen sulfide.

The plan shall describe procedures to address upset conditions caused by equipment failures, power outages, flow control, or treatment issues.

A publicly visible sign with the telephone number and person to contact regarding odor complaints shall be posted. 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. A log of odor complaints and procedures implemented to respond to complaints shall be maintained and provided to the City upon request.

Effectiveness of Mitigation Measure AQ-5

The purpose for Mitigation Measure AQ-5 is to ensure proper design and operation of the wastewater treatment facility to prevent objectionable odors. In addition, the facility would be subject to BAAQMD rules and regulations, specifically, Rule 1-301 (Public Nuisance), Rule 7 (Odorous Substances), Rule 8-8 (Wastewater Collection and Separation Systems), and Rule 9-2 (Inorganic Gaseous Pollutants: Hydrogen Sulfide). BAAQMD Regulation 7 prohibits the discharge of odorous substances to ambient air that result in frequent odor complaints. Implementation of Mitigation Measure AQ-5 and adherence with BAAQMD rules and regulations would reduce the impact to less-than-significant.

Supporting Documentation

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

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

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

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

Attachment 5 includes the screening community risk calculations from sources affecting the MEI and project site. Due to the large size of the BAAQMD health risk calculators, these files were not included but are available upon request and would be provided in digital format.

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 2015.¹ 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.² 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.³ Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates.

¹ 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.

² CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

³ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

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)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where:

C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

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

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

Parameter	Exposure Type →			
	Infant		Child	Adult
	Age Range →			
	3 rd	0<2	2 < 16	16 - 30
	Trimester			
DPM Cancer Potency Factor (mg/kg-day) ⁻¹	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80 th Percentile Rate	273	758	572	261
Daily Breathing Rate (L/kg-day) 95 th Percentile Rate	361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95 th 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). OEHHHA 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_{2.5} Concentrations

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

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 1 (R1 + R2)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	750 Dwelling Units	6.2 total project acres disturbed
	683,000 s.f. residential	
	22,508 s.f. retail	
	0 s.f. office/commercial	
	9,434 s.f. other, specify: Community Use	
	343,000 s.f. parking garage	838 spaces
	0 s.f. parking lot	0 spaces
Construction Hours	7 am to	6 pm

Pile Driving? NO

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
					Demolition			
		Start Date:	11/1/2022		Total phase:			
		End Date:	1/5/2023		56			
Overall Import/Export Volumes								
Demolition Volume								
2	Aerial Lifts	0	0.31	6.5	56	6.5	0	
2	Air Compressors	0	0.48	4.2	56	4.2	0	149,337 sf demo + 5,848 tons of asphalt debris
2	Concrete/Industrial Saws	0	0.73	2.7	56	2.7	0	500 East Middlefield + 440 Logue
4	Excavators (with/oe ram)	158	0.38	7.9	56	7.9	106247	
2	Forklifts	89	0.2	10.0	56	10.0	19936	
2	Generator Sets	84	0.74	5.4	56	5.4	37632	
2	Rubber Tired Dozers	247	0.4	10.0	56	10.0	110656	
2	Sweepers/Scrubbers	64	0.46	6.5	56	6.5	21504	
2	Tractors/Loaders/Backhoes	97	0.37	8.1	56	8.1	32592	
Site Preparation								
		Start Date:	1/5/2023		Total phase:			
		End Date:	1/24/2023		16			
2	Sweepers/Scrubbers	64	0.46	4.3	16	4.3	4096	
2	Water Trucks	0	0	2.0	16	2.0	0	
4	Tractors/Loaders/Backhoes	97	0.37	8.1	16	8.1	18624	
Grading / Excavation								
		Start Date:	1/24/2023		Total phase:			
		End Date:	3/31/2023		56			
Soil Hauling Volume								
2	Air Compressors	0	0.48	4.2	56	4.2	0	Export volume = 201,721 cubic yards
3	Bore/Drill Rigs Dewatering	221	0.5	8.0	14	2.0	37128	Import volume = 0 cubic yards
4	Excavators	158	0.38	7.9	56	7.9	106247	
2	Generator Sets	84	0.74	8.1	56	8.1	56448	
3	Bore/Drill Rig Shoring	221	0.5	8.0	28	4.0	74256	
5	Geothermal Bore/Drill Rig	221	0.5	9.6	42	7.2	222768	Export volume = 1,713 cubic yards
3	Plate Compactors	8	0.43	7.8	14	1.9	1120	
2	Dewatering Pump	84	0.74	24.0	56	24.0	167086	
6	Rubber Tired Dozers	247	0.4	10.0	56	10.0	331968	
2	Skid Steer Loaders	65	0.37	10.8	14	2.7	7280	
4	Sweepers/Scrubbers	64	0.46	8.7	56	8.7	57373	
4	Tractors/Loaders/Backhoes	97	0.37	10.8	56	10.8	86825	
Trenching/Foundation								
		Start Date:	3/31/2023		Total phase:			
		End Date:	10/5/2023		161			
3	Tractors/Loaders/Backhoes	97	0.37	9.0	24	1.3	23257	
2	Cranes	0	0.29	10.3	161	10.3	0	
5	Geothermal Bore/Drill Rig	221	0.5	9.6	33	2.0	175032	
4	Concrete Pumps	84	0.74	5.4	161	5.4	216384	
4	Aerial Lifts	0	0.31	9.7	161	9.7	0	
2	Generator Sets	84	0.74	5.4	161	5.4	108192	
4	Forklifts	89	0.2	10.0	161	10.0	114632	
Building - Exterior								
		Start Date:	10/5/2023		Total phase:			
		End Date:	1/8/2025		395			
2	Cranes	0	0.29	10.3	395	10.3	0	
3	Forklifts	89	0.2	10.0	395	10.0	210930	
2	Generator Sets	84	0.74	5.4	395	5.4	265440	
2	Tractors/Loaders/Backhoes	97	0.37	8.1	40	0.8	23280	
4	Aerial Lifts	0	0.31	9.7	395	9.7	0	
2	Welders	0	0.45	2.2	395	2.2	0	
2	Plate Compactors	8	0.43	9.3	40	0.9	2560	
2	Cement and Mortar Mixers	0	0.56	7.1	395	7.1	0	
Building - Interior/Architectural Coating								
		Start Date:	3/6/2025		Total phase:			
		End Date:	5/1/2025		48			
2	Air Compressors	0	0.48	8.3	48	8.3	0	
Paving								
		Start Date:	1/8/2025		Total phase:			
		Start Date:	3/6/2025		48			
3	Small Roller Compactor	80	0.38	8.8	48	8.8	38523	
2	Tractors/Loaders/Backhoes	97	0.37	5.4	48	5.4	18624	
4	Concrete Saw	0	0.73	8.2	2	0.3	0	
						2696639		-2.2%

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: Middlefield Park Phase 1 Affordable (R6)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
 170 Dwelling Units
 1.64 total project acres disturbed
 155,000 s.f. residential
 0 s.f. retail
 0 s.f. office/commercial
 0 s.f. other, specify: Community Use
 34,000 s.f. parking garage 170 spaces
 0 s.f. parking lot 0 spaces
 Construction Hours 7 am to 6 pm

Pile Driving? NO
Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? No
 IF YES (if BOTH separate values) -->
 Kilowatts/Horsepower: _____
 Fuel Type: _____
 Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments	
Demolition		Start Date: 1/11/2023		Total phase: 49					
		End Date: 2/27/2023						Overall Import/Export Volumes	
1	Aerial Lifts	0	0.31	8.5	49	6.5	0	Demolition Volumes	Hours at LF = 1
1	Air Compressors	0	0.48	4.2	49	4.2	0	25,570 sf demo + 500 tons of asphalt debris	2
1	Concrete/Industrial Saws	0	0.73	2.7	49	2.7	0	885-891 Maude	2
4	Excavators (wheel ram)	158	0.38	7.9	49	7.9	92966		6
1	Forklifts	89	0.2	10.0	49	10.0	8722		2
1	Generator Sets	84	0.74	5.4	49	5.4	16464		4
1	Rubber Tired Dozers	247	0.4	10.0	49	10.0	48412		4
1	Sweepers/Scrubbers	64	0.46	6.5	49	6.5	9408		3
1	Tractors/Loaders/Backhoes	97	0.37	8.1	49	8.1	14259		3
Site Preparation		Start Date: 2/27/2023		Total phase: 14					
		End Date: 3/15/2023						Total phase:	
1	Sweepers/Scrubbers	64	0.46	4.3	14	4.3	1792		2
1	Water Trucks	0	0	2.0	14	2.0	0		2
2	Tractors/Loaders/Backhoes	97	0.37	8.1	14	8.1	8148		3
Grading / Excavation		Start Date: 3/15/2023		Total phase: 49					
		End Date: 5/15/2023						Total phase:	
1	Air Compressors	0	0.48	4.2	49	4.2	0	Soil Hauling Volume	2
2	Bore/Drill Rigs Dewatering	221	0.5	6.0	16	2.0	21216	Export volume = 23,536 cubic yards	6
2	Excavators	158	0.38	7.9	49	7.9	46483	Import volume = 0 cubic yards	6
1	Generator Sets	84	0.74	8.1	49	8.1	24696		6
2	Bore/Drill Rig Shoring	221	0.5	6.0	33	4.0	43758		6
2	Plate Compactors	8	0.43	5.8	16	1.9	638		5
1	Dewatering Pump	84	0.74	24.0	49	24.0	73100		24
3	Rubber Tired Dozers	247	0.4	10.0	49	10.0	145236		6
1	Skid Steer Loaders	65	0.37	10.8	16	3.5	4160		4
2	Sweepers/Scrubbers	64	0.46	6.7	49	6.7	25101		8
2	Tractors/Loaders/Backhoes	97	0.37	10.8	49	10.8	37986		8
Trenching/Foundation		Start Date: 5/12/2023		Total phase: 140					
		End Date: 10/22/2023						Total phase:	
2	Tractors/Loaders/Backhoes	97	0.37	6.8	21	1.0	10250		5
1	Cranes	0	0.29	10.3	140	10.3	0		3
2	Concrete Pumps	84	0.74	5.4	140	5.4	94080		4
2	Aerial Lifts	0	0.31	9.7	140	9.7	0		6
1	Generator Sets	84	0.74	5.4	140	5.4	47040		4
2	Forklifts	89	0.2	10.0	140	10.0	49840		4
Building - Exterior		Start Date: 10/22/2023		Total phase: 344					
		End Date: 11/27/2024						Total phase:	
1	Cranes	0	0.29	10.3	344	10.3	0		3
2	Forklifts	89	0.2	7.5	344	7.5	91848		3
1	Generator Sets	84	0.74	5.4	344	5.4	115584		4
1	Tractors/Loaders/Backhoes	97	0.37	8.1	34	0.8	9894		3
2	Aerial Lifts	0	0.31	9.7	344	9.7	0		6
1	Welders	0	0.45	2.2	344	2.2	0		1
1	Plate Compactors	8	0.43	6.3	34	0.9	1088		4
1	Cement and Mortar Mixers	0	0.56	7.1	344	7.1	0		4
Building - Interior/Architectural Coating		Start Date: 1/15/2025		Total phase: 42					
		End Date: 3/5/2025						Total phase:	
1	Air Compressors	0	0.48	6.3	42	6.3	0		4
Paving		Start Date: 11/27/2024		Total phase: 42					
		Start Date: 1/15/2025						Total phase:	
2	Small Roller Compact	80	0.38	6.8	42	6.8	16854		5
1	Tractors/Loaders/Backhoes	97	0.37	5.4	42	5.4	8148		2
2	Concrete Saw	0	0.73	6.2	2	0.4	0		6

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

1067171 -2.4%

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 1 Infrastructure (Horizontal Finished Work)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size: 0 Dwelling Units 1 total project acres disturbed

0 s.f. residential

0 s.f. retail

0 s.f. office/commercial

0 s.f. other, specify: Community Use

0 s.f. parking garage 0 spaces

0 s.f. parking lot 0 spaces

Construction Hours: 7 am to 6 pm

Pile Driving? NO

Project include **OPERATIONAL GENERATOR OR FIRE PUMP** on-site? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Infrastructure							Overall Import/Export Volumes
		Start Date:	10/31/2024	Total phase:	136			Hours at LF = 1
		End Date:	4/20/2025					
1	Concrete/Industrial Saws	0	0.75	1.4	136	1.4	0	Demolition Volume
1	Cement and Mortar Mixers	0	0.56	10.7	136	10.7	0	
1	Generator Sets	84	0.74	5.4	136	5.4	45696	
2	Pavers	132	0.42	7.2	136	7.2	108574	
2	Plate Compactors	8	0.43	5.8	136	5.8	5427	
1	Rollers	80	0.38	10.5	136	10.5	43520	
1	Striper Truck	0	0	2.0	8	0.11	0	
1	Sweepers/Scrubbers	64	0.46	4.3	36	1.2	4608	
1	Tractors/Loaders/Backhoes	97	0.37	5.4	68	2.7	13192	
							221017	0.4%

Equipment types listed in "Equipment Types" worksheet tab.

Complete one sheet for each project component

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

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 2 (O1, O2)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	0 Dwelling Units	8.68 total project acres disturbed	
	0 s.f. residential		Pile Driving? NO
	0 s.f. retail		
	631,939 s.f. office/commercial		Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? No
	0 s.f. other, specify:		
	218,876 s.f. parking garage	700 spaces	IF YES (if BOTH separate values) -->
	0 s.f. parking lot	0 spaces	Kilowatts/Horsepower: _____
			Fuel Type: _____
Construction Hours	7 am to	6 pm	Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments	
								Demolition	
		Start Date:	11/1/2024		Total phase:		147	Overall Import/Export Volumes	<i>Hours at LF = 1</i>
		End Date:	4/22/2025						
1	Aerial Lifts	0	0.31	8.5	147	6.5	0	Demolition Volumes	2
1	Air Compressors	0	0.48	4.2	147	4.2	0	264,881 sf demo + 2,831 tons of asphalt debris	2
3	Concrete/Industrial Saws	0	0.73	8.2	147	8.2	0	401 Ellis, 500-510-520 Logue, 441 Logue, 440-450 Clyde, 433 Clyde	6
3	Excavators (w/hoop ram)	158	0.38	10.5	147	10.5	278015		6
1	Forklifts	89	0.2	10.0	147	10.0	26166		2
1	Generator Sets	84	0.74	5.4	147	5.4	49392		4
1	Rubber Tired Dozers	247	0.4	10.0	147	10.0	145236		4
1	Sweepers/Scrubbers	64	0.46	6.5	147	6.5	28224		3
1	Tractors/Loaders/Backhoes	97	0.37	8.1	147	8.1	42777		3
								Site Preparation	
		Start Date:	2/15/2025		Total phase:		38	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	4/2/2025						
1	Sweepers/Scrubbers	64	0.46	4.3	38	4.3	4864	Export volume = 230,046 cubic yards	2
1	Water Trucks	0	0	2.0	38	2.0	0	Import volume = 0 cubic yards	2
2	Tractors/Loaders/Backhoes	97	0.37	8.1	38	8.1	22116	Export volume = 34,000 cubic yards	3
								Grading / Excavation	
		Start Date:	3/17/2025		Total phase:		103	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	7/17/2025						
1	Air Compressors	0	0.48	4.2	103	4.2	0	Export volume = 230,046 cubic yards	2
2	Bore/Drill Rigs Dewatering	221	0.5	6.0	34	2.0	45084	Import volume = 0 cubic yards	6
5	Excavators	158	0.38	9.5	103	9.5	293127	Export volume = 34,000 cubic yards	6
1	Generator Sets	84	0.74	8.1	103	8.1	51912		6
2	Bore/Drill Rig Shoring	221	0.5	6.0	69	4.0	91494		6
4	Geothermal Bore/Drill Rig	221	0.5	9.0	75	6.8	298350	Export volume = 1,713 cubic yards	6
2	Plate Compactors	8	0.43	5.5	34	1.9	1357		5
1	Dewatering Pump	84	0.74	24.0	103	24.0	153660		24
5	Rubber Tired Dozers	247	0.4	8.0	103	9.0	457938		6
1	Skid Steer Loaders	65	0.37	10.8	34	3.6	8840		4
2	Sweepers/Scrubbers	64	0.46	8.7	103	8.7	52762		8
4	Tractors/Loaders/Backhoes	97	0.37	10.8	103	10.8	159696		8
								Trenching/Foundation	
		Start Date:	7/2/2025		Total phase:		330	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	7/22/2026						
2	Tractors/Loaders/Backhoes	97	0.37	6.8	51	1.0	24710	Export volume = 230,046 cubic yards	5
1	Cranes	0	0.29	10.3	330	10.3	0	Import volume = 0 cubic yards	3
4	Geothermal Bore/Drill Rig	221	0.5	9.0	60	1.8	238690	Export volume = 34,000 cubic yards	6
4	Concrete Pumps	84	0.74	5.4	330	5.4	443520		4
4	Aerial Lifts	0	0.31	8.7	261	7.7	0		6
1	Generator Sets	84	0.74	5.4	330	5.4	110880		4
4	Forklifts	89	0.2	10.0	330	10.0	234960		4
								Building - Exterior	
		Start Date:	5/2/2026		Total phase:		1000	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	7/13/2026						
1	Cranes	0	0.29	10.3	1000	10.3	0	Export volume = 230,046 cubic yards	3
2	Forklifts	89	0.2	7.5	1000	7.5	267000	Import volume = 0 cubic yards	3
1	Generator Sets	84	0.74	5.4	1000	5.4	336000	Export volume = 34,000 cubic yards	4
1	Tractors/Loaders/Backhoes	97	0.37	8.1	100	0.8	29100		3
2	Aerial Lifts	0	0.31	8.7	1000	9.7	0		6
1	Welders	0	0.45	2.2	1000	2.2	0		1
1	Plate Compactors	8	0.43	8.3	100	0.9	3200		4
1	Cement and Mortar Mixers	0	0.56	7.1	1000	7.1	0		4
								Building - Interior/Architectural Coating	
		Start Date:	8/15/2028		Total phase:		128	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	1/11/2029						
1	Air Compressors	0	0.48	8.3	128	8.3	0	Export volume = 230,046 cubic yards	4
								Paving	
		Start Date:	5/16/2028		Total phase:		128	Soil Hauling Volume	<i>Total phase:</i>
		End Date:	10/11/2028						
2	Small Roller Compacte	80	0.38	6.6	128	6.6	51384	Export volume = 230,046 cubic yards	5
1	Tractors/Loaders/Backhoes	97	0.37	5.4	128	5.4	24832	Import volume = 0 cubic yards	2
1	Pavers	0	0.42	4.8	50	1.9	0	Export volume = 34,000 cubic yards	2
1	Rollers	80	0.38	8.3	50	2.1	8000		2
2	Concrete Saw	0	0.73	8.2	4	0.3	0		6

Equipment types listed in "Equipment Types" worksheet tab.

Complete one sheet for each project component

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

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 2 Infrastructure (Horizontal Finished Work)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size: 0 Dwelling Units 1 total project acres disturbed

0 s.f. residential

0 s.f. retail

0 s.f. office/commercial

0 s.f. other, specify: Community Use

0 s.f. parking garage 0 spaces

0 s.f. parking lot 0 spaces

Construction Hours: 7 am to 6 pm

Pile Driving? NO

Project include **OPERATIONAL GENERATOR OR FIRE PUMP** on-site? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Infrastructure							Overall Import/Export Volumes
								Hours at LF = 1
								Demolition Volume
1	Air Compressors	0	0.48	4.2	80	2.5	0	2
1	Concrete/Industrial Saws	0	0.73	1.4	136	1.4	0	1
1	Cement and Mortar Mixers	0	0.56	10.7	136	10.7	0	6
1	Dewatering Pump	84	0.74	24.0	80	14.1	119347	24
1	Generator Sets	84	0.74	5.4	136	5.4	45696	4
2	Pavers	132	0.42	7.1	136	7.1	107966	6
2	Plate Compactors	8	0.43	9.9	136	9.9	5427	5
1	Rollers	80	0.38	10.5	136	10.5	43520	4
1	Striper Truck	0	0	2.0	8	0.1	0	2
1	Sweepers/Scrubbers	64	0.46	4.3	36	1.2	4608	2
1	Tractors/Loaders/Backhoes	97	0.37	5.4	68	2.7	13192	2
1	Welders	0	0.45	4.4	80	2.6	0	2
							338856	-12.6%

Equipment types listed in "Equipment Types" worksheet tab.
 Equipment listed in this sheet is to provide an example of input:
 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: Middlefield Park Phase 3 (R3, R4b, R5)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	770 Dwelling Units	9.54 total project acres disturbed
	698,000 s.f. residential	
	7,492 s.f. retail	
	0 s.f. office/commercial	
	6,566 s.f. other, specify: Community Use	
	237,000 s.f. parking garage	799 spaces
	0 s.f. parking lot	0 spaces
Construction Hours	7 am to	6 pm

Pile Driving? NO
Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? No
IF YES (if BOTH separate values) -->
Kilowatts/Horsepower: _____
Fuel Type: _____
Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments	
Demolition									
		Start Date:	1/11/2028		Total phase:		100	Overall Import/Export Volumes	
		End Date:	4/30/2028					Hours at LF = 1	
1	Aerial Lifts	0	0.31	8.5	100	6.5	0	Demolition Volumes	2
1	Air Compressors	0	0.48	4.2	100	4.2	0	58,692 sf demo + 8,033 tons of asphalt debris	2
1	Concrete/Industrial Saws	0	0.73	2.7	100	2.7	0	800 Maude, 880 Maude, 420 Clyde	2
4	Excavators (w/hoop ram)	158	0.38	7.9	100	7.9	189726		6
1	Forklifts	89	0.2	10.0	100	10.0	17800		2
1	Generator Sets	84	0.74	5.4	100	5.4	33600		4
1	Rubber Tired Dozers	247	0.4	10.0	100	10.0	98800		4
1	Sweepers/Scrubbers	64	0.46	6.5	100	6.5	19200		3
1	Tractors/Loaders/Backhoes	97	0.37	8.1	100	8.1	29100		3
Site Preparation									
		Start Date:	3/1/2028		Total phase:		41	Total phase:	
		End Date:	4/19/2028						
1	Sweepers/Scrubbers	64	0.46	4.3	41	4.3	5248		2
1	Water Trucks	0	0	2.0	41	2.0	0		2
2	Tractors/Loaders/Backhoes	97	0.37	8.1	41	8.1	23862		3
Grading / Excavation									
		Start Date:	3/18/2028		Total phase:		144	Total phase:	
		End Date:	10/3/2028						
1	Air Compressors	0	0.48	4.2	144	4.2	0	Soil Hauling Volume	2
2	Bore/Drill Rigs Dewatering	221	0.5	6.0	48	2.0	63648	Export volume = 140,384 cubic yards	6
2	Excavators	158	0.38	7.9	144	7.9	136603	Import volume = 0 cubic yards	6
1	Generator Sets	84	0.74	8.1	144	8.1	72576		6
2	Bore/Drill Rig Shoring	221	0.5	6.0	96	4.0	127296		6
4	Geothermal Bore/Drill Rig	221	0.5	9.0	100	6.3	397800		6
2	Plate Compactors	8	0.43	5.5	48	1.9	1915	Export volume = 1,713 cubic yards	5
1	Dewatering Pump	84	0.74	24.0	144	24.0	214825		24
4	Rubber Tired Dozers	247	0.4	7.5	144	7.5	426816		6
1	Skid Steer Loaders	65	0.37	10.8	48	3.6	12480		4
2	Sweepers/Scrubbers	64	0.46	8.7	144	8.7	73765		8
2	Tractors/Loaders/Backhoes	97	0.37	10.8	144	10.8	111632		8
Trenching/Foundation									
		Start Date:	5/17/2028		Total phase:		412	Total phase:	
		End Date:	9/12/2027						
2	Tractors/Loaders/Backhoes	97	0.37	6.8	62	1.0	30040		5
1	Cranes	0	0.29	10.3	412	10.3	0		3
4	Geothermal Bore/Drill Rig	221	0.5	9.0	75	1.8	298350		6
2	Concrete Pumps	84	0.74	5.4	412	5.4	276864		4
2	Aerial Lifts	0	0.31	8.7	412	9.7	0		6
1	Generator Sets	84	0.74	5.4	412	5.4	138432		4
2	Forklifts	89	0.2	10.0	412	10.0	146672		4
Building - Exterior									
		Start Date:	11/3/2028		Total phase:		1008	Total phase:	
		End Date:	2/1/2030						
1	Cranes	0	0.29	10.3	1008	10.3	0		3
2	Forklifts	89	0.2	7.5	1008	7.5	269136		3
1	Generator Sets	84	0.74	5.4	1008	5.4	338688		4
1	Tractors/Loaders/Backhoes	97	0.37	8.1	1011	0.8	29391		3
2	Aerial Lifts	0	0.31	9.7	1008	9.7	0		6
1	Welders	0	0.45	2.2	1008	2.2	0		1
1	Plate Compactors	8	0.43	6.3	1011	0.9	3232		4
1	Cement and Mortar Mixers	0	0.56	7.1	1008	7.1	0		4
Building - Interior/Architectural Coating									
		Start Date:	2/13/2028		Total phase:		123	Total phase:	
		End Date:	7/9/2028						
1	Air Compressors	0	0.48	8.3	123	8.3	0		4
Paving									
		Start Date:	12/24/2027		Total phase:		123	Total phase:	
		Start Date:	5/15/2028						
2	Small Roller Compacte	80	0.38	6.6	123	6.6	49357		5
1	Tractors/Loaders/Backhoes	97	0.37	5.4	123	5.4	23862		2
2	Concrete Saw	0	0.73	8.2	6	0.4	0		6

Equipment types listed in "Equipment Types" worksheet tab.

Complete one sheet for each project component

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

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 3 Affordable (R4a)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
 210 Dwelling Units
 1.32 total project acres disturbed
 190,000 s.f. residential
 0 s.f. retail
 0 s.f. office/commercial
 0 s.f. other, specify: Community Use
 64,000 s.f. parking garage 210 spaces
 0 s.f. parking lot 0 spaces

Construction Hours
 7 am to 6 pm

Pile Driving? NO

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? No

IF YES (if BOTH separate values) -->
 Kilowatts/Horsepower: _____
 Fuel Type: _____

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments	
Demolition									
		Start Date:	11/15/2022		Total phase:		86	Overall Import/Export Volumes	
		End Date:	2/23/2023					<i>Hours at LF = 1</i>	
1	Aerial Lifts	0	0.31	8.5	86	6.5	0	Demolition Volumes	2
1	Air Compressors	0	0.48	4.2	86	4.2	0	53,170 sf demo + 1,000 tons of asphalt debris	2
1	Concrete/Industrial Saws	0	0.73	2.7	86	2.7	0	830-850 Maude	2
4	Excavators (wheel ram)	158	0.38	7.9	86	7.9	163165		6
1	Forklifts	89	0.2	10.0	86	10.0	15308		2
1	Generator Sets	84	0.74	5.4	86	5.4	28936		4
1	Rubber Tired Dozers	247	0.4	10.0	86	10.0	84968		4
1	Sweepers/Scrubbers	64	0.46	6.3	86	6.5	16512		3
1	Tractors/Loaders/Backhoes	97	0.37	8.1	86	8.1	25026		3
Site Preparation									
		Start Date:	2/23/2027		Total phase:		13	Total phase:	
		End Date:	3/10/2027						
1	Sweepers/Scrubbers	64	0.46	4.3	13	4.3	1664		2
1	Water Trucks	0	0	2.0	13	2.0	0		2
2	Tractors/Loaders/Backhoes	97	0.37	8.1	13	8.1	7566		3
Grading / Excavation									
		Start Date:	3/10/2027		Total phase:		46	Total phase:	
		End Date:	5/2/2027						
1	Air Compressors	0	0.48	4.2	46	4.2	0	Soil Hauling Volume	2
2	Bore/Drill Rigs Dewatering	221	0.5	6.0	19	2.0	19890	Export volume = 42,787 cubic yards	6
2	Excavators	158	0.38	7.9	46	7.9	43637	Import volume = 0 cubic yards	6
1	Generator Sets	84	0.74	8.1	46	8.1	23184		6
2	Bore/Drill Rig Shoring	221	0.5	6.0	31	4.0	41106		6
2	Plate Compactors	8	0.43	5.8	15	1.9	599		5
1	Dewatering Pump	84	0.74	24.0	46	24.0	68625		24
4	Rubber Tired Dozers	247	0.4	7.5	46	7.5	136344		6
1	Skid Steer Loaders	65	0.37	10.8	19	3.5	3900		4
2	Sweepers/Scrubbers	64	0.46	8.7	46	8.7	23564		8
2	Tractors/Loaders/Backhoes	97	0.37	10.8	46	10.8	35660		8
Trenching/Foundation									
		Start Date:	5/2/2027		Total phase:		130	Total phase:	
		End Date:	10/1/2027						
2	Tractors/Loaders/Backhoes	97	0.37	6.8	20	1.0	9690		5
1	Cranes	0	0.29	10.3	130	10.3	0		3
2	Concrete Pumps	84	0.74	5.4	130	5.4	87360		4
2	Aerial Lifts	0	0.31	9.7	130	9.7	0		6
1	Generator Sets	84	0.74	5.4	130	5.4	43680		4
2	Forklifts	89	0.2	10.0	130	10.0	46280		4
Building - Exterior									
		Start Date:	10/1/2027		Total phase:		319	Total phase:	
		End Date:	10/8/2028						
1	Cranes	0	0.29	10.3	319	10.3	0		3
2	Forklifts	89	0.2	7.5	319	7.5	85173		3
1	Generator Sets	84	0.74	5.4	319	5.4	107184		4
1	Tractors/Loaders/Backhoes	97	0.37	8.1	32	0.8	9312		3
2	Aerial Lifts	0	0.31	9.7	319	9.7	0		6
1	Welders	0	0.45	2.2	319	2.2	0		1
1	Plate Compactors	8	0.43	6.3	32	0.9	1024		4
1	Cement and Mortar Mixers	0	0.56	7.1	319	7.1	0		4
Building - Interior/Architectural Coating									
		Start Date:	11/22/2027		Total phase:		39	Total phase:	
		End Date:	1/7/2028						
1	Air Compressors	0	0.48	6.3	39	8.3	0		4
Paving									
		Start Date:	10/8/2027		Total phase:		39	Total phase:	
		Start Date:	11/22/2027						
2	Small Roller Compact	80	0.38	6.8	39	6.8	15650		5
1	Tractors/Loaders/Backhoes	97	0.37	5.4	39	5.4	7566		2
2	Concrete Saw	0	0.73	6.2	2	0.4	0		6

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

1152532 -2.1%

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 3 Infrastructure (Horizontal Finished Work)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size: 0 Dwelling Units 1 total project acres disturbed

0 s.f. residential

0 s.f. retail

0 s.f. office/commercial

0 s.f. other, specify: Community Use

0 s.f. parking garage 0 spaces

0 s.f. parking lot 0 spaces

Construction Hours: 7 am to 6 pm

Pile Driving? NO

Project include **OPERATIONAL GENERATOR OR FIRE PUMP** on-site? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Infrastructure							Overall Import/Export Volumes
								Hours at LF = 1
								1
								6
								4
								6
								5
								4
								2
								2
								2

Equipment types listed in "Equipment Types" worksheet tab.

Complete one sheet for each project component

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

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 4 (O3, O4, O5, P1, P2)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size: **0** Dwelling Units **12.33** total project acres disturbed
0 s.f. residential
0 s.f. retail
685,061 s.f. office/commercial
4,000 s.f. other, specify:
420,000 s.f. parking garage **1,969** spaces
0 s.f. parking lot **0** spaces
7 am to **6 pm**
Construction Hours

Pile Driving? **NO**
 Project include **OPERATIONAL GENERATOR OR FIRE PUMP** on-site? **No**
 IF YES (if BOTH separate values) -->
 Kilowatts/Horsepower: _____
 Fuel Type: _____
 Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments	
Demolition									
		Start Date:			Total phase:		234	Overall Import/Export Volumes	<i>Hours at LF = 1</i>
		End Date:							
1	Aerial Lifts	0	0.31	8.5	234	6.5	0	Demolition Volume	2
1	Air Compressors	0	0.48	4.2	234	4.2	0	132,996 sf demo + 10,106 tons of asphalt debris	2
3	Concrete/Industrial Saws	0	0.73	8.2	234	8.2	0	530 Logue, 500/506, 510/516, 520/526 Clyde, 485/495 Clyde	6
4	Excavators (w/hoop ram)	158	0.38	7.9	234	7.9	443960		6
1	Forklifts	89	0.2	10.0	234	10.0	41652		2
1	Generator Sets	84	0.74	5.4	234	5.4	78624		4
1	Rubber Tired Dozers	247	0.4	10.0	234	10.0	231192		4
1	Sweepers/Scrubbers	64	0.46	8.5	234	6.5	44928		3
1	Tractors/Loaders/Backhoes	97	0.37	8.1	234	8.1	68094		3
Site Preparation									
		Start Date:			Total phase:		54		Total phase:
		End Date:							
1	Sweepers/Scrubbers	64	0.46	4.3	54	4.3	6912		2
1	Water Trucks	0	0	2.0	54	2.0	0		2
2	Tractors/Loaders/Backhoes	97	0.37	8.1	54	8.1	31428		3
Grading / Excavation									
		Start Date:			Total phase:		86		Total phase:
		End Date:							
1	Air Compressors	0	0.48	4.2	86	4.2	0	Soil Hauling Volume	2
2	Bore/Drill Rigs Dewatering	221	0.5	6.0	29	2.0	98454	Export volume = 110,949 cubic yards	6
4	Excavators	158	0.38	7.9	86	7.9	163165	Import volume = 0 cubic yards	6
1	Generator Sets	84	0.74	8.1	86	8.1	43344		6
2	Bore/Drill Rig Shoring	221	0.5	6.0	58	4.0	76908		6
4	Geothermal Bore/Drill Rig	221	0.5	9.0	64	6.7	254592		6
2	Plate Compactors	8	0.43	5.5	29	2.0	1157	Export volume = 1,713 cubic yards	5
1	Dewatering Pump	84	0.74	24.0	86	24.0	128298		24
5	Rubber Tired Dozers	247	0.4	8.0	86	9.0	382356		6
1	Skid Steer Loaders	65	0.37	10.8	29	3.6	7540		4
2	Sweepers/Scrubbers	64	0.46	8.7	86	8.7	44054		8
4	Tractors/Loaders/Backhoes	97	0.37	10.8	86	10.8	133339		8
Trenching/Foundation									
		Start Date:			Total phase:		766		Total phase:
		End Date:							
2	Tractors/Loaders/Backhoes	97	0.37	6.8	61	0.5	29555		5
1	Cranes	0	0.29	6.9	766	6.9	0		2
4	Geothermal Bore/Drill Rig	221	0.5	9.0	50	0.6	198900		6
2	Concrete Pumps	84	0.74	5.4	766	5.4	514752		4
2	Aerial Lifts	0	0.31	8.7	408	5.2	0		6
1	Generator Sets	84	0.74	5.4	766	5.4	257376		4
4	Forklifts	89	0.2	10.0	766	10.0	545392		4
Building - Exterior									
		Start Date:			Total phase:		1120		Total phase:
		End Date:							
1	Cranes	0	0.29	10.3	1120	10.3	0		3
2	Forklifts	89	0.2	7.5	1120	7.5	299040		3
1	Generator Sets	84	0.74	5.4	1120	5.4	376320		4
1	Tractors/Loaders/Backhoes	97	0.37	8.1	112	0.8	32592		3
2	Aerial Lifts	0	0.31	9.7	1120	9.7	0		6
1	Welders	0	0.45	2.2	1120	2.2	0		1
1	Plate Compactors	8	0.43	6.3	112	0.9	3584		4
1	Cement and Mortar Mixers	0	0.56	7.1	1120	7.1	0		4
Building - Interior/Architectural Coating									
		Start Date:			Total phase:		205		Total phase:
		End Date:							
1	Air Compressors	0	0.48	8.3	205	8.3	0		4
Paving									
		Start Date:			Total phase:		205		Total phase:
		End Date:							
2	Small Roller Compacte	80	0.38	6.6	205	6.6	82282		5
1	Tractors/Loaders/Backhoes	97	0.37	5.4	205	5.4	39770		2
1	Pavers	0	0.42	4.8	205	4.8	0		2
1	Rollers	80	0.38	6.3	205	5.3	32800		2
2	Concrete Saw	0	0.73	8.2	10	0.4	0		6
							4632340 -1.0%		
Equipment types listed in "Equipment Types" worksheet tab.									
Complete one sheet for each project component									
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									

Air Quality/Noise Construction Information Data Request

Project Name: Middlefield Park Phase 4 Infrastructure (Horizontal Finished Work)

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size: 0 Dwelling Units 1 total project acres disturbed

0 s.f. residential

0 s.f. retail

0 s.f. office/commercial

0 s.f. other, specify: Community Use

0 s.f. parking garage 0 spaces

0 s.f. parking lot 0 spaces

Construction Hours: 7 am to 6 pm

Pile Driving? NO

Project include **OPERATIONAL GENERATOR OR FIRE PUMP** on-site? No

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available): _____

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Infrastructure				68			Overall Import/Export Volumes
								Hours at LF = 1
								Demolition Volume
1	Concrete/Industrial Saws	0	0.73	1.4	68	1.4	0	1
1	Cement and Mortar Mixers	0	0.56	10.7	68	10.7	0	6
1	Generator Sets	84	0.74	5.4	68	5.4	22848	4
2	Pavers	132	0.42	7.1	68	7.1	53533	6
2	Plate Compactors	8	0.43	5.8	68	5.8	2713	5
1	Rollers	80	0.38	10.5	68	10.5	21760	4
1	Striper Truck	0	0	2.0	4	0.11	0	2
1	Sweepers/Scrubbers	64	0.46	4.3	18	1.2	2304	2
1	Tractors/Loaders/Backhoes	97	0.37	5.4	34	2.7	6596	2
							109754	-0.3%

Equipment types listed in "Equipment Types" worksheet tab.

Complete one sheet for each project component

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

Project Phase	Construction Phase	Horsepower ¹ Load Factor ¹ Hours/day Days Operational			
		Start Date:			Total phase:
Phase 1	Trenching/Foundation			3/31/2023	161
		End Date:		10/5/2023	
2	Dewatering Pump		84	0.74	24.0
Phase 1 Affordable	Trenching/Foundation	Start Date:		5/12/2023	140
		End Date:		10/22/2023	
1	Dewatering Pump		84	0.74	24.0
Phase 2	Trenching/Foundation	Start Date:		7/2/2025	330
		End Date:		7/22/2026	
1	Dewatering Pump		84	0.74	24.0
Phase 3	Trenching/Foundation	Start Date:		5/17/2026	412
		End Date:		9/12/2027	
1	Dewatering Pump		84	0.74	24.0
Phase 3 Affordable	Trenching/Foundation	Start Date:		5/2/2027	130
		End Date:		10/1/2027	
1	Dewatering Pump		84	0.74	24.0
Phase 4	Trenching/Foundation	Start Date:		7/26/2026	766
		End Date:		1/3/2028	
1	Dewatering Pump		84	0.74	24.0

¹ CalEEMod default

Typical Equipment Type & Load Factors		
OFFROAD Equipment	Horsepower	Load Factor
Aerial Lifts	Electric	0.31
Air Compressors	Electric	0.48
Bore/Drill Rigs	221	0.5
Cement and Mortar Mixers	Electric	0.56
Concrete/Industrial Saws	Electric	0.73
Cranes	Electric	0.29
Crawler Tractors	212	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	158	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	187	0.41
Off-Highway Tractors	124	0.44
Off-Highway Trucks	402	0.38
Other Construction	172	0.42
Other General Industrial	88	0.34
Other Material Handling	168	0.4
Pavers	132	0.42
Paving Equipment	130	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.3
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	247	0.4
Rubber Tired Loaders	203	0.36
Scrapers	367	0.48
Signal Boards	6	0.82
Skid Steer Loaders	65	0.37
Surfacing Equipment	263	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	78	0.5
Welders	Electric	0.45

Site Equipment	CalEEMod Type
Aerial Lifts	Aerial Lifts
Air Compressors	Air Compressors
Concrete/Industrial Saws	Concrete/Industrial
Excavators (w/hoeram)	Excavators
Forklifts	Forklifts
Generator Sets	Generator Sets
Rubber Tired Dozers	Rubber Tired
Sweepers/Scrubbers	Sweepers/Scrubbe
Tractors/Loaders/Backhoes	Tractors/Loaders/B
Water Trucks	
Grading / Excavation	Graders
Bore/Drill Rigs Dewatering	Bore/Drill Rigs
Excavators	Excavators
Bore/Drill Rig Shoring	Bore/Drill Rigs
Geothermal Bore/Drill Rig	Bore/Drill Rigs
Plate Compactors	Plate Compactors
Dewatering Pump	Pumps
Skid Steer Loaders	Skid Steer Loaders
Trenching/Foundation	Trenchers
Cranes	Cranes
Concrete Pumps	Pumps
Aerial Lifts	Aerial Lifts
Welders	Welders
Cement and Mortar Mixers	Cement and
Paving	Pavers
Small Roller Compacter	Rollers
Concrete Saw	Concrete/Industrial
Striper Truck	
Pavers	Pavers
Rollers	Rollers

Google Middlefield Park Traffic HRA

Trip Generation

Existing	-6272
Google Office	6914
Multifamily Housing	8913
Retail	921
Community /Civic Space	259
Maude Park	77
Net Increase	10,812

Street	Segment	Traffic Volume		
		Existing	Existing plus Project	
Ellis Street	north of Middlefield	9,110	11,540	2,430
Middlefield	west of Ellis	13,270	14,770	1,500
Middlefield - east	east of Ellis	15,700	18,300	2,600
Logue Ave	north of Maude	670	1,060	390
Logue Ave	south of Maude	2,900	4,650	1,750
Maude Ave	west of SR 237	6,580	9,860	3,280
Clyde Ave	north of Maude	2,480	6,010	3,530

Unmitigated Total Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023	1.17	10.76	0.52	0.50	1616.90	
2024	0.26	2.40	0.12	0.11	453.03	
2025	6.94	7.14	0.31	0.29	1557.84	
2026	1.65	15.14	0.66	0.62	2972.06	
2027	2.14	8.35	0.36	0.35	1434.19	
2028	12.46	4.54	0.21	0.20	918.55	
2029	0.38	1.33	0.06	0.06	267.96	
2030	0.05	0.37	0.01	0.01	119.46	
2031	0.02	0.11	0.00	0.00	33.92	
EMFAC						
2022-2023	0.27	1.44	0.11	0.04	1393.14	
2024	0.26	1.43	0.10	0.04	1366.08	
2025	0.19	1.33	0.09	0.04	1207.77	
2026	0.47	2.48	0.19	0.08	2556.31	
2027	0.55	2.91	0.23	0.09	3015.62	
2028	0.53	2.86	0.22	0.09	2948.27	
2029	0.44	2.21	0.18	0.07	2337.77	
2030	0.16	0.92	0.07	0.03	927.29	
2031	0.04	0.26	0.02	0.01	259.14	
Total Construction Emissions by Year						
2022-2023	1.44	12.20	0.63	0.54	3010.04	
2024	0.52	3.83	0.22	0.16	1819.11	
2025	7.13	8.48	0.40	0.33	2765.61	
2026	2.12	17.62	0.85	0.70	5528.37	
2027	2.69	11.26	0.59	0.44	4449.81	
2028	12.99	7.40	0.43	0.29	3866.81	
2029	0.82	3.54	0.24	0.13	2605.73	
2030	0.21	1.29	0.08	0.03	1046.74	
2031	0.06	0.37	0.02	0.01	293.06	
Total Construction Emissions						
Tons	27.97	65.99	3.46	2.62	25385.28	
Average Daily Emissions						
Pounds/Workdays					Workdays	
2022-2023	7.85	66.67	3.42	2.94		366
2024	3.33	24.37	1.42	0.99		314
2025	45.56	54.17	2.55	2.08		313
2026	13.53	112.61	5.43	4.45		313
2027	17.16	71.98	3.78	2.81		313
2028	82.76	47.15	2.76	1.85		314
2029	5.22	22.64	1.51	0.83		313
2030	1.34	8.25	0.49	0.22		313
2031	1.25	7.86	0.46	0.21		93
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	178.00	415.69	21.81	16.39	0.00	
Average	21.09	49.77	2.61	1.98	0.00	2652.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 1 R1+R2 Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	MT
Tons						
Construction Equipment						
2022-2023	0.67	6.33	0.30	0.29	1180.59	
2024	0.12	1.11	0.06	0.05	209.39	
2025	5.08	0.18	0.01	0.01	31.35	
2026						
2027						
2028						
2029						
2030						
2031						
EMFAC						
2022-2023	0.23	1.27	0.09	0.04	1212.20	
2024	0.20	1.09	0.08	0.03	1041.47	
2025	0.06	0.36	0.03	0.01	341.47	
2026						
2027						
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.90	7.60	0.40	0.32	2392.79	
2024	0.32	2.21	0.14	0.09	1250.86	
2025	5.15	0.54	0.03	0.02	372.82	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.00	0.00	0.00	0.00	0.00	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	6.37	10.34	0.56	0.43	4016.48	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	4.92	41.54	2.16	1.77		366
2024	2.04	14.05	0.86	0.55		314
2025	99.91	10.40	0.67	0.36		103
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	106.87	65.99	3.69	2.68	0.00	
Average	16.26	26.42	1.44	1.09	0.00	783.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 1 Affordable R6 Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	MT
Tons						
Construction Equipment						
2023	0.27	2.52	0.12	0.12	436.32	
2024	0.06	0.56	0.03	0.03	103.24	
2025	1.10	0.02	0.00	0.00	3.42	
2026						
2027						
2028						
2029						
2030						
2031						
EMFAC						
2023	0.04	0.17	0.01	0.01	180.93	
2024	0.04	0.17	0.01	0.01	181.43	
2025	0.01	0.03	0.00	0.00	31.23	
2026						
2027						
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2023	0.31	2.69	0.14	0.12	617.25	
2024	0.10	0.73	0.04	0.03	284.67	
2025	1.11	0.05	0.00	0.00	34.65	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.00	0.00	0.00	0.00	0.00	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	1.52	3.47	0.18	0.16	936.57	
Pounds/Workdays						
Average Daily Emissions						
2023	1.98	17.20	0.87	0.78		313
2024	0.65	4.64	0.26	0.20		314
2025	41.01	1.83	0.12	0.07		54
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	43.64	23.68	1.26	1.05	0.00	
Average	4.46	10.19	0.53	0.46	0.00	681.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 1 Infrastructure Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	MT
Tons						
Construction Equipment						
2022-2023						
2024	0.02	0.21	0.01	0.01	42.63	
2025	0.03	0.31	0.01	0.01	66.74	
2026						
2027						
2028						
2029						
2030						
2031						
EMFAC						
2022-2023						
2024	0.0019	0.0024	0.0003	0.0001	4.90	
2025	0.0029	0.0037	0.0005	0.0002	7.67	
2026						
2027						
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.02	0.21	0.01	0.01	47.53	
2025	0.04	0.31	0.01	0.01	74.41	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.00	0.00	0.00	0.00	0.00	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.06	0.52	0.02	0.02	121.95	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	0.90	7.89	0.38	0.35		54
2025	0.86	7.40	0.35	0.32		84
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	1.76	15.29	0.73	0.67	0.00	
Average	0.88	7.59	0.36	0.33	0.00	138.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 2 O1+O2 Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024	0.06	0.52	0.02	0.02	97.77	
2025	0.69	6.33	0.27	0.25	1456.32	
2026	0.18	1.56	0.07	0.07	357.43	
2027	0.06	0.52	0.02	0.02	104.36	
2028	3.18	0.75	0.04	0.03	144.73	
2029	0.26	0.27	0.01	0.01	55.02	
2030						
2031						
EMFAC						
2022-2023						
2024	0.02	0.16	0.01	0.00	138.28	
2025	0.12	0.94	0.06	0.03	827.40	
2026	0.12	0.94	0.06	0.03	827.40	
2027	0.12	0.94	0.06	0.03	827.40	
2028	0.12	0.95	0.06	0.03	829.67	
2029	0.06	0.50	0.03	0.01	435.24	
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.08	0.68	0.04	0.03	236.04	
2025	0.81	7.27	0.33	0.28	2283.72	
2026	0.29	2.51	0.13	0.09	1184.83	
2027	0.18	1.46	0.09	0.05	931.76	
2028	3.30	1.70	0.10	0.06	974.40	
2029	0.33	0.77	0.05	0.03	490.25	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	4.99	14.39	0.74	0.54	6101.02	
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Workdays
2024	2.94	26.09	1.37	1.06		52
2025	5.15	46.47	2.13	1.78		313
2026	1.88	16.02	0.85	0.60		313
2027	1.13	9.34	0.56	0.32		313
2028	21.05	10.82	0.63	0.38		314
2029	3.97	9.33	0.56	0.32		165
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	36.12	118.08	6.10	4.45	0.00	
Average	49.14	160.65	8.30	6.06	0.00	1470.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		

Phase 2 Infrastructure Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.03	0.30	0.01	0.01	67.47	
2027	0.05	0.49	0.02	0.02	108.99	
2028						
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.0021	0.0024	0.0004	0.0001	5.92	
2027	0.0034	0.0039	0.0006	0.0002	9.52	
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.04	0.30	0.01	0.01	73.39	
2027	0.06	0.49	0.02	0.02	118.51	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.09	0.80	0.04	0.03	191.90	
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Workdays
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	1.36	11.50	0.52	0.49		53
2027	1.37	11.59	0.52	0.49		85
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	2.72	23.09	1.04	0.98	0.00	
Average	1.36	11.55	0.52	0.49	0.00	138.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		

Phase 3 R3, R4b, R5 Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust	CO2e	MT
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.62	5.74	0.25	0.23	1246.77	
2027	0.16	1.48	0.06	0.06	346.58	
2028	5.12	0.71	0.03	0.03	137.41	
2029	0.06	0.52	0.02	0.02	104.36	
2030	0.00	0.02	0.00	0.00	6.50	
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.23	0.85	0.08	0.03	1034.78	
2027	0.23	0.85	0.08	0.03	1034.78	
2028	0.23	0.85	0.08	0.03	1037.61	
2029	0.23	0.85	0.08	0.03	1034.78	
2030	0.01	0.05	0.00	0.00	59.54	
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.85	6.59	0.32	0.26	2281.55	
2027	0.39	2.33	0.14	0.09	1381.35	
2028	5.35	1.56	0.11	0.06	1175.03	
2029	0.29	1.37	0.10	0.05	1139.14	
2030	0.02	0.07	0.00	0.00	66.03	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	6.90	11.91	0.68	0.47	6043.10	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Workdays
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	5.42	42.11	2.06	1.67		313
2027	2.52	14.86	0.90	0.59		313
2028	34.10	9.94	0.70	0.39		314
2029	1.83	8.74	0.64	0.34		313
2030	1.79	7.70	0.53	0.23		18
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	45.66	83.35	4.84	3.22	0.00	
Average	10.86	18.75	1.07	0.74	0.00	1271.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	Total PM10 Tons	Total PM2.5		
Total						
Existing Use Emissions						
Total						
Net Annual Operational Emissions						
Tons/year	0.00	0.00	0.00	0.00		
Threshold - Tons/year	10.0	10.0	15.0	10.0		
Average Daily Emissions						
Pounds Per Day	0.00	0.00	0.00	0.00		
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 3 Affordable R4a Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust	CO2e	MT
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.04	0.37	0.02	0.02	75.33	
2027	1.45	2.19	0.10	0.09	427.23	
2028	0.18	0.40	0.02	0.02	80.02	
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.01	0.03	0.00	0.00	34.42	
2027	0.05	0.25	0.02	0.01	267.30	
2028	0.04	0.19	0.02	0.01	205.05	
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.05	0.40	0.02	0.02	109.75	
2027	1.49	2.44	0.12	0.10	694.53	
2028	0.22	0.59	0.03	0.02	285.08	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	1.76	3.42	0.17	0.14	1089.36	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Workdays
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	2.31	19.87	0.98	0.84		40
2027	9.55	15.58	0.76	0.64		313
2028	1.81	4.88	0.29	0.20		240
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	13.67	40.33	2.03	1.68	0.00	
Average	5.93	11.54	0.58	0.48	0.00	593.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	Total PM10 Tons	Total PM2.5		
Total						
Existing Use Emissions						
Total						
Net Annual Operational Emissions						
Tons/year	0.00	0.00	0.00	0.00		
Threshold - Tons/year	10.0	10.0	15.0	10.0		
Average Daily Emissions						
Pounds Per Day	0.00	0.00	0.00	0.00		
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 3 Infrastructure Unmitigated Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust	CO2e	MT
Construction Equipment						
2022-2023						
2024						
2025						
2026						
2027	0.04	0.38	0.02	0.02	81.49	
2028						
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026						
2027	0.0030	0.0037	0.0006	0.0002	8.87	
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.04	0.38	0.02	0.02	90.36	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.04	0.38	0.02	0.02	90.36	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		Workdays
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	0.85	7.36	0.34	0.32		103
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	0.85	7.36	0.34	0.32	0.00	
Average	0.85	7.36	0.34	0.32	0.00	103.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	Total PM10 Tons	Total PM2.5		
Total						
Existing Use Emissions						
Total						
Net Annual Operational Emissions						
Tons/year	0.00	0.00	0.00	0.00		
Threshold - Tons/year	10.0	10.0	15.0	10.0		
Average Daily Emissions						
Pounds Per Day	0.00	0.00	0.00	0.00		
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 4 O3+O4+O5, P1+P2 Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.64	5.98	0.26	0.25	1225.06	
2027	0.19	1.70	0.08	0.07	365.54	
2028	3.94	2.43	0.11	0.11	502.05	
2029	0.06	0.54	0.02	0.02	108.58	
2030	0.05	0.35	0.01	0.01	112.96	
2031	0.02	0.11	0.00	0.00	33.92	
EMFAC						
2022-2023						
2024						
2025						
2026	0.11	0.65	0.05	0.02	653.79	
2027	0.14	0.87	0.07	0.03	867.75	
2028	0.14	0.87	0.07	0.03	870.13	
2029	0.14	0.87	0.07	0.03	867.75	
2030	0.14	0.87	0.07	0.03	867.75	
2031	0.04	0.26	0.02	0.01	259.14	
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.75	6.63	0.31	0.27	1878.84	
2027	0.33	2.57	0.14	0.10	1233.29	
2028	4.09	3.30	0.18	0.13	1372.18	
2029	0.20	1.41	0.09	0.05	976.33	
2030	0.19	1.22	0.07	0.03	980.71	
2031	0.06	0.37	0.02	0.01	293.06	
Total Construction Emissions						
Tons	5.63	15.50	0.82	0.59	6734.42	
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	6.38	56.22	2.65	2.25	236	
2027	2.12	16.42	0.92	0.65	313	
2028	26.04	21.05	1.13	0.85	314	
2029	1.29	8.98	0.58	0.32	313	
2030	1.24	7.81	0.46	0.21	313	
2031	1.25	7.86	0.46	0.21	93	
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	38.32	118.32	6.20	4.49	0.00	
Average	7.11	19.59	1.03	0.75	0.00	1582.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		

Phase 4 Infrastructure Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026						
2027						
2028	0.03	0.25	0.01	0.01	54.33	
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026						
2027						
2028	0.0019	0.0023	0.0004	0.0001	5.80	
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.00	0.00	0.00	0.00	0.00	
2028	0.03	0.25	0.01	0.01	60.13	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.03	0.25	0.01	0.01	60.13	
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2028	0.84	7.32	0.34	0.31	69	
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	0.84	7.32	0.34	0.31	0.00	
Average	0.84	7.32	0.34	0.31	0.00	69.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		

Dewatering Pumps Unmitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
Phase 1						
2023	0.16	1.33	0.07	0.07		
Phase 1 Affordable						
2023	0.07	0.58	0.03	0.03		
Phase 2						
2025	0.04	0.31	0.01	0.01		
2026	0.05	0.41	0.02	0.02		
Phase 3						
2026	0.07	0.63	0.02	0.02		
2027	0.09	0.80	0.03	0.03		
Phase 3 Affordable						
2027	0.05	0.43	0.01	0.01		
Phase 4						
2026	0.02	0.15	0.01	0.01		
2027	0.04	0.38	0.01	0.01		
<i>Total Construction Emissions by Year</i>						
2023	0.23	1.91	0.09	0.09	0.00	
2025	0.04	0.31	0.01	0.01	0.00	
2026	0.14	1.19	0.05	0.05	0.00	
2027	0.19	1.60	0.06	0.06	0.00	
<i>Total Construction Emissions</i>						
Tons	0.59	5.00	0.21	0.21	0.00	
Pounds/Workdays	<i>Average Daily Emissions</i>				Workdays	
2023	2.82	23.68	1.16	1.16		161
2025	0.47	3.94	0.16	0.16		157
2026	1.42	12.08	0.48	0.48		197
2027	1.20	10.21	0.38	0.38		313
Threshold - lbs/day	54.0	54.0	82.0	54.0		
<i>Total Construction Emissions</i>						
Pounds	5.91	49.91	2.18	2.18	0.00	
Average	1.43	12.09	0.51	0.51	0.00	828.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Mitigated Tier 4 Final Total Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023	0.27	1.48	0.03	0.03	1616.90	
2024	0.06	0.28	0.01	0.01	453.03	
2025	1.46	1.18	0.03	0.03	1557.83	
2026	0.44	2.46	0.06	0.06	2972.05	
2027	0.48	1.12	0.03	0.03	1434.19	
2028	2.51	0.52	0.02	0.02	918.55	
2029	0.08	0.15	0.00	0.00	267.96	
2030	0.01	0.06	0.00	0.00	119.46	
2031	0.00	0.02	0.00	0.00	33.92	
EMFAC						
2022-2023	0.27	1.44	0.11	0.04	1393.14	
2024	0.26	1.43	0.10	0.04	1366.08	
2025	0.19	1.33	0.09	0.04	1207.77	
2026	0.47	2.48	0.19	0.08	2556.31	
2027	0.55	2.91	0.23	0.09	3015.62	
2028	0.53	2.86	0.22	0.09	2948.27	
2029	0.44	2.21	0.18	0.07	2337.77	
2030	0.16	0.92	0.07	0.03	927.29	
2031	0.04	0.26	0.02	0.01	259.14	
Total Construction Emissions by Year						
2022-2023	0.54	2.92	0.14	0.08	3010.04	
2024	0.32	1.71	0.11	0.05	1819.11	
2025	1.65	2.52	0.12	0.07	2765.60	
2026	0.91	4.94	0.25	0.13	5528.36	
2027	1.02	4.03	0.26	0.12	4449.81	
2028	3.04	3.37	0.24	0.11	3866.81	
2029	0.52	2.36	0.18	0.08	2605.72	
2030	0.17	0.98	0.07	0.03	1046.74	
2031	0.05	0.28	0.02	0.01	293.06	
Total Construction Emissions						
Tons	8.22	23.10	1.39	0.67	25385.27	
Pounds/Workdays	Average Daily Emissions				Workdays	
2022-2023	2.94	15.95	0.76	0.43		366
2024	2.04	10.89	0.71	0.32		314
2025	10.54	16.08	0.78	0.43		313
2026	5.81	31.59	1.60	0.86		313
2027	6.53	25.74	1.66	0.79		313
2028	19.39	21.49	1.52	0.67		314
2029	3.31	15.07	1.15	0.48		313
2030	1.09	6.24	0.46	0.19		313
2031	1.01	5.93	0.43	0.18		93
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	52.67	148.98	9.06	4.35	0.00	
Average	6.20	17.42	1.05	0.51	0.00	2652.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 1 R1+R2 Mitigated Tier 4 Final Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e
Year	Tons				MT
Construction Equipment					
2022-2023	0.16	0.92	0.02	0.02	1180.59
2024	0.03	0.11	0.004	0.004	209.39
2025	1.02	0.02	0.001	0.001	31.35
2026					
2027					
2028					
2029					
2030					
2031					
EMFAC					
2022-2023	0.23	1.27	0.09	0.04	1212.20
2024	0.20	1.09	0.08	0.03	1041.47
2025	0.06	0.36	0.03	0.01	341.47
2026					
2027					
2028					
2029					
2030					
2031					
Total Construction Emissions by Year					
2022-2023	0.39	2.19	0.11	0.06	2392.79
2024	0.22	1.21	0.08	0.04	1250.86
2025	1.08	0.38	0.03	0.01	372.82
2026	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00
Total Construction Emissions					
Tons	1.70	3.77	0.22	0.11	4016.47
Pounds/Workdays					
Average Daily Emissions					
2022-2023	2.14	11.98	0.62	0.32	366
2024	1.43	7.68	0.53	0.23	314
2025	21.01	7.31	0.51	0.22	103
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Threshold - lbs/day	54.0	54.0	82.0	54.0	
Total Construction Emissions					
Pounds	24.58	26.97	1.66	0.77	0.00
Average	4.34	9.64	0.57	0.27	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0	783.00

Phase 1 Affordable R6 Mitigated Tier 4 Final Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e
Year	Tons				MT
Construction Equipment					
2023	0.06	0.36	0.01	0.01	436.32
2024	0.01	0.06	0.002	0.002	103.24
2025	0.22	0.00	0.0001	0.0001	3.42
2026					
2027					
2028					
2029					
2030					
2031					
EMFAC					
2023	0.04	0.17	0.01	0.01	180.93
2024	0.04	0.17	0.01	0.01	181.43
2025	0.01	0.03	0.00	0.00	31.23
2026					
2027					
2028					
2029					
2030					
2031					
Total Construction Emissions by Year					
2023	0.10	0.53	0.02	0.01	617.25
2024	0.05	0.23	0.02	0.01	284.67
2025	0.23	0.03	0.00	0.00	34.65
2026	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00
Total Construction Emissions					
Tons	0.38	0.79	0.04	0.02	936.57
Pounds/Workdays					
Average Daily Emissions					
2023	0.65	3.38	0.13	0.08	813
2024	0.35	1.46	0.10	0.05	314
2025	8.42	1.18	0.09	0.04	54
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Threshold - lbs/day	54.0	54.0	82.0	54.0	
Total Construction Emissions					
Pounds	9.41	6.02	0.32	0.17	0.00
Average	1.12	2.32	0.11	0.06	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0	681.00

Phase 1 Infrastructure Mitigated Tier 4 Final Construction Criteria Air Pollutants					
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e
Year	Tons				MT
Construction Equipment					
2022-2023					
2024	0.01	0.03	0.001	0.001	42.63
2025	0.01	0.05	0.001	0.001	66.74
2026					
2027					
2028					
2029					
2030					
2031					
EMFAC					
2022-2023					
2024	0.0019	0.0024	0.0003	0.0001	4.90
2025	0.0029	0.0037	0.0005	0.0002	7.67
2026					
2027					
2028					
2029					
2030					
2031					
Total Construction Emissions by Year					
2022-2023	0.00	0.00	0.00	0.00	0.00
2024	0.01	0.03	0.00	0.00	47.53
2025	0.01	0.05	0.00	0.00	74.41
2026	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00
Total Construction Emissions					
Tons	0.02	0.08	0.00	0.00	121.95
Pounds/Workdays					
Average Daily Emissions					
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2024	0.28	1.16	0.04	0.03	54
2025	0.28	1.17	0.04	0.03	84
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Threshold - lbs/day	54.0	54.0	82.0	54.0	
Total Construction Emissions					
Pounds	0.56	2.33	0.08	0.06	0.00
Average	0.28	1.17	0.04	0.03	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0	138.00

Phase 2 O1+O2 Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024	0.01	0.09	0.002	0.002	97.77	
2025	0.20	1.08	0.026	0.026	1456.32	
2026	0.05	0.20	0.006	0.006	357.43	
2027	0.01	0.06	0.002	0.002	104.36	
2028	0.64	0.08	0.002	0.002	144.73	
2029	0.05	0.03	0.001	0.001	55.02	
2030						
2031						
EMFAC						
2022-2023						
2024	0.02	0.16	0.01	0.00	138.28	
2025	0.12	0.94	0.06	0.03	827.40	
2026	0.12	0.94	0.06	0.03	827.40	
2027	0.12	0.94	0.06	0.03	827.40	
2028	0.12	0.95	0.06	0.03	829.67	
2029	0.06	0.50	0.03	0.01	435.24	
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.03	0.24	0.01	0.01	236.04	
2025	0.32	2.02	0.09	0.05	2283.72	
2026	0.16	1.14	0.07	0.03	1184.83	
2027	0.13	1.00	0.07	0.03	931.76	
2028	0.76	1.03	0.07	0.03	974.40	
2029	0.12	0.53	0.03	0.01	490.25	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	1.53	5.96	0.34	0.16	6101.02	
Average Daily Emissions						
					Workdays	
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	1.31	9.33	0.48	0.24		52
2025	2.05	12.92	0.57	0.34		313
2026	1.05	7.27	0.45	0.21		313
2027	0.85	6.39	0.42	0.18		313
2028	4.84	6.54	0.42	0.19		314
2029	1.42	6.38	0.42	0.18		165
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	11.51	48.83	2.75	1.33	0.00	
Average	15.67	66.43	3.75	1.81	0.00	1470.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 2 Infrastructure Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.01	0.04	0.001	0.001	67.47	
2027	0.01	0.07	0.002	0.002	108.99	
2028						
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.0021	0.0024	0.0004	0.0001	5.92	
2027	0.0034	0.0039	0.0006	0.0002	9.52	
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.01	0.04	0.00	0.00	73.39	
2027	0.02	0.07	0.00	0.00	118.51	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.03	0.11	0.00	0.00	191.90	
Average Daily Emissions						
					Workdays	
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	0.40	1.65	0.06	0.05		53
2027	0.41	1.66	0.06	0.05		85
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	0.81	3.32	0.12	0.10	0.00	
Average	0.40	1.66	0.06	0.05	0.00	138.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 3 R3, R4b, R5 Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust Tons	CO2e MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.17	1.02	0.02	0.02	1246.77	
2027	0.04	0.19	0.006	0.006	346.57	
2028	1.03	0.08	0.002	0.002	137.41	
2029	0.01	0.06	0.002	0.002	104.36	
2030	0.00	0.00	0.0001	0.0001	6.50	
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.23	0.85	0.08	0.03	1034.78	
2027	0.23	0.85	0.08	0.03	1034.78	
2028	0.23	0.85	0.08	0.03	1037.61	
2029	0.23	0.85	0.08	0.03	1034.78	
2030	0.01	0.05	0.00	0.00	59.54	
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.40	1.87	0.10	0.05	2281.55	
2027	0.27	1.04	0.08	0.04	1381.35	
2028	1.26	0.93	0.08	0.03	1175.03	
2029	0.24	0.91	0.08	0.03	1139.14	
2030	0.01	0.05	0.00	0.00	66.03	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	2.19	4.80	0.34	0.15	6043.10	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	2.58	11.96	0.63	0.33		313
2027	1.75	6.65	0.53	0.23		313
2028	8.01	5.91	0.51	0.21		314
2029	1.56	5.79	0.50	0.20		313
2030	1.56	5.79	0.50	0.20		18
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	15.46	36.10	2.67	1.18	0.00	
Average	3.45	7.55	0.54	0.24	0.00	1271.00
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		

Phase 3 Affordable R4a Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust Tons	CO2e MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.01	0.07	0.001	0.001	75.33	
2027	0.30	0.35	0.007	0.007	427.23	
2028	0.04	0.04	0.001	0.001	80.02	
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026	0.01	0.03	0.00	0.00	34.42	
2027	0.05	0.25	0.02	0.01	267.30	
2028	0.04	0.19	0.02	0.01	205.05	
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.02	0.10	0.00	0.00	109.75	
2027	0.35	0.59	0.03	0.02	694.53	
2028	0.07	0.23	0.02	0.01	285.08	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.44	0.92	0.05	0.03	1089.35	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	0.83	4.85	0.21	0.12		40
2027	2.21	3.77	0.18	0.10		313
2028	0.61	1.93	0.15	0.07		240
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	3.65	10.55	0.54	0.29	0.00	
Average	1.47	3.10	0.17	0.09	0.00	593.00
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		

Phase 3 Infrastructure Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated Year	ROG	NOX	PM10 Exhaust Tons	PM2.5 Exhaust Tons	CO2e MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026						
2027	0.01	0.06	0.001	0.001	81.49	
2028						
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026						
2027	0.0030	0.0037	0.0006	0.0002	8.87	
2028						
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.01	0.06	0.00	0.00	90.36	
2028	0.00	0.00	0.00	0.00	0.00	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.01	0.06	0.00	0.00	90.36	
Pounds/Workdays						
Average Daily Emissions						
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	0.27	1.15	0.04	0.03		103
2028	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	0.27	1.15	0.04	0.03	0.00	
Average	0.27	1.15	0.04	0.03	0.00	103.00
Threshold - lbs/day						
	54.0	54.0	82.0	54.0		

Phase 4 O3+O4+O5, P1+P2 Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026	0.17	1.00	0.02	0.02	1225.05	
2027	0.05	0.20	0.01	0.01	365.54	
2028	0.80	0.28	0.01	0.01	502.05	
2029	0.01	0.06	0.002	0.002	108.58	
2030	0.01	0.06	0.002	0.002	112.96	
2031	0.00	0.02	0.001	0.001	33.92	
EMFAC						
2022-2023						
2024						
2025						
2026	0.11	0.65	0.05	0.02	653.79	
2027	0.14	0.87	0.07	0.03	867.75	
2028	0.14	0.87	0.07	0.03	870.13	
2029	0.14	0.87	0.07	0.03	867.75	
2030	0.14	0.87	0.07	0.03	867.75	
2031	0.04	0.26	0.02	0.01	259.14	
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.28	1.65	0.07	0.04	1878.84	
2027	0.19	1.07	0.07	0.03	1233.29	
2028	0.94	1.15	0.07	0.04	1372.18	
2029	0.16	0.93	0.07	0.03	976.33	
2030	0.16	0.92	0.07	0.03	980.71	
2031	0.05	0.28	0.02	0.01	293.06	
Total Construction Emissions						
Tons	1.78	5.99	0.37	0.17	6734.42	
Pounds/Workdays	Average Daily Emissions				Workdays	
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	2.37	13.98	0.60	0.35	236	
2027	1.22	6.83	0.46	0.21	313	
2028	6.02	7.31	0.47	0.22	314	
2029	1.01	5.92	0.43	0.18	313	
2030	1.00	5.90	0.43	0.18	313	
2031	1.01	5.93	0.43	0.18	93	
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	12.63	45.87	2.82	1.33	0.00	
Average	2.25	7.57	0.47	0.22	0.00	1582.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Phase 4 Infrastructure Mitigated Tier 4 Final Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022-2023						
2024						
2025						
2026						
2027						
2028	0.01	0.04	0.001	0.001	54.33	
2029						
2030						
2031						
EMFAC						
2022-2023						
2024						
2025						
2026						
2027						
2028	0.0019	0.0023	0.0004	0.0001	5.80	
2029						
2030						
2031						
Total Construction Emissions by Year						
2022-2023	0.00	0.00	0.00	0.00	0.00	
2024	0.00	0.00	0.00	0.00	0.00	
2025	0.00	0.00	0.00	0.00	0.00	
2026	0.00	0.00	0.00	0.00	0.00	
2027	0.00	0.00	0.00	0.00	0.00	
2028	0.01	0.04	0.00	0.00	60.13	
2029	0.00	0.00	0.00	0.00	0.00	
2030	0.00	0.00	0.00	0.00	0.00	
2031	0.00	0.00	0.00	0.00	0.00	
Total Construction Emissions						
Tons	0.01	0.04	0.00	0.00	60.13	
Pounds/Workdays	Average Daily Emissions				Workdays	
2022-2023	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2024	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2025	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2026	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2027	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2028	0.26	1.14	0.04	0.03	69	
2029	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2030	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
2031	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Total Construction Emissions						
Pounds	0.26	1.14	0.04	0.03	0.00	
Average	0.26	1.14	0.04	0.03	0.00	69.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Dewatering Pumps Mitigated Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
Phase 1						
2023	0.03	0.14	0.004	0.004		
Phase 1 Affordable						
2023	0.01	0.06	0.002	0.002		
Phase 2						
2025	0.01	0.04	0.001	0.001		
2026	0.01	0.05	0.001	0.001		
Phase 3						
2026	0.02	0.08	0.002	0.002		
2027	0.02	0.10	0.003	0.003		
Phase 3 Affordable						
2027	0.01	0.06	0.002	0.002		
Phase 4						
2026	0.004	0.02	0.001	0.001		
2027	0.01	0.05	0.001	0.001		
<i>Total Construction Emissions by Year</i>						
2023	0.05	0.20	0.01	0.01	0.00	
2025	0.01	0.04	0.001	0.001	0.00	
2026	0.03	0.14	0.004	0.004	0.00	
2027	0.05	0.20	0.01	0.01	0.00	
<i>Total Construction Emissions</i>						
Tons	0.13	0.58	0.02	0.02	0.00	
Pounds/Workdays	<i>Average Daily Emissions</i>				Workdays	
2023	0.57	2.45	0.08	0.08		161
2025	0.11	0.46	0.01	0.01		157
2026	0.34	1.47	0.05	0.05		197
2027	0.30	1.28	0.04	0.04		313
Threshold - lbs/day	54.0	54.0	82.0	54.0		
<i>Total Construction Emissions</i>						
Pounds	1.31	5.66	0.17	0.17	0.00	
Average	0.32	1.40	0.04	0.04	0.00	828.00
Threshold - lbs/day	54.0	54.0	82.0	54.0		

Dewatering Pump Annual Emissions

	Phase by Year Unmitigated Emission in tons				Phase by Year Mitigated Emissions in Tons				
	ROG	NOX	PM10	PM2.5	ROG	NOX	PM10	PM2.5	
Phase 1									
2023	0.1582	1.3284	0.0651	0.0651	0.0317	0.1376	0.0042	0.0042	
Phase 1 Affordable									
2023	0.0688	0.5776	0.0283	0.0283	0.0138	0.0598	0.0018	0.0018	
Phase 2									
2025	0.0365	0.3096	0.0129	0.0129	0.0084	0.0364	0.0011	0.0011	
2026	0.0484	0.4104	0.0171	0.0171	0.0111	0.0482	0.0015	0.0015	
Phase 3									
2026	0.0737	0.6263	0.0241	0.0241	0.0179	0.0774	0.0024	0.0024	
2027	0.0938	0.7971	0.0306	0.0306	0.0227	0.0986	0.0030	0.0030	
Phase 3 Affordable									
2027	0.0499	0.4256	0.0149	0.0149	0.0128	0.0555	0.0017	0.0017	
Phase 4									
2026	0.0180	0.1533	0.0059	0.0059	0.0044	0.0190	0.0006	0.0006	
2027	0.0442	0.3753	0.0144	0.0144	0.0107	0.0464	0.0014	0.0014	

Operational Criteria Air Pollutants

Unmitigated

Year	ROG	NOX	Total PM10	Total PM2.5	
			Tons		
CalEEMod					
Area	12.08	0.16	0.08	0.08	tons
Energy	0.12	0.00	0.00	0.00	tons
Mobile	6.82	4.15	5.56	1.45	tons
Stationary	0.41	0.58	0.03	0.03	tons
Waste					tons
Water					tons
Cooling Towers			0.31	0.19	
Charbroilers	0.04		0.49	0.48	
TDM Reduction	0.00	0.00	0.00	0.00	tons
TOTAL	19.47	4.90	6.47	2.23	

Existing Use Emissions

CalEEMod	6.57	3.43	1.89	0.53	tons
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Net Annual Operational Emissions

Tons/year	12.90	1.47	4.58	1.70
Threshold - Tons/year	10.0	10.0	15.0	10.0

Average Daily Emissions

Pounds Per Day	70.71	8.05	25.11	9.30	pounds
Threshold - lbs/day	54.0	54.0	82.0	54.0	

Operational Criteria Air Pollutants

Mitigated

Year	ROG	NOX	Total PM10	Total PM2.5	
			Tons		
CalEEMod					
Area	10.86				tons
Energy	0.12				tons
Mobile	6.82				tons
Stationary	0.41				tons
Waste					tons
Water					tons
Cooling Towers					
Charbroilers	0.04				
TDM Reduction	-0.61				tons
TOTAL	17.64	0.00	0.00	0.00	

Existing Use Emissions

CalEEMod	6.57				tons
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Net Annual Operational Emissions

Tons/year	11.07	0.00	0.00	0.00
Threshold - Tons/year	10.0	10.0	15.0	10.0

	<i>Average Daily Emissions</i>			
Pounds Per Day	60.66	0.00	0.00	0.00
Threshold - lbs/day	54.0	54.0	82.0	54.0

pounds

Phase 1 R1+R2 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>														
Criteria Pollutants														
2022-2023	0.2307	1.2712	2.7185	0.0122	0.6436	0.0921	0.7356	0.0968	0.0381	0.1349	1173.2135	0.0684	0.1251	1212.2045
2024	0.1982	1.0922	2.3356	0.0105	0.5529	0.0791	0.6320	0.0832	0.0327	0.1159	1007.9721	0.0588	0.1075	1041.4715
2025	0.0650	0.3581	0.7658	0.0034	0.1813	0.0259	0.2072	0.0273	0.0107	0.0380	330.4827	0.0193	0.0352	341.4661
Toxic Air Contaminants (1 Mile Trip Length)														
2022-2023	0.1965	0.3587	0.9526	0.0014	0.0588	0.0082	0.0670	0.0088	0.0036	0.0124	134.4492	0.0220	0.0185	140.5069
2024	0.1688	0.3082	0.8184	0.0012	0.0505	0.0071	0.0576	0.0076	0.0031	0.0107	115.5127	0.0189	0.0159	120.7172
2025	0.0554	0.1010	0.2683	0.0004	0.0166	0.0023	0.0189	0.0025	0.0010	0.0035	37.8730	0.0062	0.0052	39.5794

Phase 1 Affordable R6 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>														
Criteria Pollutants														
2023	0.0414	0.1724	0.4734	0.0018	0.1107	0.0133	0.1241	0.0167	0.0054	0.0221	175.7239	0.0096	0.0167	180.9339
2024	0.0415	0.1729	0.4747	0.0018	0.1111	0.0134	0.1244	0.0167	0.0054	0.0221	176.2054	0.0096	0.0167	181.4296
2025	0.0072	0.0298	0.0817	0.0003	0.0191	0.0023	0.0214	0.0029	0.0009	0.0038	30.3304	0.0017	0.0029	31.2297
Toxic Air Contaminants (1 Mile Trip Length)														
2023	0.0357	0.0509	0.1658	0.0002	0.0103	0.0013	0.0115	0.0015	0.0005	0.0021	20.7045	0.0035	0.0028	21.6185
2024	0.0358	0.0511	0.1663	0.0002	0.0103	0.0013	0.0115	0.0015	0.0006	0.0021	20.7613	0.0036	0.0028	21.6777
2025	0.0062	0.0088	0.0286	0.0000	0.0018	0.0002	0.0020	0.0003	0.0001	0.0004	3.5737	0.0006	0.0005	3.7314

Phase 1 Infrastructure 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>														
Criteria Pollutants														
2024	0.0019	0.0024	0.0198	0.0001	0.0048	0.0003	0.0052	0.0007	0.0001	0.0008	4.8348	0.0002	0.0002	4.9033
2025	0.0029	0.0037	0.0310	0.0001	0.0076	0.0005	0.0081	0.0011	0.0002	0.0013	7.5641	0.0003	0.0003	7.6714
Toxic Air Contaminants (1 Mile Trip Length)														
2024	0.0017	0.0009	0.0069	0.0000	0.0005	0.0000	0.0005	0.0001	0.0000	0.0001	0.5868	0.0001	0.0001	0.6101
2025	0.0026	0.0014	0.0108	0.0000	0.0007	0.0001	0.0008	0.0001	0.0000	0.0001	0.9181	0.0002	0.0001	0.9545

Phase 2 O1+O2 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>														
Criteria Pollutants														
2024	0.0200	0.1576	0.2440	0.0014	0.0624	0.0106	0.0731	0.0094	0.0044	0.0138	133.4086	0.0077	0.0157	138.2783
2025	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2026	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2027	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2028	0.1200	0.9457	1.4641	0.0083	0.3746	0.0639	0.4385	0.0564	0.0267	0.0831	800.4515	0.0462	0.0942	829.6696
2029	0.0629	0.4961	0.7680	0.0043	0.1965	0.0335	0.2300	0.0296	0.0140	0.0436	419.9090	0.0243	0.0494	435.2365
Toxic Air Contaminants (1 Mile Trip Length)														
2024	0.0168	0.0497	0.0906	0.0002	0.0060	0.0010	0.0070	0.0009	0.0005	0.0014	16.9228	0.0024	0.0024	17.6994
2025	0.1005	0.2977	0.5423	0.0010	0.0357	0.0063	0.0419	0.0054	0.0027	0.0081	101.2596	0.0143	0.0144	105.9064
2026	0.1005	0.2977	0.5423	0.0010	0.0357	0.0063	0.0419	0.0054	0.0027	0.0081	101.2596	0.0143	0.0144	105.9064
2027	0.1005	0.2977	0.5423	0.0010	0.0357	0.0063	0.0419	0.0054	0.0027	0.0081	101.2596	0.0143	0.0144	105.9064
2028	0.1007	0.2985	0.5438	0.0010	0.0358	0.0063	0.0420	0.0054	0.0028	0.0081	101.5370	0.0144	0.0144	106.1965
2029	0.0528	0.1566	0.2853	0.0005	0.0188	0.0033	0.0221	0.0028	0.0014	0.0043	53.2653	0.0075	0.0076	55.7097

Phase 2 Infrastructure 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>									
Criteria Pollutants														
2026	0.0021	0.0024	0.0224	0.0001	0.0063	0.0004	0.0067	0.0009	0.0001	0.0011	5.8489	0.0002	0.0002	5.9228
2027	0.0034	0.0039	0.0359	0.0001	0.0100	0.0006	0.0107	0.0015	0.0002	0.0017	9.3966	0.0003	0.0004	9.5154
Toxic Air Contaminants (1 Mile Trip Length)														
2026	0.0019	0.0009	0.0078	0.0000	0.0006	0.0000	0.0006	0.0001	0.0000	0.0001	0.6999	0.0001	0.0001	0.7265
2027	0.0031	0.0015	0.0125	0.0000	0.0009	0.0001	0.0010	0.0001	0.0000	0.0002	1.1244	0.0002	0.0001	1.1671

Phase 3 R3, R4b, R5 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>														
Criteria Pollutants														
2026	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2027	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2028	0.2309	0.8519	2.5626	0.0106	0.7251	0.0770	0.8021	0.1091	0.0303	0.1394	1010.5584	0.0463	0.0869	1037.6131
2029	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2030	0.0132	0.0489	0.1470	0.0006	0.0416	0.0044	0.0460	0.0063	0.0017	0.0080	57.9829	0.0027	0.0050	59.5352
Toxic Air Contaminants (1 Mile Trip Length)														
2026	0.2034	0.2997	0.9247	0.0013	0.0688	0.0080	0.0768	0.0104	0.0034	0.0137	128.4399	0.0198	0.0167	133.9109
2027	0.2034	0.2997	0.9247	0.0013	0.0688	0.0080	0.0768	0.0104	0.0034	0.0137	128.4399	0.0198	0.0167	133.9109
2028	0.2040	0.3005	0.9272	0.0013	0.0690	0.0080	0.0771	0.0104	0.0034	0.0138	128.7918	0.0198	0.0167	134.2778
2029	0.2034	0.2997	0.9247	0.0013	0.0688	0.0080	0.0768	0.0104	0.0034	0.0137	128.4399	0.0198	0.0167	133.9109
2030	0.0117	0.0172	0.0532	0.0001	0.0040	0.0005	0.0044	0.0006	0.0002	0.0008	7.3897	0.0011	0.0010	7.7045

Phase 3 Affordable R4a 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>														
Criteria Pollutants														
2026	0.0059	0.0316	0.0683	0.0003	0.0205	0.0028	0.0233	0.0031	0.0011	0.0042	33.3575	0.0017	0.0034	34.4197
2027	0.0457	0.2453	0.5304	0.0027	0.1592	0.0215	0.1807	0.0239	0.0086	0.0326	259.0532	0.0134	0.0266	267.3018
2028	0.0351	0.1882	0.4069	0.0021	0.1221	0.0165	0.1386	0.0184	0.0066	0.0250	198.7257	0.0103	0.0204	205.0534
Toxic Air Contaminants (1 Mile Trip Length)														
2026	0.0052	0.0096	0.0244	0.0000	0.0019	0.0002	0.0021	0.0003	0.0001	0.0004	3.7647	0.0006	0.0005	3.9287
2027	0.0402	0.0745	0.1892	0.0003	0.0145	0.0019	0.0163	0.0022	0.0008	0.0030	29.2367	0.0044	0.0039	30.5102
2028	0.0308	0.0571	0.1451	0.0002	0.0111	0.0014	0.0125	0.0017	0.0006	0.0023	22.4281	0.0034	0.0030	23.4051

Phase 3 Infrastructure 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>									
Criteria Pollutants														
2027	0.0030	0.0037	0.0314	0.0001	0.0093	0.0006	0.0099	0.0014	0.0002	0.0016	8.7510	0.0003	0.0004	8.8676
Toxic Air Contaminants (1 Mile Trip Length)														
2027	0.0027	0.0015	0.0110	0.0000	0.0009	0.0001	0.0009	0.0001	0.0000	0.0002	1.0610	0.0002	0.0001	1.1012

Phase 4 O3+O4+O5, P1+P2 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>														
Criteria Pollutants														
2026	0.1085	0.6534	1.2586	0.0066	0.3602	0.0491	0.4093	0.0542	0.0199	0.0741	633.2540	0.0308	0.0663	653.7869
2027	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2028	0.1444	0.8696	1.6751	0.0088	0.4793	0.0654	0.5447	0.0721	0.0265	0.0986	842.8036	0.0411	0.0883	870.1309
2029	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2030	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2031	0.0430	0.2590	0.4989	0.0026	0.1428	0.0195	0.1622	0.0215	0.0079	0.0294	250.9989	0.0122	0.0263	259.1373
Toxic Air Contaminants (1 Mile Trip Length)														
2026	0.0939	0.2443	0.4802	0.0009	0.0359	0.0056	0.0415	0.0054	0.0024	0.0078	88.8832	0.0119	0.0122	92.8311
2027	0.1247	0.3242	0.6374	0.0012	0.0476	0.0074	0.0550	0.0072	0.0032	0.0103	117.9723	0.0158	0.0163	123.2121
2028	0.1250	0.3251	0.6391	0.0012	0.0478	0.0074	0.0552	0.0072	0.0032	0.0104	118.2955	0.0159	0.0163	123.5497
2029	0.1247	0.3242	0.6374	0.0012	0.0476	0.0074	0.0550	0.0072	0.0032	0.0103	117.9723	0.0158	0.0163	123.2121
2030	0.1247	0.3242	0.6374	0.0012	0.0476	0.0074	0.0550	0.0072	0.0032	0.0103	117.9723	0.0158	0.0163	123.2121
2031	0.0372	0.0968	0.1903	0.0004	0.0142	0.0022	0.0164	0.0021	0.0009	0.0031	35.2301	0.0047	0.0049	36.7949

Phase 4 Infrastructure 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>									
Criteria Pollutants														
2028	0.0019	0.0023	0.0198	0.0001	0.0062	0.0004	0.0066	0.0009	0.0001	0.0011	5.7247	0.0002	0.0002	5.7996
Toxic Air Contaminants (1 Mile Trip Length)														
2028	0.0018	0.0009	0.0069	0.0000	0.0006	0.0000	0.0006	0.0001	0.0000	0.0001	0.6936	0.0001	0.0001	0.7196

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Trips and VMT - 0 Trips for EMFAC2021 adjustments, demo = 5,848 tons asphalt, site prep - 2 water trucks

Demolition - As per supplied construction schedule - 149,337-sf building demo

Grading - grading = 201,721-cy export + 1,713-cy export geothermal bore

Architectural Coating - As per supplied construction schedule

Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical equipment

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_Nonresidential_Exterior	11254	0
tblAreaCoating	Area_Nonresidential_Interior	33762	0
tblAreaCoating	Area_Parking	20580	0
tblAreaCoating	Area_Residential_Exterior	467393	0
tblAreaCoating	Area_Residential_Interior	1402179	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	230.00	395.00

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

tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2090e-003	0.00
tblFleetMix	LHD2	5.2090e-003	0.00
tblFleetMix	LHD2	5.2090e-003	0.00

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

tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblGrading	MaterialExported	0.00	203,434.00
tblLandUse	LandUseSquareFeet	335,200.00	343,000.00
tblLandUse	LandUseSquareFeet	750,000.00	692,434.00
tblLandUse	LandUseSquareFeet	22,510.00	22,508.00
tblLandUse	LotAcreage	7.54	0.00
tblLandUse	LotAcreage	19.74	6.20
tblLandUse	LotAcreage	0.52	0.00
tblOffRoadEquipment	HorsePower	78.00	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	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	7.00	10.30

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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	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	8.80
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblTripsAndVMT	HaulingTripNumber	679.00	0.00
tblTripsAndVMT	HaulingTripNumber	25,429.00	0.00
tblTripsAndVMT	VendorTripNumber	140.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	103.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblTripsAndVMT	WorkerTripNumber	691.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	138.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1131	1.1108	0.9886	1.7200e-003	0.0696	0.0566	0.1261	0.0105	0.0525	0.0630	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640
2023	0.5564	5.2207	5.4412	0.0117	1.3914	0.2464	1.6379	0.7095	0.2331	0.9426	0.0000	1,023.0287	1,023.0287	0.2358	0.0000	1,028.9228
2024	0.1218	1.1138	1.5250	2.4100e-003	0.0000	0.0559	0.0559	0.0000	0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935
2025	5.0805	0.1774	0.2476	3.5000e-004	0.0000	8.4200e-003	8.4200e-003	0.0000	7.7800e-003	7.7800e-003	0.0000	31.1178	31.1178	9.4000e-003	0.0000	31.3529
Maximum	5.0805	5.2207	5.4412	0.0117	1.3914	0.2464	1.6379	0.7095	0.2331	0.9426	0.0000	1,023.0287	1,023.0287	0.2358	0.0000	1,028.9228

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0289	0.6496	1.1408	1.7200e-003	0.0271	5.0700e-003	0.0322	2.0500e-003	5.0700e-003	7.1200e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638
2023	0.2102	3.9565	7.1543	0.0117	0.5427	0.0260	0.5687	0.1384	0.0260	0.1644	0.0000	1,023.0275	1,023.0275	0.2358	0.0000	1,028.9215
2024	0.0481	0.9353	1.6172	2.4100e-003	0.0000	3.5000e-003	3.5000e-003	0.0000	3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933
2025	5.0711	0.1526	0.2639	3.5000e-004	0.0000	5.7000e-004	5.7000e-004	0.0000	5.7000e-004	5.7000e-004	0.0000	31.1177	31.1177	9.4000e-003	0.0000	31.3528
Maximum	5.0711	3.9565	7.1543	0.0117	0.5427	0.0260	0.5687	0.1384	0.0260	0.1644	0.0000	1,023.0275	1,023.0275	0.2358	0.0000	1,028.9215

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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
Percent Reduction	8.75	25.30	-24.06	0.00	61.00	90.43	66.91	80.50	89.86	83.54	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	11-1-2022	1-31-2023	1.7896	1.0697
2	2-1-2023	4-30-2023	3.4338	2.3457
3	5-1-2023	7-31-2023	0.8417	0.6921
4	8-1-2023	10-31-2023	0.6927	0.5615
5	11-1-2023	1-31-2024	0.3259	0.2470
6	2-1-2024	4-30-2024	0.3036	0.2416
7	5-1-2024	7-31-2024	0.3103	0.2470
8	8-1-2024	10-31-2024	0.3103	0.2470
9	11-1-2024	1-31-2025	0.3018	0.2433
10	2-1-2025	4-30-2025	5.1619	5.1442
		Highest	5.1619	5.1442

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	11/1/2022	1/4/2023	6	56	
2	Site Preparation	Site Preparation	1/5/2023	1/23/2023	6	16	
3	Grading	Grading	1/24/2023	3/29/2023	6	56	
4	Trenching	Trenching	3/31/2023	10/4/2023	6	161	
5	Building Construction	Building Construction	10/5/2023	1/7/2025	6	395	
6	Paving	Paving	1/8/2025	3/4/2025	6	48	

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

7	Architectural Coating	Architectural Coating	3/6/2025	4/30/2025	6	48
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 210

Acres of Paving: 0

Residential Indoor: 1,402,179; Residential Outdoor: 467,393; Non-Residential Indoor: 33,762; Non-Residential Outdoor: 11,254; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	2	6.50	0	0.31
Demolition	Air Compressors	2	4.20	0	0.48
Demolition	Concrete/Industrial Saws	2	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	2	10.00	89	0.20
Demolition	Generator Sets	2	5.40	84	0.74
Demolition	Rubber Tired Dozers	2	10.00	247	0.40
Demolition	Sweepers/Scrubbers	2	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	2	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	4	8.10	97	0.37
Grading	Air Compressors	2	4.20	0	0.48
Grading	Bore/Drill Rigs	3	2.00	221	0.50
Grading	Bore/Drill Rigs	4	7.90	221	0.50
Grading	Bore/Drill Rigs	5	7.20	221	0.50
Grading	Excavators	4	7.90	158	0.38
Grading	Generator Sets	2	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41

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

Grading	Plate Compactors	3	1.90	8	0.43
Grading	Pumps	2	24.00	84	0.74
Grading	Rubber Tired Dozers	6	10.00	247	0.40
Grading	Skid Steer Loaders	2	2.70	65	0.37
Grading	Sweepers/Scrubbers	4	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching	Aerial Lifts	4	9.70	0	0.31
Trenching	Bore/Drill Rigs	5	2.00	221	0.50
Trenching	Cranes	2	10.30	0	0.29
Trenching	Forklifts	4	10.00	89	0.20
Trenching	Generator Sets	2	5.40	84	0.74
Trenching	Pumps	4	5.40	84	0.74
Trenching	Tractors/Loaders/Backhoes	3	1.30	97	0.37
Building Construction	Aerial Lifts	4	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	2	7.10	0	0.56
Building Construction	Cranes	2	10.30	0	0.29
Building Construction	Forklifts	3	10.00	89	0.20
Building Construction	Generator Sets	2	5.40	84	0.74
Building Construction	Plate Compactors	2	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	2	0.80	97	0.37
Building Construction	Welders	2	2.20	0	0.45
Paving	Concrete/Industrial Saws	4	0.30	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	3	8.80	80	0.38
Paving	Tractors/Loaders/Backhoes	2	5.40	97	0.37
Architectural Coating	Air Compressors	2	8.30	0	0.48

Trips and VMT

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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	20	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	41	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	24	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	19	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	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

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0696	0.0000	0.0696	0.0105	0.0000	0.0105	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1131	1.1108	0.9886	1.7200e-003		0.0566	0.0566		0.0525	0.0525	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	0.1131	1.1108	0.9886	1.7200e-003	0.0696	0.0566	0.1261	0.0105	0.0525	0.0630	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	2.0500e-003	0.0000	2.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0289	0.6496	1.1408	1.7200e-003		5.0700e-003	5.0700e-003		5.0700e-003	5.0700e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	0.0289	0.6496	1.1408	1.7200e-003	0.0271	5.0700e-003	0.0322	2.0500e-003	5.0700e-003	7.1200e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638
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Mitigated Construction Off-Site

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

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					3.9400e-003	0.0000	3.9400e-003	6.0000e-004	0.0000	6.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5900e-003	0.0538	0.0541	1.0000e-004		2.6300e-003	2.6300e-003		2.4400e-003	2.4400e-003	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	5.5900e-003	0.0538	0.0541	1.0000e-004	3.9400e-003	2.6300e-003	6.5700e-003	6.0000e-004	2.4400e-003	3.0400e-003	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5400e-003	0.0000	1.5400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6400e-003	0.0368	0.0646	1.0000e-004		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	1.6400e-003	0.0368	0.0646	1.0000e-004	1.5400e-003	2.9000e-004	1.8300e-003	1.2000e-004	2.9000e-004	4.1000e-004	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860
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Mitigated Construction Off-Site

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

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4700e-003	0.0644	0.0888	1.2000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	6.4700e-003	0.0644	0.0888	1.2000e-004	0.0000	3.3900e-003	3.3900e-003	0.0000	3.1200e-003	3.1200e-003	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-003	0.0561	0.0924	1.2000e-004		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	2.7900e-003	0.0561	0.0924	1.2000e-004	0.0000	6.6000e-004	6.6000e-004	0.0000	6.6000e-004	6.6000e-004	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720
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Mitigated Construction Off-Site

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3875	0.0000	1.3875	0.7089	0.0000	0.7089	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3396	3.2712	2.9717	7.1100e-003		0.1482	0.1482		0.1387	0.1387	0.0000	621.2812	621.2812	0.1655	0.0000	625.4181

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	0.3396	3.2712	2.9717	7.1100e-003	1.3875	0.1482	1.5357	0.7089	0.1387	0.8476	0.0000	621.2812	621.2812	0.1655	0.0000	625.4181
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5411	0.0000	0.5411	0.1382	0.0000	0.1382	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1226	2.2987	4.2193	7.1100e-003		0.0186	0.0186		0.0186	0.0186	0.0000	621.2805	621.2805	0.1655	0.0000	625.4174

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	0.1226	2.2987	4.2193	7.1100e-003	0.5411	0.0186	0.5597	0.1382	0.0186	0.1568	0.0000	621.2805	621.2805	0.1655	0.0000	625.4174
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Mitigated Construction Off-Site

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

3.5 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1734	1.5452	1.9614	3.8300e-003		0.0767	0.0767		0.0741	0.0741	0.0000	332.6236	332.6236	0.0563	0.0000	334.0311
Total	0.1734	1.5452	1.9614	3.8300e-003		0.0767	0.0767		0.0741	0.0741	0.0000	332.6236	332.6236	0.0563	0.0000	334.0311

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0716	1.3414	2.3918	3.8300e-003		5.6400e-003	5.6400e-003		5.6400e-003	5.6400e-003	0.0000	332.6232	332.6232	0.0563	0.0000	334.0307
Total	0.0716	1.3414	2.3918	3.8300e-003		5.6400e-003	5.6400e-003		5.6400e-003	5.6400e-003	0.0000	332.6232	332.6232	0.0563	0.0000	334.0307

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0314	0.2861	0.3653	5.8000e-004		0.0155	0.0155		0.0148	0.0148	0.0000	49.8142	49.8142	8.0600e-003	0.0000	50.0156
Total	0.0314	0.2861	0.3653	5.8000e-004		0.0155	0.0155		0.0148	0.0148	0.0000	49.8142	49.8142	8.0600e-003	0.0000	50.0156

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0115	0.2234	0.3863	5.8000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	49.8141	49.8141	8.0600e-003	0.0000	50.0155
Total	0.0115	0.2234	0.3863	5.8000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	49.8141	49.8141	8.0600e-003	0.0000	50.0155

Mitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1218	1.1138	1.5250	2.4100e-003		0.0559	0.0559		0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935
Total	0.1218	1.1138	1.5250	2.4100e-003		0.0559	0.0559		0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935

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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Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0481	0.9353	1.6172	2.4100e-003		3.5000e-003	3.5000e-003		3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933
Total	0.0481	0.9353	1.6172	2.4100e-003		3.5000e-003	3.5000e-003		3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933

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					

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Unmitigated
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	170.00	Space	0.00	34,000.00	0
Apartments Mid Rise	170.00	Dwelling Unit	1.64	155,000.00	486

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 Trips EMFAC2021 adjustments, 500 tons asphalt demo, site prep = 1 water truck

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Demolition - building demo = 25,570-sf

Grading - grading = 23,536-cy export

Architectural Coating - As per supplied construction schedule

Construction Off-road Equipment Mitigation - BMPs, Tier 4 Interim + Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Residential_Exterior	104625	115425
tblAreaCoating	Area_Residential_Interior	313875	346275
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	200.00	344.00
tblConstructionPhase	NumDays	20.00	49.00
tblConstructionPhase	NumDays	4.00	49.00
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	2.00	14.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	6.00	10.30
tblOffRoadEquipment	UsageHours	6.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	7.00	10.80
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	78.20	88.32
tblTripsAndVMT	HaulingTripNumber	116.00	0.00
tblTripsAndVMT	HaulingTripNumber	2,942.00	0.00
tblTripsAndVMT	VendorTripNumber	24.00	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	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	137.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00
tblWater	IndoorWaterUseRate	11,076,184.36	12,509,572.92
tblWater	OutdoorWaterUseRate	6,982,811.88	7,886,469.88
tblWoodstoves	NumberCatalytic	3.40	3.84
tblWoodstoves	NumberNoncatalytic	3.40	3.84

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2687	2.5195	2.6991	4.9800e-003	0.6159	0.1233	0.7392	0.3115	0.1163	0.4278	0.0000	433.9000	433.9000	0.0967	0.0000	436.3168
2024	0.0602	0.5561	0.7581	1.1900e-003	0.0000	0.0280	0.0280	0.0000	0.0266	0.0266	0.0000	102.7953	102.7953	0.0178	0.0000	103.2405
2025	1.1001	0.0197	0.0273	4.0000e-005	0.0000	9.4000e-004	9.4000e-004	0.0000	8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000	3.4190
Maximum	1.1001	2.5195	2.6991	4.9800e-003	0.6159	0.1233	0.7392	0.3115	0.1163	0.4278	0.0000	433.9000	433.9000	0.0967	0.0000	436.3168

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Mitigated Construction

	ROG	NOx	CO	SO2	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	0.0886	1.8158	3.1960	4.9800e-003	0.2402	0.0122	0.2524	0.0607	0.0122	0.0730	0.0000	433.8995	433.8995	0.0967	0.0000	436.3163
2024	0.0239	0.4651	0.8041	1.1900e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	102.7952	102.7952	0.0178	0.0000	103.2404
2025	1.0991	0.0169	0.0291	4.0000e-005	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005	0.0000	3.3915	3.3915	1.1000e-003	0.0000	3.4190
Maximum	1.0991	1.8158	3.1960	4.9800e-003	0.2402	0.0122	0.2524	0.0607	0.0122	0.0730	0.0000	433.8995	433.8995	0.0967	0.0000	436.3163

	ROG	NOx	CO	SO2	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	15.22	25.76	-15.63	0.00	61.00	90.79	66.90	80.50	90.25	83.58	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	1.0277	0.7140
2	4-1-2023	6-30-2023	1.1865	0.7539
3	7-1-2023	9-30-2023	0.3657	0.2806
4	10-1-2023	12-31-2023	0.2123	0.1594
5	1-1-2024	3-31-2024	0.1535	0.1221
6	4-1-2024	6-30-2024	0.1535	0.1221
7	7-1-2024	9-30-2024	0.1552	0.1235
8	10-1-2024	12-31-2024	0.1536	0.1208
9	1-1-2025	3-31-2025	1.1198	1.1159
		Highest	1.1865	1.1159

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	2/27/2023	6	49	
2	Site Preparation	Site Preparation	2/27/2023	3/14/2023	6	14	
3	Grading	Grading	3/15/2023	5/10/2023	6	49	
4	Trenching/Foundation	Trenching	5/12/2023	10/21/2023	6	140	
5	Building Construction	Building Construction	10/22/2023	11/26/2024	6	344	
6	Paving	Paving	11/27/2024	1/14/2025	6	42	
7	Architectural Coating	Architectural Coating	1/15/2025	3/4/2025	6	42	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 91.88

Acres of Paving: 0

Residential Indoor: 313,875; Residential Outdoor: 104,625; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,040

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46

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

Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	3	10.00	247	0.40
Grading	Skid Steer Loaders	1	3.50	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	12	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	19	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9100e-003	0.0000	4.9100e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0164	0.4105	0.7169	1.0400e-003		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	91.5738	91.5738	0.0270	0.0000	92.2489
Total	0.0164	0.4105	0.7169	1.0400e-003	4.9100e-003	2.7500e-003	7.6600e-003	3.7000e-004	2.7500e-003	3.1200e-003	0.0000	91.5738	91.5738	0.0270	0.0000	92.2489

Mitigated Construction Off-Site

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

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Unmitigated Construction 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8300e-003	0.0282	0.0389	5.0000e-005		1.4800e-003	1.4800e-003		1.3700e-003	1.3700e-003	0.0000	4.7184	4.7184	1.5300e-003	0.0000	4.7565
Total	2.8300e-003	0.0282	0.0389	5.0000e-005	0.0000	1.4800e-003	1.4800e-003	0.0000	1.3700e-003	1.3700e-003	0.0000	4.7184	4.7184	1.5300e-003	0.0000	4.7565

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, City Util - Affordable R6 - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2200e-003	0.0246	0.0404	5.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.7183	4.7183	1.5300e-003	0.0000	4.7565
Total	1.2200e-003	0.0246	0.0404	5.0000e-005	0.0000	2.9000e-004	2.9000e-004	0.0000	2.9000e-004	2.9000e-004	0.0000	4.7183	4.7183	1.5300e-003	0.0000	4.7565

Mitigated Construction Off-Site

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

3.4 Grading - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, City Util - Affordable R6 - 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					0.6033	0.0000	0.6033	0.3096	0.0000	0.3096	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1325	1.2791	1.1497	2.4000e-003		0.0599	0.0599		0.0562	0.0562	0.0000	209.2752	209.2752	0.0522	0.0000	210.5790
Total	0.1325	1.2791	1.1497	2.4000e-003	0.6033	0.0599	0.6632	0.3096	0.0562	0.3658	0.0000	209.2752	209.2752	0.0522	0.0000	210.5790

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, City Util - Affordable R6 - 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					0.2353	0.0000	0.2353	0.0604	0.0000	0.0604	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0419	0.8176	1.4649	2.4000e-003		7.0700e-003	7.0700e-003		7.0700e-003	7.0700e-003	0.0000	209.2750	209.2750	0.0522	0.0000	210.5787
Total	0.0419	0.8176	1.4649	2.4000e-003	0.2353	7.0700e-003	0.2424	0.0604	7.0700e-003	0.0674	0.0000	209.2750	209.2750	0.0522	0.0000	210.5787

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0660	0.5833	0.7648	1.2500e-003		0.0305	0.0305		0.0296	0.0296	0.0000	108.4069	108.4069	0.0128	0.0000	108.7261
Total	0.0660	0.5833	0.7648	1.2500e-003		0.0305	0.0305		0.0296	0.0296	0.0000	108.4069	108.4069	0.0128	0.0000	108.7261

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0244	0.4738	0.8193	1.2500e-003		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	108.4068	108.4068	0.0128	0.0000	108.7259
Total	0.0244	0.4738	0.8193	1.2500e-003		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	108.4068	108.4068	0.0128	0.0000	108.7259

Mitigated Construction Off-Site

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

3.6 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Off-Road	4.5900e-003	0.0894	0.1545	2.3000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	19.9256	19.9256	3.2200e-003	0.0000	20.0062
Total	4.5900e-003	0.0894	0.1545	2.3000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	19.9256	19.9256	3.2200e-003	0.0000	20.0062

Mitigated Construction Off-Site

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0551	0.5037	0.6896	1.0900e-003		0.0253	0.0253		0.0241	0.0241	0.0000	94.3173	94.3173	0.0151	0.0000	94.6939

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Total	0.0551	0.5037	0.6896	1.0900e-003		0.0253	0.0253		0.0241	0.0241	0.0000	94.3173	94.3173	0.0151	0.0000	94.6939
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0217	0.4230	0.7313	1.0900e-003		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	94.3171	94.3171	0.0151	0.0000	94.6938
Total	0.0217	0.4230	0.7313	1.0900e-003		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	94.3171	94.3171	0.0151	0.0000	94.6938

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0600e-003	0.0524	0.0684	1.0000e-004		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0600e-003	0.0524	0.0684	1.0000e-004		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1600e-003	0.0421	0.0728	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.1600e-003	0.0421	0.0728	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.7 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	1.8900e-003	0.0197	0.0273	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000	3.4190
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8900e-003	0.0197	0.0273	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000	3.4190

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7000e-004	0.0169	0.0291	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.3915	3.3915	1.1000e-003	0.0000	3.4190
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.7000e-004	0.0169	0.0291	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.3915	3.3915	1.1000e-003	0.0000	3.4190

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 1, District Util - Infrastructure - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use - As per supplied construction schedule
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - provided construction data
- Trips and VMT - 0 trips EMFAC2021 adjustments, Infrastructure - 1 striper truck
- Grading -
- Architectural Coating - As per supplied construction schedule
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 I+Electrical

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

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

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	2.00	136.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	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

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	0.0224	0.2106	0.3036	4.9000e-004	0.0000	0.0100	0.0100	0.0000	9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278
2025	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433
Maximum	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433

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	7.8300e-003	0.1984	0.3401	4.9000e-004	0.0000	9.5000e-004	9.5000e-004	0.0000	9.5000e-004	9.5000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277
2025	0.0123	0.3107	0.5326	7.7000e-004	0.0000	1.4900e-003	1.4900e-003	0.0000	1.4900e-003	1.4900e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432
Maximum	0.0123	0.3107	0.5326	7.7000e-004	0.0000	1.4900e-003	1.4900e-003	0.0000	1.4900e-003	1.4900e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432

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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
Percent Reduction	63.84	1.62	-12.07	0.00	0.00	89.85	89.85	0.00	89.19	89.19	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	10-31-2024	1-30-2025	0.3390	0.3069
2	1-31-2025	4-29-2025	0.2353	0.2235
		Highest	0.3390	0.3069

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	10/31/2024	4/7/2025	6	136	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.20	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43

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

Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2106	0.3036	4.9000e-004		0.0100	0.0100		9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	0.0224	0.2106	0.3036	4.9000e-004	0.0000	0.0100	0.0100	0.0000	9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8300e-003	0.1984	0.3401	4.9000e-004		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	7.8300e-003	0.1984	0.3401	4.9000e-004	0.0000	9.5000e-004	9.5000e-004	0.0000	9.5000e-004	9.5000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277
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Mitigated Construction Off-Site

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

3.2 Infrastructure - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0332	0.3069	0.4752	7.7000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0123	0.3107	0.5326	7.7000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 2, District Util - O1,O2 - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	631.94	1000sqft	8.68	631,939.00	0
Enclosed Parking with Elevator	700.00	Space	0.00	218,576.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2029
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips for emfac2021 adjustments, demo = 2,831 ton of asphalt, site prep = 1 water truck

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

Demolition - existing buiding demo = 264,881-sf

Grading - grading = 230,046-cy + 34,000-cy export + 1,713-cy export geothermal bore

Architectural Coating - As per supplied construction schedule

Construction Off-road Equipment Mitigation - BMPs, Tier 4 I+Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	315970	323690
tblAreaCoating	Area_Nonresidential_Interior	947909	971069
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	128.00
tblConstructionPhase	NumDays	230.00	1,000.00
tblConstructionPhase	NumDays	20.00	147.00
tblConstructionPhase	NumDays	20.00	103.00
tblConstructionPhase	NumDays	20.00	128.00
tblConstructionPhase	NumDays	10.00	38.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	265,759.00
tblLandUse	LandUseSquareFeet	631,940.00	631,939.00
tblLandUse	LandUseSquareFeet	280,000.00	218,576.00
tblLandUse	LotAcreage	14.51	8.68
tblLandUse	LotAcreage	6.30	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	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	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	8.20
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	10.50
tblOffRoadEquipment	UsageHours	8.00	9.50
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	1.90
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	9.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	587.70	602.06
tblTripsAndVMT	HaulingTripNumber	1,205.00	0.00
tblTripsAndVMT	HaulingTripNumber	33,220.00	0.00
tblTripsAndVMT	VendorTripNumber	139.00	0.00
tblTripsAndVMT	WorkerTripNumber	33.00	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	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	83.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	294.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	59.00	0.00
tblWater	IndoorWaterUseRate	112,317,064.71	115,061,273.78
tblWater	OutdoorWaterUseRate	68,839,491.27	70,521,425.86

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	0.0565	0.5208	0.6367	1.1100e-003	0.0461	0.0249	0.0711	6.9800e-003	0.0231	0.0301	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663
2025	0.6858	6.3298	7.3775	0.0166	1.9974	0.2701	2.2675	0.9906	0.2525	1.2431	0.0000	1,446.6484	1,446.6484	0.3869	0.0000	1,456.3207
2026	0.1750	1.5647	2.2669	4.1100e-003	0.0000	0.0695	0.0695	0.0000	0.0668	0.0668	0.0000	356.0066	356.0066	0.0568	0.0000	357.4274
2027	0.0564	0.5186	0.7579	1.2000e-003	0.0000	0.0240	0.0240	0.0000	0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
2028	3.1848	0.7529	1.0802	1.6600e-003	0.0000	0.0352	0.0352	0.0000	0.0332	0.0332	0.0000	144.0009	144.0009	0.0294	0.0000	144.7346
2029	0.2646	0.2734	0.3995	6.3000e-004	0.0000	0.0126	0.0126	0.0000	0.0121	0.0121	0.0000	54.7992	54.7992	8.6400e-003	0.0000	55.0152
Maximum	3.1848	6.3298	7.3775	0.0166	1.9974	0.2701	2.2675	0.9906	0.2525	1.2431	0.0000	1,446.6484	1,446.6484	0.3869	0.0000	1,456.3207

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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

	ROG	NOx	CO	SO2	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	0.0174	0.4349	0.7595	1.1100e-003	0.0180	2.9200e-003	0.0209	1.3600e-003	2.9200e-003	4.2800e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662
2025	0.2823	5.5867	10.1848	0.0166	0.7790	0.0358	0.8148	0.1932	0.0358	0.2290	0.0000	1,446.6467	1,446.6467	0.3869	0.0000	1,456.3189
2026	0.0784	1.4900	2.6261	4.1100e-003	0.0000	6.0000e-003	6.0000e-003	0.0000	6.0000e-003	6.0000e-003	0.0000	356.0062	356.0062	0.0568	0.0000	357.4270
2027	0.0240	0.4662	0.8060	1.2000e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
2028	3.1401	0.6651	1.1500	1.6600e-003	0.0000	2.4900e-003	2.4900e-003	0.0000	2.4900e-003	2.4900e-003	0.0000	144.0007	144.0007	0.0294	0.0000	144.7344
2029	0.2475	0.2458	0.4249	6.3000e-004	0.0000	9.2000e-004	9.2000e-004	0.0000	9.2000e-004	9.2000e-004	0.0000	54.7991	54.7991	8.6400e-003	0.0000	55.0152
Maximum	3.1401	5.5867	10.1848	0.0166	0.7790	0.0358	0.8148	0.1932	0.0358	0.2290	0.0000	1,446.6467	1,446.6467	0.3869	0.0000	1,456.3189

	ROG	NOx	CO	SO2	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	14.32	10.76	-27.42	0.00	61.00	88.57	65.85	80.50	87.85	82.64	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	0.8501	0.6859
2	2-1-2025	4-30-2025	2.5481	2.1078
3	5-1-2025	7-31-2025	3.1649	2.5851
4	8-1-2025	10-31-2025	0.6180	0.5658
5	11-1-2025	1-31-2026	0.6180	0.5658

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

6	2-1-2026	4-30-2026	0.5978	0.5473
7	5-1-2026	7-31-2026	0.6941	0.6264
8	8-1-2026	10-31-2026	0.1449	0.1235
9	11-1-2026	1-31-2027	0.1449	0.1235
10	2-1-2027	4-30-2027	0.1401	0.1195
11	5-1-2027	7-31-2027	0.1449	0.1235
12	8-1-2027	10-31-2027	0.1449	0.1235
13	11-1-2027	1-31-2028	0.1449	0.1235
14	2-1-2028	4-30-2028	0.1417	0.1208
15	5-1-2028	7-31-2028	0.2773	0.2313
16	8-1-2028	10-31-2028	2.0136	1.9693
17	11-1-2028	1-31-2029	1.7332	1.7118
18	2-1-2029	4-30-2029	0.1401	0.1195
19	5-1-2029	7-31-2029	0.1134	0.0966
		Highest	3.1649	2.5851

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	4/21/2025	6	147	
2	Site Preparation	Site Preparation	2/15/2025	3/31/2025	6	38	
3	Grading	Grading	3/17/2025	7/14/2025	6	103	
4	Trenching/Foundation	Trenching	7/2/2025	7/21/2026	6	330	
5	Building Construction	Building Construction	5/2/2026	7/11/2029	6	1000	
6	Paving	Paving	5/16/2028	10/11/2028	6	128	
7	Architectural Coating	Architectural Coating	8/15/2028	1/10/2029	6	128	

Acres of Grading (Site Preparation Phase): 0

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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 Grading (Grading Phase): 289.69

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 947,909; Non-Residential Outdoor: 315,970; Striped Parking Area: 13,115

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	3	8.20	0	0.73
Demolition	Excavators	3	10.50	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	5	9.50	221	0.50
Grading	Bore/Drill Rigs	4	6.60	221	0.50
Grading	Excavators	5	9.50	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	5	9.00	247	0.40

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

Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	4	7.70	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	1.60	221	0.50
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	4	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	4	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.30	0	0.73
Paving	Pavers	1	1.90	0	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	1	2.10	80	0.38
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

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

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	13	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	33	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	20	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					0.0461	0.0000	0.0461	6.9800e-003	0.0000	6.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0565	0.5208	0.6367	1.1100e-003		0.0249	0.0249		0.0231	0.0231	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663
Total	0.0565	0.5208	0.6367	1.1100e-003	0.0461	0.0249	0.0711	6.9800e-003	0.0231	0.0301	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0180	0.0000	0.0180	1.3600e-003	0.0000	1.3600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.4349	0.7595	1.1100e-003		2.9200e-003	2.9200e-003		2.9200e-003	2.9200e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662
Total	0.0174	0.4349	0.7595	1.1100e-003	0.0180	2.9200e-003	0.0209	1.3600e-003	2.9200e-003	4.2800e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0843	0.0000	0.0843	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0959	0.8683	1.1529	2.0200e-003		0.0399	0.0399		0.0369	0.0369	0.0000	177.3300	177.3300	0.0522	0.0000	178.6340
Total	0.0959	0.8683	1.1529	2.0200e-003	0.0843	0.0399	0.1241	0.0128	0.0369	0.0497	0.0000	177.3300	177.3300	0.0522	0.0000	178.6340

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0329	0.0000	0.0329	2.4900e-003	0.0000	2.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0318	0.7945	1.3876	2.0200e-003		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003	0.0000	177.3298	177.3298	0.0522	0.0000	178.6338
Total	0.0318	0.7945	1.3876	2.0200e-003	0.0329	5.3300e-003	0.0382	2.4900e-003	5.3300e-003	7.8200e-003	0.0000	177.3298	177.3298	0.0522	0.0000	178.6338

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6900e-003	0.0663	0.1052	1.5000e-004		2.9300e-003	2.9300e-003		2.6900e-003	2.6900e-003	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9274
Total	6.6900e-003	0.0663	0.1052	1.5000e-004	0.0000	2.9300e-003	2.9300e-003	0.0000	2.6900e-003	2.6900e-003	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9274

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0667	0.1097	1.5000e-004		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9273
Total	3.3200e-003	0.0667	0.1097	1.5000e-004	0.0000	7.9000e-004	7.9000e-004	0.0000	7.9000e-004	7.9000e-004	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9273

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9132	0.0000	1.9132	0.9778	0.0000	0.9778	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4586	4.2894	4.5213	0.0114		0.1788	0.1788		0.1661	0.1661	0.0000	996.4063	996.4063	0.2889	0.0000	1,003.6298
Total	0.4586	4.2894	4.5213	0.0114	1.9132	0.1788	2.0919	0.9778	0.1661	1.1439	0.0000	996.4063	996.4063	0.2889	0.0000	1,003.6298

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7461	0.0000	0.7461	0.1907	0.0000	0.1907	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1904	3.6559	6.7927	0.0114		0.0253	0.0253		0.0253	0.0253	0.0000	996.4051	996.4051	0.2889	0.0000	1,003.6286
Total	0.1904	3.6559	6.7927	0.0114	0.7461	0.0253	0.7714	0.1907	0.0253	0.2160	0.0000	996.4051	996.4051	0.2889	0.0000	1,003.6286

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1246	1.1058	1.5980	3.0000e-003		0.0485	0.0485		0.0468	0.0468	0.0000	260.0885	260.0885	0.0416	0.0000	261.1296
Total	0.1246	1.1058	1.5980	3.0000e-003		0.0485	0.0485		0.0468	0.0468	0.0000	260.0885	260.0885	0.0416	0.0000	261.1296

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0567	1.0697	1.8948	3.0000e-003		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	260.0882	260.0882	0.0416	0.0000	261.1292
Total	0.0567	1.0697	1.8948	3.0000e-003		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	260.0882	260.0882	0.0416	0.0000	261.1292

Mitigated Construction Off-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

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

3.5 Trenching/Foundation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1373	1.2185	1.7609	3.3100e-003		0.0535	0.0535		0.0515	0.0515	0.0000	286.5943	286.5943	0.0459	0.0000	287.7415
Total	0.1373	1.2185	1.7609	3.3100e-003		0.0535	0.0535		0.0515	0.0515	0.0000	286.5943	286.5943	0.0459	0.0000	287.7415

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0624	1.1788	2.0879	3.3100e-003		4.8400e-003	4.8400e-003		4.8400e-003	4.8400e-003	0.0000	286.5940	286.5940	0.0459	0.0000	287.7411
Total	0.0624	1.1788	2.0879	3.3100e-003		4.8400e-003	4.8400e-003		4.8400e-003	4.8400e-003	0.0000	286.5940	286.5940	0.0459	0.0000	287.7411

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
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0377	0.3463	0.5061	8.0000e-004		0.0160	0.0160		0.0153	0.0153	0.0000	69.4123	69.4123	0.0110	0.0000	69.6860
Total	0.0377	0.3463	0.5061	8.0000e-004		0.0160	0.0160		0.0153	0.0153	0.0000	69.4123	69.4123	0.0110	0.0000	69.6860

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					

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

3.6 Building Construction - 2029

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	0.0297	0.2734	0.3995	6.3000e-004		0.0126	0.0126		0.0121	0.0121	0.0000	54.7992	54.7992	8.6400e-003	0.0000	55.0152
Total	0.0297	0.2734	0.3995	6.3000e-004		0.0126	0.0126		0.0121	0.0121	0.0000	54.7992	54.7992	8.6400e-003	0.0000	55.0152

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.2458	0.4249	6.3000e-004		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	54.7991	54.7991	8.6400e-003	0.0000	55.0152
Total	0.0126	0.2458	0.4249	6.3000e-004		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	54.7991	54.7991	8.6400e-003	0.0000	55.0152

Mitigated Construction Off-Site

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

3.7 Paving - 2028

Unmitigated Construction On-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0225	0.2343	0.3224	4.6000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	40.0486	40.0486	0.0130	0.0000	40.3724
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0225	0.2343	0.3224	4.6000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	40.0486	40.0486	0.0130	0.0000	40.3724

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0102	0.1990	0.3440	4.6000e-004		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	40.0485	40.0485	0.0130	0.0000	40.3723
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0102	0.1990	0.3440	4.6000e-004		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	40.0485	40.0485	0.0130	0.0000	40.3723

Mitigated Construction Off-Site

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

3.8 Architectural Coating - 2028

Unmitigated Construction On-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - 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					
Archit. Coating	3.1059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.1059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
Archit. Coating	3.1059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.1059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

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

3.8 Architectural Coating - 2029

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					

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 2, District Util - Infrastructure - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use -
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Trips and VMT - 0 trip emfac2021 adjustments, infra - 1 stripper truck
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

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

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	2.00	136.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	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	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	33.00	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					
2026	0.0338	0.3024	0.4661	7.8000e-004	0.0000	0.0134	0.0134	0.0000	0.0128	0.0128	0.0000	67.1889	67.1889	0.0113	0.0000	67.4715
2027	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924
Maximum	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924

Mitigated 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					
2026	0.0132	0.3008	0.5173	7.8000e-004	0.0000	1.3300e-003	1.3300e-003	0.0000	1.3300e-003	1.3300e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714
2027	0.0213	0.4860	0.8356	1.2600e-003	0.0000	2.1500e-003	2.1500e-003	0.0000	2.1500e-003	2.1500e-003	0.0000	108.5358	108.5358	0.0183	0.0000	108.9922
Maximum	0.0213	0.4860	0.8356	1.2600e-003	0.0000	2.1500e-003	2.1500e-003	0.0000	2.1500e-003	2.1500e-003	0.0000	108.5358	108.5358	0.0183	0.0000	108.9922

	ROG	NOx	CO	SO2	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	60.98	0.53	-10.98	0.00	0.00	90.04	90.04	0.00	89.62	89.62	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	11-1-2026	1-31-2027	0.5098	0.4762
2	2-1-2027	4-30-2027	0.3713	0.3468
		Highest	0.5098	0.4762

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	11/1/2026	4/8/2027	6	136	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

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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
Grading	Air Compressors	1	2.50	0	0.48
Grading	Cement and Mortar Mixers	1	10.70	0	0.56
Grading	Concrete/Industrial Saws	1	1.40	0	0.73
Grading	Generator Sets	1	5.40	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Pavers	2	7.10	130	0.42
Grading	Plate Compactors	2	5.80	8	0.43
Grading	Pumps	1	14.10	84	0.74
Grading	Rollers	1	10.50	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Sweepers/Scrubbers	1	1.20	64	0.46
Grading	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Grading	Welders	1	2.60	0	0.45

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
Grading	13	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.3008	0.5173	7.8000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714
Total	0.0132	0.3008	0.5173	7.8000e-004	0.0000	1.3300e-003	1.3300e-003	0.0000	1.3300e-003	1.3300e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714

Mitigated Construction Off-Site

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

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

Unmitigated Construction 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0546	0.4885	0.7529	1.2600e-003		0.0216	0.0216		0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924
Total	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - **Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	799.00	Space	0.00	237,000.00	0
Apartments Mid Rise	770.00	Dwelling Unit	9.54	704,566.00	2202
Strip Mall	7.49	1000sqft	0.00	7,492.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per construction schedule

Construction Phase - As per construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Trips and VMT - 0 trips emfac2021 adjustments, demo = 8,033 tons asphalt, site prep = 1 water truck

Demolition - existing building demo = 58,692-sf

Grading - grading = 140,384-cy export + 1,713-cy export geothermal bore

Architectural Coating -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	3746	3500
tblAreaCoating	Area_Nonresidential_Interior	11238	10500
tblAreaCoating	Area_Residential_Exterior	475582	427613
tblAreaCoating	Area_Residential_Interior	1426746	1282838
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	123.00
tblConstructionPhase	NumDays	230.00	1,008.00
tblConstructionPhase	NumDays	20.00	100.00
tblConstructionPhase	NumDays	20.00	144.00
tblConstructionPhase	NumDays	20.00	123.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	NumberGas	115.50	102.60
tblFireplaces	NumberNoFireplace	30.80	27.36
tblFireplaces	NumberWood	130.90	116.28
tblGrading	MaterialExported	0.00	142,097.00
tblLandUse	LandUseSquareFeet	319,600.00	237,000.00
tblLandUse	LandUseSquareFeet	770,000.00	704,566.00
tblLandUse	LandUseSquareFeet	7,490.00	7,492.00
tblLandUse	LotAcreage	7.19	0.00
tblLandUse	LotAcreage	20.26	9.54
tblLandUse	LotAcreage	0.17	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20

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

tblSolidWaste	SolidWasteGenerationRate	354.20	314.64
tblSolidWaste	SolidWasteGenerationRate	7.86	7.35
tblTripsAndVMT	HaulingTripNumber	267.00	0.00
tblTripsAndVMT	HaulingTripNumber	17,762.00	0.00
tblTripsAndVMT	VendorTripNumber	122.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	0.00
tblTripsAndVMT	WorkerTripNumber	656.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	131.00	0.00
tblWater	IndoorWaterUseRate	50,168,599.73	44,565,353.53
tblWater	IndoorWaterUseRate	554,803.19	518,507.65
tblWater	OutdoorWaterUseRate	31,628,030.26	28,095,548.96
tblWater	OutdoorWaterUseRate	340,040.66	317,795.01
tblWoodstoves	NumberCatalytic	15.40	13.68
tblWoodstoves	NumberNoncatalytic	15.40	13.68

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

2026	0.6175	5.7400	6.4855	0.0142	1.8061	0.2463	2.0524	0.9148	0.2309	1.1457	0.0000	1,238.9244	1,238.9244	0.3140	0.0000	1,246.7737
2027	0.1638	1.4766	2.1245	3.9800e-003	0.0000	0.0647	0.0647	0.0000	0.0621	0.0621	0.0000	345.0936	345.0936	0.0593	0.0000	346.5752
2028	5.1229	0.7089	1.0219	1.5700e-003	0.0000	0.0330	0.0330	0.0000	0.0312	0.0312	0.0000	136.7373	136.7373	0.0270	0.0000	137.4122
2029	0.0564	0.5186	0.7579	1.2000e-003	0.0000	0.0240	0.0240	0.0000	0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
2030	2.8800e-003	0.0204	0.0445	8.0000e-005	0.0000	3.6000e-004	3.6000e-004	0.0000	3.6000e-004	3.6000e-004	0.0000	6.4903	6.4903	2.3000e-004	0.0000	6.4961
Maximum	5.1229	5.7400	6.4855	0.0142	1.8061	0.2463	2.0524	0.9148	0.2309	1.1457	0.0000	1,238.9244	1,238.9244	0.3140	0.0000	1,246.7737

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					
2026	0.2460	4.8200	8.7128	0.0142	0.7044	0.0348	0.7392	0.1784	0.0348	0.2132	0.0000	1,238.9230	1,238.9230	0.3140	0.0000	1,246.7722
2027	0.0755	1.4243	2.5248	3.9800e-003	0.0000	5.8600e-003	5.8600e-003	0.0000	5.8600e-003	5.8600e-003	0.0000	345.0932	345.0932	0.0593	0.0000	346.5748
2028	5.0806	0.6290	1.0876	1.5700e-003	0.0000	2.3500e-003	2.3500e-003	0.0000	2.3500e-003	2.3500e-003	0.0000	136.7371	136.7371	0.0270	0.0000	137.4121
2029	0.0240	0.4662	0.8060	1.2000e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
2030	1.3800e-003	0.0268	0.0464	8.0000e-005	0.0000	1.0000e-004	1.0000e-004	0.0000	1.0000e-004	1.0000e-004	0.0000	6.4903	6.4903	2.3000e-004	0.0000	6.4961
Maximum	5.0806	4.8200	8.7128	0.0142	0.7044	0.0348	0.7392	0.1784	0.0348	0.2132	0.0000	1,238.9230	1,238.9230	0.3140	0.0000	1,246.7722

ROG	NOx	CO	SO2	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	8.99	12.97	-26.29	0.00	61.00	87.82	65.54	80.50	87.09	82.31	0.00	0.00	0.00	0.00	0.00	0.00
Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)				Maximum Mitigated ROG + NOX (tons/quarter)									
1	1-1-2026	3-31-2026	1.1858				0.9821									
2	4-1-2026	6-30-2026	2.7336				2.1037									
3	7-1-2026	9-30-2026	1.9646				1.5396									
4	10-1-2026	12-31-2026	0.4773				0.4440									
5	1-1-2027	3-31-2027	0.5177				0.4777									
6	4-1-2027	6-30-2027	0.5235				0.4830									
7	7-1-2027	9-30-2027	0.4415				0.4050									
8	10-1-2027	12-31-2027	0.1572				0.1336									
9	1-1-2028	3-31-2028	1.9722				1.9259									
10	4-1-2028	6-30-2028	3.4140				3.3804									
11	7-1-2028	9-30-2028	0.3208				0.2994									
12	10-1-2028	12-31-2028	0.1449				0.1235									
13	1-1-2029	3-31-2029	0.1417				0.1208									
14	4-1-2029	6-30-2029	0.1433				0.1221									
15	7-1-2029	9-30-2029	0.1449				0.1235									
16	10-1-2029	12-31-2029	0.1449				0.1235									
17	1-1-2030	3-31-2030	0.0233				0.0282									
		Highest	3.4140				3.3804									

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2026	4/27/2026	6	100	
2	Site Preparation	Site Preparation	3/1/2026	4/17/2026	6	41	

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

3	Grading	Grading	3/18/2026	9/1/2026	6	144
4	Trenching/Foundation	Trenching	5/17/2026	9/9/2027	6	412
5	Building Construction	Building Construction	11/3/2026	1/21/2030	6	1008
6	Paving	Paving	12/24/2027	5/15/2028	6	123
7	Architectural Coating	Architectural Coating	2/13/2028	7/5/2028	6	123

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 270

Acres of Paving: 0

Residential Indoor: 1,426,746; Residential Outdoor: 475,582; Non-Residential Indoor: 11,238; Non-Residential Outdoor: 3,746; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Grading	Bore/Drill Rigs	4	6.30	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	4	7.50	247	0.40
Grading	Scrapers	0	0.00	367	0.48
Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	1.60	221	0.50
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0289	0.0000	0.0289	4.3700e-003	0.0000	4.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1010	0.9148	1.2156	2.1300e-003		0.0420	0.0420		0.0389	0.0389	0.0000	186.9468	186.9468	0.0550	0.0000	188.3218
Total	0.1010	0.9148	1.2156	2.1300e-003	0.0289	0.0420	0.0709	4.3700e-003	0.0389	0.0433	0.0000	186.9468	186.9468	0.0550	0.0000	188.3218

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0113	0.0000	0.0113	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0336	0.8377	1.4631	2.1300e-003		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003	0.0000	186.9466	186.9466	0.0550	0.0000	188.3215
Total	0.0336	0.8377	1.4631	2.1300e-003	0.0113	5.6200e-003	0.0169	8.5000e-004	5.6200e-003	6.4700e-003	0.0000	186.9466	186.9466	0.0550	0.0000	188.3215

Mitigated Construction Off-Site

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

3.3 Site Preparation - 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
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0715	0.1135	1.6000e-004		3.1600e-003	3.1600e-003		2.9100e-003	2.9100e-003	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479
Total	7.2200e-003	0.0715	0.1135	1.6000e-004	0.0000	3.1600e-003	3.1600e-003	0.0000	2.9100e-003	2.9100e-003	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5800e-003	0.0719	0.1184	1.6000e-004		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479
Total	3.5800e-003	0.0719	0.1184	1.6000e-004	0.0000	8.5000e-004	8.5000e-004	0.0000	8.5000e-004	8.5000e-004	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479

Mitigated Construction Off-Site

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

3.4 Grading - 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
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					1.7772	0.0000	1.7772	0.9104	0.0000	0.9104	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4037	3.8102	3.8072	9.2000e-003		0.1607	0.1607		0.1502	0.1502	0.0000	804.1855	804.1855	0.2135	0.0000	809.5232
Total	0.4037	3.8102	3.8072	9.2000e-003	1.7772	0.1607	1.9379	0.9104	0.1502	1.0606	0.0000	804.1855	804.1855	0.2135	0.0000	809.5232

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.6931	0.0000	0.6931	0.1775	0.0000	0.1775	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1587	2.9740	5.4558	9.2000e-003		0.0244	0.0244		0.0244	0.0244	0.0000	804.1846	804.1846	0.2135	0.0000	809.5222
Total	0.1587	2.9740	5.4558	9.2000e-003	0.6931	0.0244	0.7174	0.1775	0.0244	0.2019	0.0000	804.1846	804.1846	0.2135	0.0000	809.5222

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 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
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Off-Road	0.0463	0.8605	1.5442	2.5000e-003		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	217.0179	217.0179	0.0383	0.0000	217.9759
Total	0.0463	0.8605	1.5442	2.5000e-003		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	217.0179	217.0179	0.0383	0.0000	217.9759

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1063	0.9466	1.3507	2.7500e-003		0.0402	0.0402		0.0388	0.0388	0.0000	239.1628	239.1628	0.0422	0.0000	240.2186

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Total	0.1063	0.9466	1.3507	2.7500e-003		0.0402	0.0402		0.0388	0.0388	0.0000	239.1628	239.1628	0.0422	0.0000	240.2186
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0511	0.9483	1.7018	2.7500e-003		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	239.1626	239.1626	0.0422	0.0000	240.2183
Total	0.0511	0.9483	1.7018	2.7500e-003		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	239.1626	239.1626	0.0422	0.0000	240.2183

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1900e-003	0.0845	0.1235	2.0000e-004		3.9000e-003	3.9000e-003		3.7200e-003	3.7200e-003	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047
Total	9.1900e-003	0.0845	0.1235	2.0000e-004		3.9000e-003	3.9000e-003		3.7200e-003	3.7200e-003	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9000e-003	0.0760	0.1313	2.0000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047
Total	3.9000e-003	0.0760	0.1313	2.0000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047

Mitigated Construction Off-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0240	0.4662	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
Total	0.0240	0.4662	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621

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
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2028

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	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

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					

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1000e-004	9.8300e-003	0.0170	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	1.9784	1.9784	6.4000e-004	0.0000	1.9944
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.1000e-004	9.8300e-003	0.0170	2.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	1.9784	1.9784	6.4000e-004	0.0000	1.9944

Mitigated Construction Off-Site

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

3.7 Paving - 2028

Unmitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0183	0.1904	0.2640	3.7000e-004		9.0600e-003	9.0600e-003		8.3400e-003	8.3400e-003	0.0000	32.7849	32.7849	0.0106	0.0000	33.0500
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0183	0.1904	0.2640	3.7000e-004		9.0600e-003	9.0600e-003		8.3400e-003	8.3400e-003	0.0000	32.7849	32.7849	0.0106	0.0000	33.0500

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.3700e-003	0.1628	0.2815	3.7000e-004		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	32.7849	32.7849	0.0106	0.0000	33.0500
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.3700e-003	0.1628	0.2815	3.7000e-004		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	32.7849	32.7849	0.0106	0.0000	33.0500

Mitigated Construction Off-Site

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

3.8 Architectural Coating - 2028

Unmitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					
Archit. Coating	5.0482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 3 Affordable R4a, District Util - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	210.00	Space	0.00	64,000.00	0
Apartments Mid Rise	210.00	Dwelling Unit	1.32	190,000.00	601

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2028
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips emfac2021 adjustments, demo = 1,000 ton asphalt, site prep = 1 water truck

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Demolition - existing building demo = 53,170-sf

Grading - grading = 42,787-cy export

Architectural Coating -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	42,787.00
tblLandUse	LandUseSquareFeet	84,000.00	64,000.00
tblLandUse	LandUseSquareFeet	210,000.00	190,000.00
tblLandUse	LotAcreage	1.89	0.00
tblLandUse	LotAcreage	5.53	1.32
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.70

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	7.00	10.80
tblOffRoadEquipment	UsageHours	6.00	10.30
tblOffRoadEquipment	UsageHours	6.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	6.00	0.80
tblOffRoadEquipment	UsageHours	8.00	2.20
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.60
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	6.00	8.30
tblTripsAndVMT	HaulingTripNumber	242.00	0.00
tblTripsAndVMT	HaulingTripNumber	5,348.00	0.00
tblTripsAndVMT	VendorTripNumber	33.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	178.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	36.00	0.00

2.0 Emissions Summary

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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					
2026	0.0404	0.3659	0.4863	8.5000e-004	0.0122	0.0168	0.0290	1.8400e-003	0.0156	0.0174	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287
2027	1.4483	2.1928	2.6505	4.8800e-003	0.5816	0.0974	0.6789	0.2929	0.0917	0.3846	0.0000	424.8664	424.8664	0.0945	0.0000	427.2297
2028	0.1818	0.3976	0.5811	9.2000e-004	0.0000	0.0184	0.0184	0.0000	0.0175	0.0175	0.0000	79.7079	79.7079	0.0126	0.0000	80.0222
Maximum	1.4483	2.1928	2.6505	4.8800e-003	0.5816	0.0974	0.6789	0.2929	0.0917	0.3846	0.0000	424.8664	424.8664	0.0945	0.0000	427.2297

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					
2026	0.0134	0.3351	0.5852	8.5000e-004	4.7500e-003	2.2500e-003	6.9900e-003	3.6000e-004	2.2500e-003	2.6100e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286
2027	1.2997	1.7881	3.1446	4.8800e-003	0.2268	0.0118	0.2386	0.0571	0.0118	0.0689	0.0000	424.8659	424.8659	0.0945	0.0000	427.2292
2028	0.1569	0.3575	0.6180	9.2000e-004	0.0000	1.3400e-003	1.3400e-003	0.0000	1.3400e-003	1.3400e-003	0.0000	79.7078	79.7078	0.0126	0.0000	80.0221
Maximum	1.2997	1.7881	3.1446	4.8800e-003	0.2268	0.0118	0.2386	0.0571	0.0118	0.0689	0.0000	424.8659	424.8659	0.0945	0.0000	427.2292

Google Middlefield, Const Phase 3 Affordable R4a, District Util - 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
Percent Reduction	12.00	16.09	-16.94	0.00	61.00	88.40	66.00	80.50	87.68	82.64	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	11-15-2026	2-14-2027	0.8010	0.6870
2	2-15-2027	5-14-2027	1.3288	0.9274
3	5-15-2027	8-14-2027	0.3189	0.2806
4	8-15-2027	11-14-2027	0.2924	0.2518
5	11-15-2027	2-14-2028	1.4932	1.4696
6	2-15-2028	5-14-2028	0.1417	0.1208
7	5-15-2028	8-14-2028	0.1449	0.1235
8	8-15-2028	9-30-2028	0.0740	0.0631
		Highest	1.4932	1.4696

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	11/15/2026	2/23/2027	6	86	
2	Site Preparation	Site Preparation	2/23/2027	3/9/2027	6	13	
3	Grading	Grading	3/10/2027	5/1/2027	6	46	
4	Trenching/Foundation	Trenching	5/2/2027	9/30/2027	6	130	
5	Building Construction	Building Construction	10/1/2027	10/6/2028	6	319	
6	Paving	Paving	10/8/2027	11/22/2027	6	39	
7	Architectural Coating	Architectural Coating	11/22/2027	1/5/2028	6	39	

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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 Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 86.25

Acres of Paving: 0

Residential Indoor: 384,750; Residential Outdoor: 128,250; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,840

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	4	7.50	247	0.40

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

Grading	Scrapers	0	0.00	367	0.48
Grading	Skid Steer Loaders	1	3.50	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Demolition	12	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	20	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					
Fugitive Dust					0.0122	0.0000	0.0122	1.8400e-003	0.0000	1.8400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0404	0.3659	0.4863	8.5000e-004		0.0168	0.0168		0.0156	0.0156	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287
Total	0.0404	0.3659	0.4863	8.5000e-004	0.0122	0.0168	0.0290	1.8400e-003	0.0156	0.0174	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7500e-003	0.0000	4.7500e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.3351	0.5852	8.5000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286
Total	0.0134	0.3351	0.5852	8.5000e-004	4.7500e-003	2.2500e-003	7.0000e-003	3.6000e-004	2.2500e-003	2.6100e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286

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

3.2 Demolition - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0140	0.0000	0.0140	2.1200e-003	0.0000	2.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0465	0.4208	0.5592	9.8000e-004		0.0193	0.0193		0.0179	0.0179	0.0000	85.9955	85.9955	0.0253	0.0000	86.6280
Total	0.0465	0.4208	0.5592	9.8000e-004	0.0140	0.0193	0.0333	2.1200e-003	0.0179	0.0200	0.0000	85.9955	85.9955	0.0253	0.0000	86.6280

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4600e-003	0.0000	5.4600e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0154	0.3853	0.6730	9.8000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	85.9954	85.9954	0.0253	0.0000	86.6279
Total	0.0154	0.3853	0.6730	9.8000e-004	5.4600e-003	2.5800e-003	8.0400e-003	4.1000e-004	2.5800e-003	2.9900e-003	0.0000	85.9954	85.9954	0.0253	0.0000	86.6279

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

3.3 Site Preparation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	0.0227	0.0360	5.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225
Total	2.2900e-003	0.0227	0.0360	5.0000e-005	0.0000	1.0000e-003	1.0000e-003	0.0000	9.2000e-004	9.2000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1300e-003	0.0228	0.0375	5.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225
Total	1.1300e-003	0.0228	0.0375	5.0000e-005	0.0000	2.7000e-004	2.7000e-004	0.0000	2.7000e-004	2.7000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225

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

3.4 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5676	0.0000	0.5676	0.2908	0.0000	0.2908	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1138	1.0818	1.0683	2.2500e-003		0.0469	0.0469		0.0439	0.0439	0.0000	196.5536	196.5536	0.0487	0.0000	197.7708
Total	0.1138	1.0818	1.0683	2.2500e-003	0.5676	0.0469	0.6145	0.2908	0.0439	0.3347	0.0000	196.5536	196.5536	0.0487	0.0000	197.7708

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2214	0.0000	0.2214	0.0567	0.0000	0.0567	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0394	0.7675	1.3753	2.2500e-003		6.6400e-003	6.6400e-003		6.6400e-003	6.6400e-003	0.0000	196.5533	196.5533	0.0487	0.0000	197.7705
Total	0.0394	0.7675	1.3753	2.2500e-003	0.2214	6.6400e-003	0.2280	0.0567	6.6400e-003	0.0634	0.0000	196.5533	196.5533	0.0487	0.0000	197.7705

Mitigated Construction Off-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0531	0.4727	0.7071	1.1600e-003		0.0210	0.0210		0.0204	0.0204	0.0000	100.6706	100.6706	0.0114	0.0000	100.9561
Total	0.0531	0.4727	0.7071	1.1600e-003		0.0210	0.0210		0.0204	0.0204	0.0000	100.6706	100.6706	0.0114	0.0000	100.9561

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0226	0.4400	0.7607	1.1600e-003		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	100.6705	100.6705	0.0114	0.0000	100.9560
Total	0.0226	0.4400	0.7607	1.1600e-003		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	100.6705	100.6705	0.0114	0.0000	100.9560

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
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Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1309	0.1913	3.0000e-004		6.0500e-003	6.0500e-003		5.7700e-003	5.7700e-003	0.0000	26.2372	26.2372	4.1400e-003	0.0000	26.3406
Total	0.0142	0.1309	0.1913	3.0000e-004		6.0500e-003	6.0500e-003		5.7700e-003	5.7700e-003	0.0000	26.2372	26.2372	4.1400e-003	0.0000	26.3406

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					

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

3.8 Architectural Coating - 2028

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	0.1386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 3, City Util - Infrastructure - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use - As per supplied construction schedule
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - As per supplied construction equipment
- Trips and VMT - 0 trips emfac2021 adjustments, infra = 1 striper truck
- Demolition -
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical

Table Name	Column Name	Default Value	New Value
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Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

tblAreaCoating	Area_Parking	2614	3840
tblAreaCoating	Area_Residential_Exterior	0	128250
tblAreaCoating	Area_Residential_Interior	0	384750
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	12
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	2.00	102.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.2400e-003	0.00

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2570e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6240e-003	0.00
tblFleetMix	MHD	8.1590e-003	0.00
tblFleetMix	OBUS	8.7700e-004	0.00
tblFleetMix	SBUS	8.7400e-004	0.00
tblFleetMix	UBUS	3.5600e-004	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Google Middlefield, Const Phase 3, City Util - Infrastructure - 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
Year	tons/yr										MT/yr					
2027	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914
Maximum	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914

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					
2027	0.0150	0.3792	0.6500	9.4000e-004	0.0000	1.8200e-003	1.8200e-003	0.0000	1.8200e-003	1.8200e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913
Maximum	0.0150	0.3792	0.6500	9.4000e-004	0.0000	1.8200e-003	1.8200e-003	0.0000	1.8200e-003	1.8200e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913

	ROG	NOx	CO	SO2	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	62.98	-1.08	-12.02	0.00	0.00	89.38	89.38	0.00	88.69	88.69	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2027	3-31-2027	0.3143	0.2981
2	4-1-2027	6-30-2027	0.1013	0.0961
		Highest	0.3143	0.2981

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	1/1/2027	4/29/2027	6	102	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Air Compressors	0	0.00	0	0.48
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.10	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43
Infrastructure	Pumps	0	0.00	84	0.74
Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Infrastructure	Welders	0	0.00	0	0.45

Trips and VMT

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0405	0.3751	0.5802	9.4000e-004		0.0171	0.0171		0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914
Total	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.3792	0.6500	9.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913
Total	0.0150	0.3792	0.6500	9.4000e-004	0.0000	1.8200e-003	1.8200e-003	0.0000	1.8200e-003	1.8200e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913

Mitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	689.06	1000sqft	12.33	689,061.00	0
Enclosed Parking with Elevator	1,969.00	Space	0.00	420,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2031
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips for emfac2021 adjustments, demo = 10,106 ton asphalt, site prep - 1 water truck

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Demolition - existing building demo = 132,996-sf

Grading - grading = 110,949-cy export + 1,713-cy export geothermal bore

Architectural Coating -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 I+Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	344531	343500
tblAreaCoating	Area_Nonresidential_Interior	1033592	1030500
tblAreaCoating	Area_Parking	25200	47184
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	205.00
tblConstructionPhase	NumDays	300.00	1,120.00
tblConstructionPhase	NumDays	20.00	234.00
tblConstructionPhase	NumDays	30.00	86.00
tblConstructionPhase	NumDays	20.00	205.00
tblConstructionPhase	NumDays	10.00	54.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	112,662.00
tblLandUse	LandUseSquareFeet	689,060.00	689,061.00
tblLandUse	LandUseSquareFeet	787,600.00	420,000.00
tblLandUse	LotAcreage	15.82	12.33
tblLandUse	LotAcreage	17.72	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	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	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	8.20
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	9.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	640.83	638.91
tblTripsAndVMT	HaulingTripNumber	605.00	0.00
tblTripsAndVMT	HaulingTripNumber	14,083.00	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	VendorTripNumber	182.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	73.00	0.00
tblTripsAndVMT	WorkerTripNumber	40.00	0.00
tblTripsAndVMT	WorkerTripNumber	397.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	79.00	0.00
tblWater	IndoorWaterUseRate	122,469,216.39	122,103,084.87
tblWater	OutdoorWaterUseRate	75,061,777.79	74,837,374.60

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					
2026	0.6440	5.9804	7.0179	0.0139	1.6567	0.2640	1.9207	0.8254	0.2460	1.0714	0.0000	1,216.7848	1,216.7848	0.3308	0.0000	1,225.0550
2027	0.1883	1.7021	2.4606	4.1900e-003	0.0000	0.0781	0.0781	0.0000	0.0746	0.0746	0.0000	363.9883	363.9883	0.0620	0.0000	365.5393
2028	3.9440	2.4347	3.4958	5.7500e-003	0.0000	0.1127	0.1127	0.0000	0.1070	0.1070	0.0000	499.7134	499.7134	0.0935	0.0000	502.0509
2029	0.0586	0.5380	0.7860	1.2500e-003	0.0000	0.0248	0.0248	0.0000	0.0237	0.0237	0.0000	108.1521	108.1521	0.0171	0.0000	108.5797
2030	0.0501	0.3543	0.7744	1.3200e-003	0.0000	6.3400e-003	6.3400e-003	0.0000	6.3400e-003	6.3400e-003	0.0000	112.8584	112.8584	4.0400e-003	0.0000	112.9594
2031	0.0150	0.1064	0.2326	4.0000e-004	0.0000	1.9000e-003	1.9000e-003	0.0000	1.9000e-003	1.9000e-003	0.0000	33.8936	33.8936	1.2100e-003	0.0000	33.9239

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

Maximum	3.9440	5.9804	7.0179	0.0139	1.6567	0.2640	1.9207	0.8254	0.2460	1.0714	0.0000	1,216.7848	1,216.7848	0.3308	0.0000	1,225.0550
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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					
2026	0.2361	4.9988	8.9281	0.0139	0.6461	0.0338	0.6799	0.1610	0.0338	0.1948	0.0000	1,216.7834	1,216.7834	0.3308	0.0000	1,225.0535
2027	0.0822	1.5754	2.7577	4.1900e-003	0.0000	6.1800e-003	6.1800e-003	0.0000	6.1800e-003	6.1800e-003	0.0000	363.9878	363.9878	0.0620	0.0000	365.5389
2028	3.7957	2.2135	3.8609	5.7500e-003	0.0000	8.5700e-003	8.5700e-003	0.0000	8.5700e-003	8.5700e-003	0.0000	499.7128	499.7128	0.0935	0.0000	502.0503
2029	0.0249	0.4842	0.8377	1.2500e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	108.1520	108.1520	0.0171	0.0000	108.5796
2030	0.0240	0.4662	0.8060	1.3200e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	112.8582	112.8582	4.0400e-003	0.0000	112.9593
2031	7.2000e-003	0.1400	0.2421	4.0000e-004	0.0000	5.2000e-004	5.2000e-004	0.0000	5.2000e-004	5.2000e-004	0.0000	33.8935	33.8935	1.2100e-003	0.0000	33.9239
Maximum	3.7957	4.9988	8.9281	0.0139	0.6461	0.0338	0.6799	0.1610	0.0338	0.1948	0.0000	1,216.7834	1,216.7834	0.3308	0.0000	1,225.0535

	ROG	NOx	CO	SO2	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	14.90	11.13	-18.05	0.00	61.00	89.22	67.42	80.50	88.55	83.38	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2026	6-30-2026	1.7418	1.3777
2	7-1-2026	9-30-2026	3.6637	2.8035

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

3	10-1-2026	12-31-2026	1.2091	1.0469
4	1-1-2027	3-31-2027	0.4162	0.3667
5	4-1-2027	6-30-2027	0.4209	0.3707
6	7-1-2027	9-30-2027	0.4397	0.3869
7	10-1-2027	12-31-2027	0.6121	0.5320
8	1-1-2028	3-31-2028	1.7917	1.6856
9	4-1-2028	6-30-2028	2.1457	2.0396
10	7-1-2028	9-30-2028	1.8731	1.7873
11	10-1-2028	12-31-2028	0.5703	0.4983
12	1-1-2029	3-31-2029	0.1602	0.1371
13	4-1-2029	6-30-2029	0.1433	0.1221
14	7-1-2029	9-30-2029	0.1449	0.1235
15	10-1-2029	12-31-2029	0.1449	0.1235
16	1-1-2030	3-31-2030	0.0997	0.1208
17	4-1-2030	6-30-2030	0.1008	0.1221
18	7-1-2030	9-30-2030	0.1019	0.1235
19	10-1-2030	12-31-2030	0.1019	0.1235
20	1-1-2031	3-31-2031	0.0997	0.1208
21	4-1-2031	6-30-2031	0.0210	0.0255
		Highest	3.6637	2.8035

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	4/1/2026	12/29/2026	6	234	
2	Site Preparation	Site Preparation	5/22/2026	7/23/2026	6	54	
3	Grading	Grading	6/5/2026	9/12/2026	6	86	

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

4	Trenching/Foundation	Trenching	7/26/2026	1/4/2029	6	766
5	Building Construction	Building Construction	9/22/2027	4/19/2031	6	1120
6	Paving	Paving	12/11/2027	8/5/2028	6	205
7	Architectural Coating	Architectural Coating	1/24/2028	9/18/2028	6	205

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 241.88

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,033,592; Non-Residential Outdoor: 344,531; Striped Parking Area: 25,200

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	3	8.20	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Bore/Drill Rigs	4	6.70	221	0.50

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

Grading	Excavators	4	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	2.00	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	5	9.00	247	0.40
Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	5.20	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	0.60	221	0.50
Trenching/Foundation	Cranes	1	6.90	0	0.29
Trenching/Foundation	Forklifts	4	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	0.50	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	1	4.80	0	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	1	5.30	80	0.38
Paving	Rollers	2	6.60	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	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	14	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	29	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	16	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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
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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					
	Fugitive Dust					0.0655	0.0000	0.0655	9.9100e-003	0.0000	9.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2364	2.1405	2.8445	4.9900e-003		0.0983	0.0983		0.0911	0.0911	0.0000	437.4555	437.4555	0.1287	0.0000	440.6729
Total	0.2364	2.1405	2.8445	4.9900e-003	0.0655	0.0983	0.1638	9.9100e-003	0.0911	0.1010	0.0000	437.4555	437.4555	0.1287	0.0000	440.6729

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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					
	Fugitive Dust					0.0255	0.0000	0.0255	1.9300e-003	0.0000	1.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0785	1.9602	3.4236	4.9900e-003		0.0131	0.0131		0.0131	0.0131	0.0000	437.4550	437.4550	0.1287	0.0000	440.6724
Total	0.0785	1.9602	3.4236	4.9900e-003	0.0255	0.0131	0.0387	1.9300e-003	0.0131	0.0151	0.0000	437.4550	437.4550	0.1287	0.0000	440.6724

Mitigated Construction Off-Site

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

3.3 Site Preparation - 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
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0942	0.1495	2.1000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3705
Total	9.5100e-003	0.0942	0.1495	2.1000e-004	0.0000	4.1600e-003	4.1600e-003	0.0000	3.8300e-003	3.8300e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3705

Unmitigated Construction Off-Site

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

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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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7100e-003	0.0947	0.1559	2.1000e-004		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3704
Total	4.7100e-003	0.0947	0.1559	2.1000e-004	0.0000	1.1200e-003	1.1200e-003	0.0000	1.1200e-003	1.1200e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3704

Mitigated Construction Off-Site

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

3.4 Grading - 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
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					1.5912	0.0000	1.5912	0.8155	0.0000	0.8155	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3247	3.0853	3.0688	7.0700e-003		0.1313	0.1313		0.1222	0.1222	0.0000	618.3137	618.3137	0.1722	0.0000	622.6174
Total	0.3247	3.0853	3.0688	7.0700e-003	1.5912	0.1313	1.7225	0.8155	0.1222	0.9376	0.0000	618.3137	618.3137	0.1722	0.0000	622.6174

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.6206	0.0000	0.6206	0.1590	0.0000	0.1590	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1208	2.3296	4.2718	7.0700e-003		0.0171	0.0171		0.0171	0.0171	0.0000	618.3130	618.3130	0.1722	0.0000	622.6167
Total	0.1208	2.3296	4.2718	7.0700e-003	0.6206	0.0171	0.6377	0.1590	0.0171	0.1761	0.0000	618.3130	618.3130	0.1722	0.0000	622.6167

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 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
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	0.0734	0.6604	0.9550	1.6500e-003		0.0302	0.0302		0.0289	0.0289	0.0000	142.7924	142.7924	0.0241	0.0000
Total	0.0734	0.6604	0.9550	1.6500e-003		0.0302	0.0302		0.0289	0.0289	0.0000	142.7924	142.7924	0.0241	0.0000	143.3942

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Off-Road	0.0321	0.6143	1.0768	1.6500e-003		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003	0.0000	142.7923	142.7923	0.0241	0.0000	143.3940
Total	0.0321	0.6143	1.0768	1.6500e-003		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003	0.0000	142.7923	142.7923	0.0241	0.0000	143.3940

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Total	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0739	1.4138	2.4782	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171
Total	0.0739	1.4138	2.4782	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2028

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	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175
Total	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0739	1.4138	2.4782	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171
Total	0.0739	1.4138	2.4782	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171

Mitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

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

3.5 Trenching/Foundation - 2029

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	2.1600e-003	0.0194	0.0281	5.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175
Total	2.1600e-003	0.0194	0.0281	5.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4000e-004	0.0181	0.0317	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175
Total	9.4000e-004	0.0181	0.0317	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175

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
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1441	0.2107	3.3000e-004		6.6600e-003	6.6600e-003		6.3500e-003	6.3500e-003	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080
Total	0.0157	0.1441	0.2107	3.3000e-004		6.6600e-003	6.6600e-003		6.3500e-003	6.3500e-003	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080

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					

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

3.6 Building Construction - 2030

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	0.0501	0.3543	0.7744	1.3200e-003		6.3400e-003	6.3400e-003		6.3400e-003	6.3400e-003	0.0000	112.8584	112.8584	4.0400e-003	0.0000	112.9594
Total	0.0501	0.3543	0.7744	1.3200e-003		6.3400e-003	6.3400e-003		6.3400e-003	6.3400e-003	0.0000	112.8584	112.8584	4.0400e-003	0.0000	112.9594

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0240	0.4662	0.8060	1.3200e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	112.8582	112.8582	4.0400e-003	0.0000	112.9593
Total	0.0240	0.4662	0.8060	1.3200e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	112.8582	112.8582	4.0400e-003	0.0000	112.9593

Mitigated Construction Off-Site

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

3.6 Building Construction - 2031

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.1064	0.2326	4.0000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	33.8936	33.8936	1.2100e-003	0.0000	33.9239
Total	0.0150	0.1064	0.2326	4.0000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	33.8936	33.8936	1.2100e-003	0.0000	33.9239

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	7.2000e-003	0.1400	0.2421	4.0000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.8935	33.8935	1.2100e-003	0.0000
Total	7.2000e-003	0.1400	0.2421	4.0000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.8935	33.8935	1.2100e-003	0.0000	33.9239

Mitigated Construction Off-Site

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

3.7 Paving - 2027

Unmitigated Construction On-Site

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

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Off-Road	1.6500e-003	0.0321	0.0555	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.4616	6.4616	2.0900e-003	0.0000	6.5138
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6500e-003	0.0321	0.0555	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.4616	6.4616	2.0900e-003	0.0000	6.5138

Mitigated Construction Off-Site

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

3.7 Paving - 2028

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					

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Off-Road	0.0380	0.3963	0.5400	7.6000e-004		0.0191	0.0191		0.0176	0.0176	0.0000	67.1285	67.1285	0.0217	0.0000	67.6712
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0380	0.3963	0.5400	7.6000e-004		0.0191	0.0191		0.0176	0.0176	0.0000	67.1285	67.1285	0.0217	0.0000	67.6712

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 4, District Util - Infrastructure - Unmitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use -
- Construction Phase - As per supplied construction schedule
- Off-road Equipment -
- Off-road Equipment - provided construction equipment
- Trips and VMT - 0 trips emfac 2021, infra = 1 striper truck
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 I + Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

tblAreaCoating	Area_Parking	2614	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	2.00	68.00

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.2400e-003	0.00
tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2570e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6240e-003	0.00
tblFleetMix	MHD	8.1590e-003	0.00
tblFleetMix	OBUS	8.7700e-004	0.00
tblFleetMix	SBUS	8.7400e-004	0.00
tblFleetMix	UBUS	3.5600e-004	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Google Middlefield, Const Phase 4, District Util - Infrastructure - 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
Year	tons/yr										MT/yr					
2028	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276
Maximum	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276

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					
2028	0.0100	0.2528	0.4333	6.2000e-004	0.0000	1.2100e-003	1.2100e-003	0.0000	1.2100e-003	1.2100e-003	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275
Maximum	0.0100	0.2528	0.4333	6.2000e-004	0.0000	1.2100e-003	1.2100e-003	0.0000	1.2100e-003	1.2100e-003	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275

	ROG	NOx	CO	SO2	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	62.98	-1.08	-12.02	0.00	0.00	89.41	89.41	0.00	88.72	88.72	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	3-1-2028	5-31-2028	0.2759	0.2617
		Highest	0.2759	0.2617

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	3/1/2028	5/18/2028	6	68	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Air Compressors	0	0.00	0	0.48
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.10	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43
Infrastructure	Pumps	0	0.00	84	0.74
Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Infrastructure	Welders	0	0.00	0	0.45

Trips and VMT

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

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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 2028

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0270	0.2501	0.3868	6.2000e-004		0.0114	0.0114		0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276
Total	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0100	0.2528	0.4333	6.2000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275
Total	0.0100	0.2528	0.4333	6.2000e-004	0.0000	1.2100e-003	1.2100e-003	0.0000	1.2100e-003	1.2100e-003	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275

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

Trips and VMT - 0 Trips for EMFAC2021 adjustments, demo = 5,848 tons asphalt, site prep - 2 water trucks

Demolition - As per supplied construction schedule - 149,337-sf building demo

Grading - grading = 201,721-cy export + 1,713-cy export geothermal bore

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 Final + Electrical equipment

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_Nonresidential_Exterior	11254	0
tblAreaCoating	Area_Nonresidential_Interior	33762	0
tblAreaCoating	Area_Parking	20580	0
tblAreaCoating	Area_Residential_Exterior	467393	0
tblAreaCoating	Area_Residential_Interior	1402179	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical

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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 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	230.00	395.00
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	HHD	6.3120e-003	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00

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

tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2090e-003	0.00
tblFleetMix	LHD2	5.2090e-003	0.00
tblFleetMix	LHD2	5.2090e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MH	2.6680e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	MHD	8.0910e-003	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	OBUS	8.8400e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	SBUS	8.8700e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblFleetMix	UBUS	3.6400e-004	0.00
tblGrading	MaterialExported	0.00	203,434.00
tblLandUse	LandUseSquareFeet	335,200.00	343,000.00
tblLandUse	LandUseSquareFeet	750,000.00	692,434.00

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

tblLandUse	LandUseSquareFeet	22,510.00	22,508.00
tblLandUse	LotAcreage	7.54	0.00
tblLandUse	LotAcreage	19.74	6.20
tblLandUse	LotAcreage	0.52	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	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	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	8.80
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblTripsAndVMT	HaulingTripNumber	679.00	0.00
tblTripsAndVMT	HaulingTripNumber	25,429.00	0.00
tblTripsAndVMT	VendorTripNumber	140.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	103.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblTripsAndVMT	WorkerTripNumber	691.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	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	138.00	0.00
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1131	1.1108	0.9886	1.7200e-003	0.0696	0.0566	0.1261	0.0105	0.0525	0.0630	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640
2023	0.5564	5.2207	5.4412	0.0117	1.3914	0.2464	1.6379	0.7095	0.2331	0.9426	0.0000	1,023.0287	1,023.0287	0.2358	0.0000	1,028.9228
2024	0.1218	1.1138	1.5250	2.4100e-003	0.0000	0.0559	0.0559	0.0000	0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935
2025	1.0299	0.1774	0.2476	3.5000e-004	0.0000	8.4200e-003	8.4200e-003	0.0000	7.7800e-003	7.7800e-003	0.0000	31.1178	31.1178	9.4000e-003	0.0000	31.3529
Maximum	1.0299	5.2207	5.4412	0.0117	1.3914	0.2464	1.6379	0.7095	0.2331	0.9426	0.0000	1,023.0287	1,023.0287	0.2358	0.0000	1,028.9228

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0219	0.1445	1.0946	1.7200e-003	0.0271	2.7400e-003	0.0299	2.0500e-003	2.7400e-003	4.7900e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638

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

2023	0.1397	0.7764	6.7261	0.0117	0.5427	0.0180	0.5607	0.1384	0.0180	0.1564	0.0000	1,023.0275	1,023.0275	0.2358	0.0000	1,028.9215
2024	0.0262	0.1136	1.6172	2.4100e-003	0.0000	3.5000e-003	3.5000e-003	0.0000	3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933
2025	1.0169	0.0185	0.2639	3.5000e-004	0.0000	5.7000e-004	5.7000e-004	0.0000	5.7000e-004	5.7000e-004	0.0000	31.1177	31.1177	9.4000e-003	0.0000	31.3528
Maximum	1.0169	0.7764	6.7261	0.0117	0.5427	0.0180	0.5607	0.1384	0.0180	0.1564	0.0000	1,023.0275	1,023.0275	0.2358	0.0000	1,028.9215

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	33.85	86.18	-18.28	0.00	61.00	93.24	67.48	80.50	92.84	84.51	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	11-1-2022	1-31-2023	1.7896	0.2716
2	2-1-2023	4-30-2023	3.4338	0.5855
3	5-1-2023	7-31-2023	0.8417	0.1105
4	8-1-2023	10-31-2023	0.6927	0.0883
5	11-1-2023	1-31-2024	0.3259	0.0351
6	2-1-2024	4-30-2024	0.3036	0.0344
7	5-1-2024	7-31-2024	0.3103	0.0351
8	8-1-2024	10-31-2024	0.3103	0.0351
9	11-1-2024	1-31-2025	0.3018	0.0346
10	2-1-2025	4-30-2025	1.1113	1.0242
		Highest	3.4338	1.0242

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1	Demolition	Demolition	11/1/2022	1/4/2023	6	56
2	Site Preparation	Site Preparation	1/5/2023	1/23/2023	6	16
3	Grading	Grading	1/24/2023	3/29/2023	6	56
4	Trenching	Trenching	3/31/2023	10/4/2023	6	161
5	Building Construction	Building Construction	10/5/2023	1/7/2025	6	395
6	Paving	Paving	1/8/2025	3/4/2025	6	48
7	Architectural Coating	Architectural Coating	3/6/2025	4/30/2025	6	48

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 210

Acres of Paving: 0

Residential Indoor: 1,402,179; Residential Outdoor: 467,393; Non-Residential Indoor: 33,762; Non-Residential Outdoor: 11,254; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	2	6.50	0	0.31
Demolition	Air Compressors	2	4.20	0	0.48
Demolition	Concrete/Industrial Saws	2	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	2	10.00	89	0.20
Demolition	Generator Sets	2	5.40	84	0.74
Demolition	Rubber Tired Dozers	2	10.00	247	0.40
Demolition	Sweepers/Scrubbers	2	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	2	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	4	8.10	97	0.37
Grading	Air Compressors	2	4.20	0	0.48

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

Grading	Bore/Drill Rigs	3	2.00	221	0.50
Grading	Bore/Drill Rigs	4	7.90	221	0.50
Grading	Bore/Drill Rigs	5	7.20	221	0.50
Grading	Excavators	4	7.90	158	0.38
Grading	Generator Sets	2	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	3	1.90	8	0.43
Grading	Pumps	2	24.00	84	0.74
Grading	Rubber Tired Dozers	6	10.00	247	0.40
Grading	Skid Steer Loaders	2	2.70	65	0.37
Grading	Sweepers/Scrubbers	4	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching	Aerial Lifts	4	9.70	0	0.31
Trenching	Bore/Drill Rigs	5	2.00	221	0.50
Trenching	Cranes	2	10.30	0	0.29
Trenching	Forklifts	4	10.00	89	0.20
Trenching	Generator Sets	2	5.40	84	0.74
Trenching	Pumps	4	5.40	84	0.74
Trenching	Tractors/Loaders/Backhoes	3	1.30	97	0.37
Building Construction	Aerial Lifts	4	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	2	7.10	0	0.56
Building Construction	Cranes	2	10.30	0	0.29
Building Construction	Forklifts	3	10.00	89	0.20
Building Construction	Generator Sets	2	5.40	84	0.74
Building Construction	Plate Compactors	2	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	2	0.80	97	0.37
Building Construction	Welders	2	2.20	0	0.45
Paving	Concrete/Industrial Saws	4	0.30	0	0.73
Paving	Pavers	0	0.00	130	0.42

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	3	8.80	80	0.38
Paving	Tractors/Loaders/Backhoes	2	5.40	97	0.37
Architectural Coating	Air Compressors	2	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	20	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	41	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	24	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	19	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	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

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					0.0696	0.0000	0.0696	0.0105	0.0000	0.0105	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1131	1.1108	0.9886	1.7200e-003		0.0566	0.0566		0.0525	0.0525	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640
Total	0.1131	1.1108	0.9886	1.7200e-003	0.0696	0.0566	0.1261	0.0105	0.0525	0.0630	0.0000	150.5859	150.5859	0.0431	0.0000	151.6640

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					0.0271	0.0000	0.0271	2.0500e-003	0.0000	2.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0219	0.1445	1.0946	1.7200e-003		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638
Total	0.0219	0.1445	1.0946	1.7200e-003	0.0271	2.7400e-003	0.0299	2.0500e-003	2.7400e-003	4.7900e-003	0.0000	150.5857	150.5857	0.0431	0.0000	151.6638

Mitigated Construction Off-Site

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

3.2 Demolition - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					3.9400e-003	0.0000	3.9400e-003	6.0000e-004	0.0000	6.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5900e-003	0.0538	0.0541	1.0000e-004		2.6300e-003	2.6300e-003		2.4400e-003	2.4400e-003	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860
Total	5.5900e-003	0.0538	0.0541	1.0000e-004	3.9400e-003	2.6300e-003	6.5700e-003	6.0000e-004	2.4400e-003	3.0400e-003	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					1.5400e-003	0.0000	1.5400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2400e-003	8.1800e-003	0.0620	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860
Total	1.2400e-003	8.1800e-003	0.0620	1.0000e-004	1.5400e-003	1.6000e-004	1.7000e-003	1.2000e-004	1.6000e-004	2.8000e-004	0.0000	8.5250	8.5250	2.4400e-003	0.0000	8.5860

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4700e-003	0.0644	0.0888	1.2000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720
Total	6.4700e-003	0.0644	0.0888	1.2000e-004	0.0000	3.3900e-003	3.3900e-003	0.0000	3.1200e-003	3.1200e-003	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7700e-003	0.0176	0.0924	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720
Total	1.7700e-003	0.0176	0.0924	1.2000e-004	0.0000	2.0000e-004	2.0000e-004	0.0000	2.0000e-004	2.0000e-004	0.0000	10.7848	10.7848	3.4900e-003	0.0000	10.8720

Mitigated Construction Off-Site

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

3.4 Grading - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					1.3875	0.0000	1.3875	0.7089	0.0000	0.7089	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3396	3.2712	2.9717	7.1100e-003		0.1482	0.1482		0.1387	0.1387	0.0000	621.2812	621.2812	0.1655	0.0000	625.4181
Total	0.3396	3.2712	2.9717	7.1100e-003	1.3875	0.1482	1.5357	0.7089	0.1387	0.8476	0.0000	621.2812	621.2812	0.1655	0.0000	625.4181

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - 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					0.5411	0.0000	0.5411	0.1382	0.0000	0.1382	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0882	0.5403	3.8721	7.1100e-003		0.0112	0.0112		0.0112	0.0112	0.0000	621.2805	621.2805	0.1655	0.0000	625.4174
Total	0.0882	0.5403	3.8721	7.1100e-003	0.5411	0.0112	0.5523	0.1382	0.0112	0.1494	0.0000	621.2805	621.2805	0.1655	0.0000	625.4174

Mitigated Construction Off-Site

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

3.5 Trenching - 2023

Unmitigated Construction On-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1734	1.5452	1.9614	3.8300e-003		0.0767	0.0767		0.0741	0.0741	0.0000	332.6236	332.6236	0.0563	0.0000	334.0311
Total	0.1734	1.5452	1.9614	3.8300e-003		0.0767	0.0767		0.0741	0.0741	0.0000	332.6236	332.6236	0.0563	0.0000	334.0311

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	0.0423	0.1832	2.3134	3.8300e-003		5.6400e-003	5.6400e-003		5.6400e-003	5.6400e-003	0.0000	332.6232	332.6232	0.0563	0.0000
Total	0.0423	0.1832	2.3134	3.8300e-003		5.6400e-003	5.6400e-003		5.6400e-003	5.6400e-003	0.0000	332.6232	332.6232	0.0563	0.0000	334.0307

Mitigated Construction Off-Site

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

3.6 Building Construction - 2023

Unmitigated Construction On-Site

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

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Off-Road	0.0314	0.2861	0.3653	5.8000e-004		0.0155	0.0155		0.0148	0.0148	0.0000	49.8142	49.8142	8.0600e-003	0.0000	50.0156
Total	0.0314	0.2861	0.3653	5.8000e-004		0.0155	0.0155		0.0148	0.0148	0.0000	49.8142	49.8142	8.0600e-003	0.0000	50.0156

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2600e-003	0.0271	0.3863	5.8000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	49.8141	49.8141	8.0600e-003	0.0000	50.0155

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Total	6.2600e-003	0.0271	0.3863	5.8000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	49.8141	49.8141	8.0600e-003	0.0000	50.0155
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Mitigated Construction Off-Site

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

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	0.1218	1.1138	1.5250	2.4100e-003		0.0559	0.0559		0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935
Total	0.1218	1.1138	1.5250	2.4100e-003		0.0559	0.0559		0.0534	0.0534	0.0000	208.5607	208.5607	0.0333	0.0000	209.3935

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0262	0.1136	1.6172	2.4100e-003		3.5000e-003	3.5000e-003		3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933
Total	0.0262	0.1136	1.6172	2.4100e-003		3.5000e-003	3.5000e-003		3.5000e-003	3.5000e-003	0.0000	208.5604	208.5604	0.0333	0.0000	209.3933

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 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	2.1600e-003	0.0199	0.0291	5.0000e-005		9.2000e-004	9.2000e-004		8.8000e-004	8.8000e-004	0.0000	3.9854	3.9854	6.3000e-004	0.0000	4.0011
Total	2.1600e-003	0.0199	0.0291	5.0000e-005		9.2000e-004	9.2000e-004		8.8000e-004	8.8000e-004	0.0000	3.9854	3.9854	6.3000e-004	0.0000	4.0011

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0000e-004	2.1700e-003	0.0309	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	3.9854	3.9854	6.3000e-004	0.0000	4.0011
Total	5.0000e-004	2.1700e-003	0.0309	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	3.9854	3.9854	6.3000e-004	0.0000	4.0011

Mitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

3.7 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	0.0151	0.1575	0.2185	3.1000e-004		7.5000e-003	7.5000e-003		6.9000e-003	6.9000e-003	0.0000	27.1324	27.1324	8.7800e-003	0.0000	27.3518
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0151	0.1575	0.2185	3.1000e-004		7.5000e-003	7.5000e-003		6.9000e-003	6.9000e-003	0.0000	27.1324	27.1324	8.7800e-003	0.0000	27.3518

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7800e-003	0.0164	0.2330	3.1000e-004		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	27.1323	27.1323	8.7800e-003	0.0000	27.3517
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.7800e-003	0.0164	0.2330	3.1000e-004		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	27.1323	27.1323	8.7800e-003	0.0000	27.3517

Mitigated Construction Off-Site

Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

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

3.8 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	1.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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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Google Middlefield, Const Phase 1, District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 1, City Util - Affordable R6 - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	170.00	Space	0.00	34,000.00	0
Apartments Mid Rise	170.00	Dwelling Unit	1.64	155,000.00	486

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 Trips EMFAC2021 adjustments, 500 tons asphalt demo, site prep = 1 water truck

Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Demolition - building demo = 25,570-sf

Grading - grading = 23,536-cy export

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblAreaCoating	Area_Residential_Exterior	104625	115425
tblAreaCoating	Area_Residential_Interior	313875	346275
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	200.00	344.00
tblConstructionPhase	NumDays	20.00	49.00
tblConstructionPhase	NumDays	4.00	49.00
tblConstructionPhase	NumDays	10.00	42.00
tblConstructionPhase	NumDays	2.00	14.00

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	NumberGas	25.50	28.80
tblFireplaces	NumberNoFireplace	6.80	7.68
tblFireplaces	NumberWood	28.90	32.64
tblGrading	MaterialExported	0.00	23,536.00
tblLandUse	LandUseSquareFeet	68,000.00	34,000.00
tblLandUse	LandUseSquareFeet	170,000.00	155,000.00
tblLandUse	LotAcreage	1.53	0.00
tblLandUse	LotAcreage	4.47	1.64
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	6.00	10.30
tblOffRoadEquipment	UsageHours	6.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	7.00	10.80
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	8.10

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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	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	78.20	88.32
tblTripsAndVMT	HaulingTripNumber	116.00	0.00
tblTripsAndVMT	HaulingTripNumber	2,942.00	0.00
tblTripsAndVMT	VendorTripNumber	24.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00
tblTripsAndVMT	WorkerTripNumber	137.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	27.00	0.00
tblWater	IndoorWaterUseRate	11,076,184.36	12,509,572.92
tblWater	OutdoorWaterUseRate	6,982,811.88	7,886,469.88
tblWoodstoves	NumberCatalytic	3.40	3.84
tblWoodstoves	NumberNoncatalytic	3.40	3.84

2.0 Emissions Summary

2.1 Overall Construction
Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2687	2.5195	2.6991	4.9800e-003	0.6159	0.1233	0.7392	0.3115	0.1163	0.4278	0.0000	433.9000	433.9000	0.0967	0.0000	436.3168
2024	0.0602	0.5561	0.7581	1.1900e-003	0.0000	0.0280	0.0280	0.0000	0.0266	0.0266	0.0000	102.7953	102.7953	0.0178	0.0000	103.2405

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

2025	0.2215	0.0197	0.0273	4.0000e-005	0.0000	9.4000e-004	9.4000e-004	0.0000	8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000	3.4190
Maximum	0.2687	2.5195	2.6991	4.9800e-003	0.6159	0.1233	0.7392	0.3115	0.1163	0.4278	0.0000	433.9000	433.9000	0.0967	0.0000	436.3168

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0596	0.3570	3.0820	4.9800e-003	0.2402	7.5900e-003	0.2478	0.0607	7.5900e-003	0.0683	0.0000	433.8995	433.8995	0.0967	0.0000	436.3163
2024	0.0130	0.0565	0.8041	1.1900e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	102.7952	102.7952	0.0178	0.0000	103.2404
2025	0.2201	2.0500e-003	0.0291	4.0000e-005	0.0000	6.0000e-005	6.0000e-005	0.0000	6.0000e-005	6.0000e-005	0.0000	3.3915	3.3915	1.1000e-003	0.0000	3.4190
Maximum	0.2201	0.3570	3.0820	4.9800e-003	0.2402	7.5900e-003	0.2478	0.0607	7.5900e-003	0.0683	0.0000	433.8995	433.8995	0.0967	0.0000	436.3163

	ROG	NOx	CO	SO2	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	46.81	86.57	-12.36	0.00	61.00	93.83	67.50	80.50	93.47	84.60	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	1.0277	0.1715
2	4-1-2023	6-30-2023	1.1865	0.1830
3	7-1-2023	9-30-2023	0.3657	0.0399
4	10-1-2023	12-31-2023	0.2123	0.0227
5	1-1-2024	3-31-2024	0.1535	0.0174

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

6	4-1-2024	6-30-2024	0.1535	0.0174
7	7-1-2024	9-30-2024	0.1552	0.0176
8	10-1-2024	12-31-2024	0.1536	0.0172
9	1-1-2025	3-31-2025	0.2412	0.2222
		Highest	1.1865	0.2222

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	2/27/2023	6	49	
2	Site Preparation	Site Preparation	2/27/2023	3/14/2023	6	14	
3	Grading	Grading	3/15/2023	5/10/2023	6	49	
4	Trenching/Foundation	Trenching	5/12/2023	10/21/2023	6	140	
5	Building Construction	Building Construction	10/22/2023	11/26/2024	6	344	
6	Paving	Paving	11/27/2024	1/14/2025	6	42	
7	Architectural Coating	Architectural Coating	1/15/2025	3/4/2025	6	42	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 91.88

Acres of Paving: 0

Residential Indoor: 313,875; Residential Outdoor: 104,625; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,040

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73

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

Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	3	10.00	247	0.40
Grading	Skid Steer Loaders	1	3.50	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31

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

Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	12	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	19	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5100e-003	0.0109	0.1545	2.3000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	19.9256	19.9256	3.2200e-003	0.0000	20.0062
Total	2.5100e-003	0.0109	0.1545	2.3000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	19.9256	19.9256	3.2200e-003	0.0000	20.0062

Mitigated Construction Off-Site

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

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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	0.0551	0.5037	0.6896	1.0900e-003		0.0253	0.0253		0.0241	0.0241	0.0000	94.3173	94.3173	0.0151	0.0000	94.6939
Total	0.0551	0.5037	0.6896	1.0900e-003		0.0253	0.0253		0.0241	0.0241	0.0000	94.3173	94.3173	0.0151	0.0000	94.6939

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0119	0.0514	0.7313	1.0900e-003		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	94.3171	94.3171	0.0151	0.0000	94.6938
Total	0.0119	0.0514	0.7313	1.0900e-003		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	94.3171	94.3171	0.0151	0.0000	94.6938

Mitigated Construction Off-Site

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

3.7 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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	5.0600e-003	0.0524	0.0684	1.0000e-004		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	8.4781	8.4781	2.7400e-003	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0600e-003	0.0524	0.0684	1.0000e-004		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
	Off-Road	1.1800e-003	5.1200e-003	0.0728	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.4781	8.4781	2.7400e-003	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1800e-003	5.1200e-003	0.0728	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.4781	8.4781	2.7400e-003	0.0000	8.5466

Mitigated Construction Off-Site

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

3.7 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
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Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Category	tons/yr								MT/yr							
	Off-Road	1.8900e-003	0.0197	0.0273	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8900e-003	0.0197	0.0273	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.3916	3.3916	1.1000e-003	0.0000	3.4190

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 1, City Util - Affordable R6 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
Archit. Coating	0.2196					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2196					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 1, District Util - Infrastructure - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use - As per supplied construction schedule
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - provided construction data
- Trips and VMT - 0 trips EMFAC2021 adjustments, Infrastructure - 1 striper truck
- Grading -
- Architectural Coating - As per supplied construction schedule
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 final+Electrical

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	136.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	0.00

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0224	0.2106	0.3036	4.9000e-004	0.0000	0.0100	0.0100	0.0000	9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278
2025	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433
Maximum	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433

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	5.6400e-003	0.0290	0.3401	4.9000e-004	0.0000	7.4000e-004	7.4000e-004	0.0000	7.4000e-004	7.4000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277
2025	8.8300e-003	0.0454	0.5326	7.7000e-004	0.0000	1.1500e-003	1.1500e-003	0.0000	1.1500e-003	1.1500e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432
Maximum	8.8300e-003	0.0454	0.5326	7.7000e-004	0.0000	1.1500e-003	1.1500e-003	0.0000	1.1500e-003	1.1500e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432

Google Middlefield, Const Phase 1, District Util - Infrastructure - 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
Percent Reduction	73.97	85.61	-12.07	0.00	0.00	92.14	92.14	0.00	91.63	91.63	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	10-31-2024	1-30-2025	0.3390	0.0516
2	1-31-2025	4-29-2025	0.2353	0.0376
		Highest	0.3390	0.0516

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	10/31/2024	4/7/2025	6	136	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.20	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2106	0.3036	4.9000e-004		0.0100	0.0100		9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	0.0224	0.2106	0.3036	4.9000e-004	0.0000	0.0100	0.0100	0.0000	9.4100e-003	9.4100e-003	0.0000	42.3634	42.3634	0.0106	0.0000	42.6278
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6400e-003	0.0290	0.3401	4.9000e-004		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	5.6400e-003	0.0290	0.3401	4.9000e-004	0.0000	7.4000e-004	7.4000e-004	0.0000	7.4000e-004	7.4000e-004	0.0000	42.3633	42.3633	0.0106	0.0000	42.6277
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Mitigated Construction Off-Site

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

3.2 Infrastructure - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0332	0.3069	0.4752	7.7000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433

Google Middlefield, Const Phase 1, District Util - Infrastructure - Santa Clara County, Annual

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

Total	0.0332	0.3069	0.4752	7.7000e-004	0.0000	0.0140	0.0140	0.0000	0.0132	0.0132	0.0000	66.3307	66.3307	0.0165	0.0000	66.7433
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.8300e-003	0.0454	0.5326	7.7000e-004		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	66.3306	66.3306	0.0165	0.0000	66.7432

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 2, District Util - O1,O2 - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	631.94	1000sqft	8.68	631,939.00	0
Enclosed Parking with Elevator	700.00	Space	0.00	218,576.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2029
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips for emfac2021 adjustments, demo = 2,831 ton of asphalt, site prep = 1 water truck

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

Demolition - existing buiding demo = 264,881-sf

Grading - grading = 230,046-cy + 34,000-cy export + 1,713-cy export geothermal bore

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final+Electrical

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblAreaCoating	Area_Nonresidential_Exterior	315970	323690
tblAreaCoating	Area_Nonresidential_Interior	947909	971069
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	128.00
tblConstructionPhase	NumDays	230.00	1,000.00
tblConstructionPhase	NumDays	20.00	147.00
tblConstructionPhase	NumDays	20.00	103.00
tblConstructionPhase	NumDays	20.00	128.00

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

tblConstructionPhase	NumDays	10.00	38.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	265,759.00
tblLandUse	LandUseSquareFeet	631,940.00	631,939.00
tblLandUse	LandUseSquareFeet	280,000.00	218,576.00
tblLandUse	LotAcreage	14.51	8.68
tblLandUse	LotAcreage	6.30	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	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	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	8.20
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	10.50
tblOffRoadEquipment	UsageHours	8.00	9.50
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	1.90
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	9.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20

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

tblSolidWaste	SolidWasteGenerationRate	587.70	602.06
tblTripsAndVMT	HaulingTripNumber	1,205.00	0.00
tblTripsAndVMT	HaulingTripNumber	33,220.00	0.00
tblTripsAndVMT	VendorTripNumber	139.00	0.00
tblTripsAndVMT	WorkerTripNumber	33.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	83.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	294.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	59.00	0.00
tblWater	IndoorWaterUseRate	112,317,064.71	115,061,273.78
tblWater	OutdoorWaterUseRate	68,839,491.27	70,521,425.86

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2024	0.0565	0.5208	0.6367	1.1100e-003	0.0461	0.0249	0.0711	6.9800e-003	0.0231	0.0301	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663
2025	0.6858	6.3298	7.3775	0.0166	1.9974	0.2701	2.2675	0.9906	0.2525	1.2431	0.0000	1,446.6484	1,446.6484	0.3869	0.0000	1,456.3207
2026	0.1750	1.5647	2.2669	4.1100e-003	0.0000	0.0695	0.0695	0.0000	0.0668	0.0668	0.0000	356.0066	356.0066	0.0568	0.0000	357.4274
2027	0.0564	0.5186	0.7579	1.2000e-003	0.0000	0.0240	0.0240	0.0000	0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

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

2028	0.7001	0.7529	1.0802	1.6600e-003	0.0000	0.0352	0.0352	0.0000	0.0332	0.0332	0.0000	144.0009	144.0009	0.0294	0.0000	144.7346
2029	0.0767	0.2734	0.3995	6.3000e-004	0.0000	0.0126	0.0126	0.0000	0.0121	0.0121	0.0000	54.7992	54.7992	8.6400e-003	0.0000	55.0152
Maximum	0.7001	6.3298	7.3775	0.0166	1.9974	0.2701	2.2675	0.9906	0.2525	1.2431	0.0000	1,446.6484	1,446.6484	0.3869	0.0000	1,456.3207

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	0.0140	0.0850	0.7369	1.1100e-003	0.0180	1.7800e-003	0.0198	1.3600e-003	1.7800e-003	3.1400e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662
2025	0.2012	1.0792	9.5016	0.0166	0.7790	0.0261	0.8051	0.1932	0.0261	0.2192	0.0000	1,446.6467	1,446.6467	0.3869	0.0000	1,456.3189
2026	0.0450	0.1950	2.5721	4.1100e-003	0.0000	6.0000e-003	6.0000e-003	0.0000	6.0000e-003	6.0000e-003	0.0000	356.0062	356.0062	0.0568	0.0000	357.4270
2027	0.0131	0.0566	0.8060	1.2000e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
2028	0.6398	0.0808	1.1500	1.6600e-003	0.0000	2.4900e-003	2.4900e-003	0.0000	2.4900e-003	2.4900e-003	0.0000	144.0007	144.0007	0.0294	0.0000	144.7344
2029	0.0539	0.0299	0.4249	6.3000e-004	0.0000	9.2000e-004	9.2000e-004	0.0000	9.2000e-004	9.2000e-004	0.0000	54.7991	54.7991	8.6400e-003	0.0000	55.0152
Maximum	0.6398	1.0792	9.5016	0.0166	0.7790	0.0261	0.8051	0.1932	0.0261	0.2192	0.0000	1,446.6467	1,446.6467	0.3869	0.0000	1,456.3189

	ROG	NOx	CO	SO2	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	44.76	84.67	-21.35	0.00	61.00	91.06	66.29	80.50	90.50	83.41	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)
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1	11-1-2024	1-31-2025	0.8501	0.1500
2	2-1-2025	4-30-2025	2.5481	0.4912
3	5-1-2025	7-31-2025	3.1649	0.5912
4	8-1-2025	10-31-2025	0.6180	0.0882
5	11-1-2025	1-31-2026	0.6180	0.0882
6	2-1-2026	4-30-2026	0.5978	0.0853
7	5-1-2026	7-31-2026	0.6941	0.0959
8	8-1-2026	10-31-2026	0.1449	0.0176
9	11-1-2026	1-31-2027	0.1449	0.0176
10	2-1-2027	4-30-2027	0.1401	0.0170
11	5-1-2027	7-31-2027	0.1449	0.0176
12	8-1-2027	10-31-2027	0.1449	0.0176
13	11-1-2027	1-31-2028	0.1449	0.0176
14	2-1-2028	4-30-2028	0.1417	0.0172
15	5-1-2028	7-31-2028	0.2773	0.0329
16	8-1-2028	10-31-2028	0.6176	0.3809
17	11-1-2028	1-31-2029	0.4625	0.3352
18	2-1-2029	4-30-2029	0.1401	0.0170
19	5-1-2029	7-31-2029	0.1134	0.0137
		Highest	3.1649	0.5912

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	4/21/2025	6	147	
2	Site Preparation	Site Preparation	2/15/2025	3/31/2025	6	38	
3	Grading	Grading	3/17/2025	7/14/2025	6	103	

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

4	Trenching/Foundation	Trenching	7/2/2025	7/21/2026	6	330
5	Building Construction	Building Construction	5/2/2026	7/11/2029	6	1000
6	Paving	Paving	5/16/2028	10/11/2028	6	128
7	Architectural Coating	Architectural Coating	8/15/2028	1/10/2029	6	128

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 289.69

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 947,909; Non-Residential Outdoor: 315,970; Striped Parking Area: 13,115

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	3	8.20	0	0.73
Demolition	Excavators	3	10.50	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	5	9.50	221	0.50
Grading	Bore/Drill Rigs	4	6.60	221	0.50

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

Grading	Excavators	5	9.50	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	5	9.00	247	0.40
Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	4	7.70	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	1.60	221	0.50
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	4	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	4	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.30	0	0.73
Paving	Pavers	1	1.90	0	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	1	2.10	80	0.38
Paving	Rollers	2	6.60	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	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	13	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	33	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	20	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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
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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					
	Fugitive Dust					0.0461	0.0000	0.0461	6.9800e-003	0.0000	6.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0565	0.5208	0.6367	1.1100e-003		0.0249	0.0249		0.0231	0.0231	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663
Total	0.0565	0.5208	0.6367	1.1100e-003	0.0461	0.0249	0.0711	6.9800e-003	0.0231	0.0301	0.0000	97.0518	97.0518	0.0286	0.0000	97.7663

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0180	0.0000	0.0180	1.3600e-003	0.0000	1.3600e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.0850	0.7369	1.1100e-003		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662
Total	0.0140	0.0850	0.7369	1.1100e-003	0.0180	1.7800e-003	0.0198	1.3600e-003	1.7800e-003	3.1400e-003	0.0000	97.0517	97.0517	0.0286	0.0000	97.7662

Mitigated Construction Off-Site

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

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0843	0.0000	0.0843	0.0128	0.0000	0.0128	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0959	0.8683	1.1529	2.0200e-003		0.0399	0.0399		0.0369	0.0369	0.0000	177.3300	177.3300	0.0522	0.0000	178.6340
Total	0.0959	0.8683	1.1529	2.0200e-003	0.0843	0.0399	0.1241	0.0128	0.0369	0.0497	0.0000	177.3300	177.3300	0.0522	0.0000	178.6340

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0329	0.0000	0.0329	2.4900e-003	0.0000	2.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0256	0.1552	1.3462	2.0200e-003		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	177.3298	177.3298	0.0522	0.0000	178.6338
Total	0.0256	0.1552	1.3462	2.0200e-003	0.0329	3.2500e-003	0.0361	2.4900e-003	3.2500e-003	5.7400e-003	0.0000	177.3298	177.3298	0.0522	0.0000	178.6338

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6900e-003	0.0663	0.1052	1.5000e-004		2.9300e-003	2.9300e-003		2.6900e-003	2.6900e-003	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9274
Total	6.6900e-003	0.0663	0.1052	1.5000e-004	0.0000	2.9300e-003	2.9300e-003	0.0000	2.6900e-003	2.6900e-003	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9274

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	0.0209	0.1097	1.5000e-004		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9273
Total	2.1000e-003	0.0209	0.1097	1.5000e-004	0.0000	2.4000e-004	2.4000e-004	0.0000	2.4000e-004	2.4000e-004	0.0000	12.8237	12.8237	4.1500e-003	0.0000	12.9273

Mitigated Construction Off-Site

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

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					1.9132	0.0000	1.9132	0.9778	0.0000	0.9778	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4586	4.2894	4.5213	0.0114		0.1788	0.1788		0.1661	0.1661	0.0000	996.4063	996.4063	0.2889	0.0000	1,003.6298
Total	0.4586	4.2894	4.5213	0.0114	1.9132	0.1788	2.0919	0.9778	0.1661	1.1439	0.0000	996.4063	996.4063	0.2889	0.0000	1,003.6298

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Fugitive Dust					0.7461	0.0000	0.7461	0.1907	0.0000	0.1907	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1407	0.7605	6.1998	0.0114		0.0182	0.0182		0.0182	0.0182	0.0000	996.4051	996.4051	0.2889	0.0000	1,003.6286
Total	0.1407	0.7605	6.1998	0.0114	0.7461	0.0182	0.7643	0.1907	0.0182	0.2089	0.0000	996.4051	996.4051	0.2889	0.0000	1,003.6286

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Off-Road	0.0329	0.1426	1.8458	3.0000e-003		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	260.0882	260.0882	0.0416	0.0000	261.1292
Total	0.0329	0.1426	1.8458	3.0000e-003		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	260.0882	260.0882	0.0416	0.0000	261.1292

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1373	1.2185	1.7609	3.3100e-003		0.0535	0.0535		0.0515	0.0515	0.0000	286.5943	286.5943	0.0459	0.0000	287.7415

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Total	0.1373	1.2185	1.7609	3.3100e-003		0.0535	0.0535		0.0515	0.0515	0.0000	286.5943	286.5943	0.0459	0.0000	287.7415
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0363	0.1571	2.0339	3.3100e-003		4.8400e-003	4.8400e-003		4.8400e-003	4.8400e-003	0.0000	286.5940	286.5940	0.0459	0.0000	287.7411
Total	0.0363	0.1571	2.0339	3.3100e-003		4.8400e-003	4.8400e-003		4.8400e-003	4.8400e-003	0.0000	286.5940	286.5940	0.0459	0.0000	287.7411

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0377	0.3463	0.5061	8.0000e-004		0.0160	0.0160		0.0153	0.0153	0.0000	69.4123	69.4123	0.0110	0.0000	69.6860
Total	0.0377	0.3463	0.5061	8.0000e-004		0.0160	0.0160		0.0153	0.0153	0.0000	69.4123	69.4123	0.0110	0.0000	69.6860

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7300e-003	0.0378	0.5382	8.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	69.4122	69.4122	0.0110	0.0000	69.6859
Total	8.7300e-003	0.0378	0.5382	8.0000e-004		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003	0.0000	69.4122	69.4122	0.0110	0.0000	69.6859

Mitigated Construction Off-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
Total	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621

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
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Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2028

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	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

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					

Google Middlefield, Const Phase 2, District Util - O1,O2 - Santa Clara County, Annual

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

3.8 Architectural Coating - 2029

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	0.0470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0470					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 2, District Util - Infrastructure - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use -
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Trips and VMT - 0 trip emfac2021 adjustments, infra - 1 stripper truck
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	136.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	33.00	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					
2026	0.0338	0.3024	0.4661	7.8000e-004	0.0000	0.0134	0.0134	0.0000	0.0128	0.0128	0.0000	67.1889	67.1889	0.0113	0.0000	67.4715
2027	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924
Maximum	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924

Mitigated Construction

Google Middlefield, Const Phase 2, District Util - Infrastructure - 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
Year	tons/yr										MT/yr					
2026	8.5100e-003	0.0414	0.5173	7.8000e-004	0.0000	1.1200e-003	1.1200e-003	0.0000	1.1200e-003	1.1200e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714
2027	0.0138	0.0668	0.8356	1.2600e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	108.5358	108.5358	0.0183	0.0000	108.9922
Maximum	0.0138	0.0668	0.8356	1.2600e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	1.8100e-003	1.8100e-003	0.0000	108.5358	108.5358	0.0183	0.0000	108.9922

	ROG	NOx	CO	SO2	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	74.80	86.32	-10.98	0.00	0.00	91.61	91.61	0.00	91.26	91.26	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	11-1-2026	1-31-2027	0.5098	0.0756
2	2-1-2027	4-30-2027	0.3713	0.0551
		Highest	0.5098	0.0756

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	11/1/2026	4/8/2027	6	136	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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
Grading	Air Compressors	1	2.50	0	0.48
Grading	Cement and Mortar Mixers	1	10.70	0	0.56
Grading	Concrete/Industrial Saws	1	1.40	0	0.73
Grading	Generator Sets	1	5.40	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Pavers	2	7.10	130	0.42
Grading	Plate Compactors	2	5.80	8	0.43
Grading	Pumps	1	14.10	84	0.74
Grading	Rollers	1	10.50	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Sweepers/Scrubbers	1	1.20	64	0.46
Grading	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Grading	Welders	1	2.60	0	0.45

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
Grading	13	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5100e-003	0.0414	0.5173	7.8000e-004		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714
Total	8.5100e-003	0.0414	0.5173	7.8000e-004	0.0000	1.1200e-003	1.1200e-003	0.0000	1.1200e-003	1.1200e-003	0.0000	67.1889	67.1889	0.0113	0.0000	67.4714

Mitigated Construction Off-Site

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

Google Middlefield, Const Phase 2, District Util - Infrastructure - Santa Clara County, Annual

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

Unmitigated Construction 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0546	0.4885	0.7529	1.2600e-003		0.0216	0.0216		0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924
Total	0.0546	0.4885	0.7529	1.2600e-003	0.0000	0.0216	0.0216	0.0000	0.0207	0.0207	0.0000	108.5360	108.5360	0.0183	0.0000	108.9924

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	799.00	Space	0.00	237,000.00	0
Apartments Mid Rise	770.00	Dwelling Unit	9.54	704,566.00	2202
Strip Mall	7.49	1000sqft	0.00	7,492.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per construction schedule

Construction Phase - As per construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

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Off-road Equipment - As per supplied construction schedule

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Trips and VMT - 0 trips emfac2021 adjustments, demo = 8,033 tons asphalt, site prep = 1 water truck

Demolition - existing building demo = 58,692-sf

Grading - grading = 140,384-cy export + 1,713-cy export geothermal bore

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblAreaCoating	Area_Nonresidential_Exterior	3746	3500
tblAreaCoating	Area_Nonresidential_Interior	11238	10500
tblAreaCoating	Area_Residential_Exterior	475582	427613
tblAreaCoating	Area_Residential_Interior	1426746	1282838
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	123.00
tblConstructionPhase	NumDays	230.00	1,008.00

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tblConstructionPhase	NumDays	20.00	100.00
tblConstructionPhase	NumDays	20.00	144.00
tblConstructionPhase	NumDays	20.00	123.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	NumberGas	115.50	102.60
tblFireplaces	NumberNoFireplace	30.80	27.36
tblFireplaces	NumberWood	130.90	116.28
tblGrading	MaterialExported	0.00	142,097.00
tblLandUse	LandUseSquareFeet	319,600.00	237,000.00
tblLandUse	LandUseSquareFeet	770,000.00	704,566.00
tblLandUse	LandUseSquareFeet	7,490.00	7,492.00
tblLandUse	LotAcreage	7.19	0.00
tblLandUse	LotAcreage	20.26	9.54
tblLandUse	LotAcreage	0.17	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00

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tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	7.50

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tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	354.20	314.64
tblSolidWaste	SolidWasteGenerationRate	7.86	7.35
tblTripsAndVMT	HaulingTripNumber	267.00	0.00
tblTripsAndVMT	HaulingTripNumber	17,762.00	0.00
tblTripsAndVMT	VendorTripNumber	122.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	60.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	0.00
tblTripsAndVMT	WorkerTripNumber	656.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	131.00	0.00
tblWater	IndoorWaterUseRate	50,168,599.73	44,565,353.53
tblWater	IndoorWaterUseRate	554,803.19	518,507.65
tblWater	OutdoorWaterUseRate	31,628,030.26	28,095,548.96
tblWater	OutdoorWaterUseRate	340,040.66	317,795.01
tblWoodstoves	NumberCatalytic	15.40	13.68
tblWoodstoves	NumberNoncatalytic	15.40	13.68

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					
2026	0.6175	5.7400	6.4855	0.0142	1.8061	0.2463	2.0524	0.9148	0.2309	1.1457	0.0000	1,238.9244	1,238.9244	0.3140	0.0000	1,246.7737
2027	0.1638	1.4766	2.1245	3.9800e-003	0.0000	0.0647	0.0647	0.0000	0.0621	0.0621	0.0000	345.0936	345.0936	0.0593	0.0000	346.5752
2028	1.0843	0.7089	1.0219	1.5700e-003	0.0000	0.0330	0.0330	0.0000	0.0312	0.0312	0.0000	136.7373	136.7373	0.0270	0.0000	137.4122
2029	0.0564	0.5186	0.7579	1.2000e-003	0.0000	0.0240	0.0240	0.0000	0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
2030	2.8800e-003	0.0204	0.0445	8.0000e-005	0.0000	3.6000e-004	3.6000e-004	0.0000	3.6000e-004	3.6000e-004	0.0000	6.4903	6.4903	2.3000e-004	0.0000	6.4961
Maximum	1.0843	5.7400	6.4855	0.0142	1.8061	0.2463	2.0524	0.9148	0.2309	1.1457	0.0000	1,238.9244	1,238.9244	0.3140	0.0000	1,246.7737

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					
2026	0.1733	1.0215	8.1589	0.0142	0.7044	0.0221	0.7265	0.1784	0.0221	0.2005	0.0000	1,238.9230	1,238.9230	0.3140	0.0000	1,246.7722
2027	0.0440	0.1904	2.4574	3.9800e-003	0.0000	5.8600e-003	5.8600e-003	0.0000	5.8600e-003	5.8600e-003	0.0000	345.0932	345.0932	0.0593	0.0000	346.5748
2028	1.0273	0.0764	1.0876	1.5700e-003	0.0000	2.3500e-003	2.3500e-003	0.0000	2.3500e-003	2.3500e-003	0.0000	136.7371	136.7371	0.0270	0.0000	137.4121
2029	0.0131	0.0566	0.8060	1.2000e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
2030	7.5000e-004	3.2600e-003	0.0464	8.0000e-005	0.0000	1.0000e-004	1.0000e-004	0.0000	1.0000e-004	1.0000e-004	0.0000	6.4903	6.4903	2.3000e-004	0.0000	6.4961

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Maximum	1.0273	1.0215	8.1589	0.0142	0.7044	0.0221	0.7265	0.1784	0.0221	0.2005	0.0000	1,238.9230	1,238.9230	0.3140	0.0000	1,246.7722
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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	34.63	84.07	-20.34	0.00	61.00	91.26	66.13	80.50	90.74	83.32	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2026	3-31-2026	1.1858	0.2313
2	4-1-2026	6-30-2026	2.7336	0.5263
3	7-1-2026	9-30-2026	1.9646	0.3671
4	10-1-2026	12-31-2026	0.4773	0.0708
5	1-1-2027	3-31-2027	0.5177	0.0755
6	4-1-2027	6-30-2027	0.5235	0.0763
7	7-1-2027	9-30-2027	0.4415	0.0635
8	10-1-2027	12-31-2027	0.1572	0.0190
9	1-1-2028	3-31-2028	0.6213	0.3715
10	4-1-2028	6-30-2028	0.8529	0.6657
11	7-1-2028	9-30-2028	0.1800	0.0527
12	10-1-2028	12-31-2028	0.1449	0.0176
13	1-1-2029	3-31-2029	0.1417	0.0172
14	4-1-2029	6-30-2029	0.1433	0.0174
15	7-1-2029	9-30-2029	0.1449	0.0176
16	10-1-2029	12-31-2029	0.1449	0.0176
17	1-1-2030	3-31-2030	0.0233	0.0040
		Highest	2.7336	0.6657

3.0 Construction Detail

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2026	4/27/2026	6	100	
2	Site Preparation	Site Preparation	3/1/2026	4/17/2026	6	41	
3	Grading	Grading	3/18/2026	9/1/2026	6	144	
4	Trenching/Foundation	Trenching	5/17/2026	9/9/2027	6	412	
5	Building Construction	Building Construction	11/3/2026	1/21/2030	6	1008	
6	Paving	Paving	12/24/2027	5/15/2028	6	123	
7	Architectural Coating	Architectural Coating	2/13/2028	7/5/2028	6	123	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 270

Acres of Paving: 0

Residential Indoor: 1,426,746; Residential Outdoor: 475,582; Non-Residential Indoor: 11,238; Non-Residential Outdoor: 3,746; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46

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Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Bore/Drill Rigs	4	6.30	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	4	7.50	247	0.40
Grading	Scrapers	0	0.00	367	0.48
Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	1.60	221	0.50
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37

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Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	12	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	24	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	14	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2026

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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 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					0.0289	0.0000	0.0289	4.3700e-003	0.0000	4.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1010	0.9148	1.2156	2.1300e-003		0.0420	0.0420		0.0389	0.0389	0.0000	186.9468	186.9468	0.0550	0.0000	188.3218
Total	0.1010	0.9148	1.2156	2.1300e-003	0.0289	0.0420	0.0709	4.3700e-003	0.0389	0.0433	0.0000	186.9468	186.9468	0.0550	0.0000	188.3218

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					0.0113	0.0000	0.0113	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0269	0.1635	1.4195	2.1300e-003		3.4200e-003	3.4200e-003		3.4200e-003	3.4200e-003	0.0000	186.9466	186.9466	0.0550	0.0000	188.3215
Total	0.0269	0.1635	1.4195	2.1300e-003	0.0113	3.4200e-003	0.0147	8.5000e-004	3.4200e-003	4.2700e-003	0.0000	186.9466	186.9466	0.0550	0.0000	188.3215

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0715	0.1135	1.6000e-004		3.1600e-003	3.1600e-003		2.9100e-003	2.9100e-003	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479
Total	7.2200e-003	0.0715	0.1135	1.6000e-004	0.0000	3.1600e-003	3.1600e-003	0.0000	2.9100e-003	2.9100e-003	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2600e-003	0.0225	0.1184	1.6000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479
Total	2.2600e-003	0.0225	0.1184	1.6000e-004	0.0000	2.6000e-004	2.6000e-004	0.0000	2.6000e-004	2.6000e-004	0.0000	13.8361	13.8361	4.4700e-003	0.0000	13.9479

Mitigated Construction Off-Site

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

3.4 Grading - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					1.7772	0.0000	1.7772	0.9104	0.0000	0.9104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4037	3.8102	3.8072	9.2000e-003		0.1607	0.1607		0.1502	0.1502	0.0000	804.1855	804.1855	0.2135	0.0000	809.5232
Total	0.4037	3.8102	3.8072	9.2000e-003	1.7772	0.1607	1.9379	0.9104	0.1502	1.0606	0.0000	804.1855	804.1855	0.2135	0.0000	809.5232

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - 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					0.6931	0.0000	0.6931	0.1775	0.0000	0.1775	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1142	0.7059	5.0066	9.2000e-003		0.0145	0.0145		0.0145	0.0145	0.0000	804.1846	804.1846	0.2135	0.0000	809.5222
Total	0.1142	0.7059	5.0066	9.2000e-003	0.6931	0.0145	0.7076	0.1775	0.0145	0.1920	0.0000	804.1846	804.1846	0.2135	0.0000	809.5222

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0964	0.8589	1.2257	2.5000e-003		0.0365	0.0365		0.0352	0.0352	0.0000	217.0181	217.0181	0.0383	0.0000	217.9761
Total	0.0964	0.8589	1.2257	2.5000e-003		0.0365	0.0365		0.0352	0.0352	0.0000	217.0181	217.0181	0.0383	0.0000	217.9761

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0278	0.1203	1.4831	2.5000e-003		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	217.0179	217.0179	0.0383	0.0000	217.9759
Total	0.0278	0.1203	1.4831	2.5000e-003		3.7000e-003	3.7000e-003		3.7000e-003	3.7000e-003	0.0000	217.0179	217.0179	0.0383	0.0000	217.9759

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	0.1063	0.9466	1.3507	2.7500e-003		0.0402	0.0402		0.0388	0.0388	0.0000	239.1628	239.1628	0.0422	0.0000
Total	0.1063	0.9466	1.3507	2.7500e-003		0.0402	0.0402		0.0388	0.0388	0.0000	239.1628	239.1628	0.0422	0.0000	240.2186

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Off-Road	0.0306	0.1326	1.6344	2.7500e-003		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	239.1626	239.1626	0.0422	0.0000	240.2183
Total	0.0306	0.1326	1.6344	2.7500e-003		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003	0.0000	239.1626	239.1626	0.0422	0.0000	240.2183

Mitigated Construction Off-Site

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1900e-003	0.0845	0.1235	2.0000e-004		3.9000e-003	3.9000e-003		3.7200e-003	3.7200e-003	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Total	9.1900e-003	0.0845	0.1235	2.0000e-004		3.9000e-003	3.9000e-003		3.7200e-003	3.7200e-003	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1300e-003	9.2300e-003	0.1313	2.0000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047
Total	2.1300e-003	9.2300e-003	0.1313	2.0000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	16.9379	16.9379	2.6700e-003	0.0000	17.0047

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
Total	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621

Mitigated Construction Off-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

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

3.6 Building Construction - 2028

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	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621
Total	0.0131	0.0566	0.8060	1.2000e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	103.9522	103.9522	0.0164	0.0000	104.3621

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
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Google Middlefield, Const Phase 3 (R3, R4b, R5), District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Building Construction - 2029

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	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622
Total	0.0564	0.5186	0.7579	1.2000e-003		0.0240	0.0240		0.0229	0.0229	0.0000	103.9523	103.9523	0.0164	0.0000	104.3622

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					

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 3 Affordable R4a, District Util - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	210.00	Space	0.00	64,000.00	0
Apartments Mid Rise	210.00	Dwelling Unit	1.32	190,000.00	601

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2028
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips emfac2021 adjustments, demo = 1,000 ton asphalt, site prep = 1 water truck

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Demolition - existing building demo = 53,170-sf

Grading - grading = 42,787-cy export

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	39.00
tblConstructionPhase	NumDays	200.00	319.00
tblConstructionPhase	NumDays	20.00	86.00
tblConstructionPhase	NumDays	4.00	46.00
tblConstructionPhase	NumDays	10.00	39.00
tblConstructionPhase	NumDays	2.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	42,787.00
tblLandUse	LandUseSquareFeet	84,000.00	64,000.00
tblLandUse	LandUseSquareFeet	210,000.00	190,000.00
tblLandUse	LotAcreage	1.89	0.00
tblLandUse	LotAcreage	5.53	1.32
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	7.00	10.80
tblOffRoadEquipment	UsageHours	6.00	10.30
tblOffRoadEquipment	UsageHours	6.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	6.00	0.80
tblOffRoadEquipment	UsageHours	8.00	2.20
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.60
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	6.00	8.30
tblTripsAndVMT	HaulingTripNumber	242.00	0.00
tblTripsAndVMT	HaulingTripNumber	5,348.00	0.00
tblTripsAndVMT	VendorTripNumber	33.00	0.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	50.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	0.00

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

tblTripsAndVMT	WorkerTripNumber	178.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	36.00	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					
2026	0.0404	0.3659	0.4863	8.5000e-004	0.0122	0.0168	0.0290	1.8400e-003	0.0156	0.0174	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287
2027	0.4784	2.1928	2.6505	4.8800e-003	0.5816	0.0974	0.6789	0.2929	0.0917	0.3846	0.0000	424.8664	424.8664	0.0945	0.0000	427.2297
2028	0.0710	0.3976	0.5811	9.2000e-004	0.0000	0.0184	0.0184	0.0000	0.0175	0.0175	0.0000	79.7079	79.7079	0.0126	0.0000	80.0222
Maximum	0.4784	2.1928	2.6505	4.8800e-003	0.5816	0.0974	0.6789	0.2929	0.0917	0.3846	0.0000	424.8664	424.8664	0.0945	0.0000	427.2297

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					
2026	0.0108	0.0654	0.5678	8.5000e-004	4.7500e-003	1.3700e-003	6.1200e-003	3.6000e-004	1.3700e-003	1.7300e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

2027	0.3007	0.3452	3.0376	4.8800e-003	0.2268	7.4400e-003	0.2342	0.0571	7.4400e-003	0.0646	0.0000	424.8659	424.8659	0.0945	0.0000	427.2292
2028	0.0377	0.0434	0.6180	9.2000e-004	0.0000	1.3400e-003	1.3400e-003	0.0000	1.3400e-003	1.3400e-003	0.0000	79.7078	79.7078	0.0126	0.0000	80.0221
Maximum	0.3007	0.3452	3.0376	4.8800e-003	0.2268	7.4400e-003	0.2342	0.0571	7.4400e-003	0.0646	0.0000	424.8659	424.8659	0.0945	0.0000	427.2292

	ROG	NOx	CO	SO2	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	40.79	84.64	-13.60	0.00	61.00	92.34	66.72	80.50	91.87	83.88	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	11-15-2026	2-14-2027	0.8010	0.1502
2	2-15-2027	5-14-2027	1.3288	0.2419
3	5-15-2027	8-14-2027	0.3189	0.0399
4	8-15-2027	11-14-2027	0.2924	0.0358
5	11-15-2027	2-14-2028	0.4244	0.2862
6	2-15-2028	5-14-2028	0.1417	0.0172
7	5-15-2028	8-14-2028	0.1449	0.0176
8	8-15-2028	9-30-2028	0.0740	0.0090
		Highest	1.3288	0.2862

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	11/15/2026	2/23/2027	6	86	
2	Site Preparation	Site Preparation	2/23/2027	3/9/2027	6	13	
3	Grading	Grading	3/10/2027	5/1/2027	6	46	
4	Trenching/Foundation	Trenching	5/2/2027	9/30/2027	6	130	

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

5	Building Construction	Building Construction	10/1/2027	10/6/2028	6	319
6	Paving	Paving	10/8/2027	11/22/2027	6	39
7	Architectural Coating	Architectural Coating	11/22/2027	1/5/2028	6	39

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 86.25

Acres of Paving: 0

Residential Indoor: 384,750; Residential Outdoor: 128,250; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 3,840

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	1	2.70	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48
Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Excavators	2	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	1.90	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	4	7.50	247	0.40
Grading	Scrapers	0	0.00	367	0.48
Grading	Skid Steer Loaders	1	3.50	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	2	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	9.70	0	0.31
Trenching/Foundation	Cranes	1	10.30	0	0.29
Trenching/Foundation	Forklifts	2	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	1.00	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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	12	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	20	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	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
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2026

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8400e-003	0.0000	1.8400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0404	0.3659	0.4863	8.5000e-004		0.0168	0.0168		0.0156	0.0156	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.0404	0.3659	0.4863	8.5000e-004	0.0122	0.0168	0.0290	1.8400e-003	0.0156	0.0174	0.0000	74.7787	74.7787	0.0220	0.0000	75.3287
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7500e-003	0.0000	4.7500e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.0654	0.5678	8.5000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.0108	0.0654	0.5678	8.5000e-004	4.7500e-003	1.3700e-003	6.1200e-003	3.6000e-004	1.3700e-003	1.7300e-003	0.0000	74.7786	74.7786	0.0220	0.0000	75.3286
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Mitigated Construction Off-Site

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

3.2 Demolition - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0140	0.0000	0.0140	2.1200e-003	0.0000	2.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0465	0.4208	0.5592	9.8000e-004		0.0193	0.0193		0.0179	0.0179	0.0000	85.9955	85.9955	0.0253	0.0000	86.6280

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.0465	0.4208	0.5592	9.8000e-004	0.0140	0.0193	0.0333	2.1200e-003	0.0179	0.0200	0.0000	85.9955	85.9955	0.0253	0.0000	86.6280
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4600e-003	0.0000	5.4600e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.0752	0.6530	9.8000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	85.9954	85.9954	0.0253	0.0000	86.6279

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.0124	0.0752	0.6530	9.8000e-004	5.4600e-003	1.5700e-003	7.0300e-003	4.1000e-004	1.5700e-003	1.9800e-003	0.0000	85.9954	85.9954	0.0253	0.0000	86.6279
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Mitigated Construction Off-Site

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

3.3 Site Preparation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	0.0227	0.0360	5.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	2.2900e-003	0.0227	0.0360	5.0000e-005	0.0000	1.0000e-003	1.0000e-003	0.0000	9.2000e-004	9.2000e-004	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2000e-004	7.1400e-003	0.0375	5.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	7.2000e-004	7.1400e-003	0.0375	5.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	4.3870	4.3870	1.4200e-003	0.0000	4.4225
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Mitigated Construction Off-Site

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

3.4 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5676	0.0000	0.5676	0.2908	0.0000	0.2908	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1138	1.0818	1.0683	2.2500e-003		0.0469	0.0469		0.0439	0.0439	0.0000	196.5536	196.5536	0.0487	0.0000	197.7708

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.1138	1.0818	1.0683	2.2500e-003	0.5676	0.0469	0.6145	0.2908	0.0439	0.3347	0.0000	196.5536	196.5536	0.0487	0.0000	197.7708
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Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2214	0.0000	0.2214	0.0567	0.0000	0.0567	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.1885	1.2882	2.2500e-003		3.4900e-003	3.4900e-003		3.4900e-003	3.4900e-003	0.0000	196.5533	196.5533	0.0487	0.0000	197.7705

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Total	0.0280	0.1885	1.2882	2.2500e-003	0.2214	3.4900e-003	0.2248	0.0567	3.4900e-003	0.0602	0.0000	196.5533	196.5533	0.0487	0.0000	197.7705
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Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0531	0.4727	0.7071	1.1600e-003		0.0210	0.0210		0.0204	0.0204	0.0000	100.6706	100.6706	0.0114	0.0000	100.9561
Total	0.0531	0.4727	0.7071	1.1600e-003		0.0210	0.0210		0.0204	0.0204	0.0000	100.6706	100.6706	0.0114	0.0000	100.9561

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.0535	0.7607	1.1600e-003		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	100.6705	100.6705	0.0114	0.0000	100.9560
Total	0.0123	0.0535	0.7607	1.1600e-003		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	0.0000	100.6705	100.6705	0.0114	0.0000	100.9560

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.1309	0.1913	3.0000e-004		6.0500e-003	6.0500e-003		5.7700e-003	5.7700e-003	0.0000	26.2372	26.2372	4.1400e-003	0.0000	26.3406
Total	0.0142	0.1309	0.1913	3.0000e-004		6.0500e-003	6.0500e-003		5.7700e-003	5.7700e-003	0.0000	26.2372	26.2372	4.1400e-003	0.0000	26.3406

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3000e-003	0.0143	0.2034	3.0000e-004		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	26.2371	26.2371	4.1400e-003	0.0000	26.3406
Total	3.3000e-003	0.0143	0.2034	3.0000e-004		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	26.2371	26.2371	4.1400e-003	0.0000	26.3406

Mitigated Construction Off-Site

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

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

3.6 Building Construction - 2028

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	0.0433	0.3976	0.5811	9.2000e-004		0.0184	0.0184		0.0175	0.0175	0.0000	79.7079	79.7079	0.0126	0.0000	80.0222
Total	0.0433	0.3976	0.5811	9.2000e-004		0.0184	0.0184		0.0175	0.0175	0.0000	79.7079	79.7079	0.0126	0.0000	80.0222

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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Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0100	0.0434	0.6180	9.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.7078	79.7078	0.0126	0.0000	80.0221
Total	0.0100	0.0434	0.6180	9.2000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	79.7078	79.7078	0.0126	0.0000	80.0221

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					

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.7 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.1500e-003	0.0640	0.0888	1.3000e-004		3.0500e-003	3.0500e-003		2.8000e-003	2.8000e-003	0.0000	11.0225	11.0225	3.5600e-003	0.0000	11.1117
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.1500e-003	0.0640	0.0888	1.3000e-004		3.0500e-003	3.0500e-003		2.8000e-003	2.8000e-003	0.0000	11.0225	11.0225	3.5600e-003	0.0000	11.1117

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					

Google Middlefield, Const Phase 3 Affordable R4a, District Util - Santa Clara County, Annual

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

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 3, City Util - Infrastructure - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use - As per supplied construction schedule
- Construction Phase - As per supplied construction schedule
- Off-road Equipment - As per supplied construction schedule
- Off-road Equipment - As per supplied construction equipment
- Trips and VMT - 0 trips emfac2021 adjustments, infra = 1 striper truck
- Demolition -
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
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Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

tblAreaCoating	Area_Parking	2614	3840
tblAreaCoating	Area_Residential_Exterior	0	128250
tblAreaCoating	Area_Residential_Interior	0	384750
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	12
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	102.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.2400e-003	0.00

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2570e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6240e-003	0.00
tblFleetMix	MHD	8.1590e-003	0.00
tblFleetMix	OBUS	8.7700e-004	0.00
tblFleetMix	SBUS	8.7400e-004	0.00
tblFleetMix	UBUS	3.5600e-004	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Google Middlefield, Const Phase 3, City Util - Infrastructure - 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
Year	tons/yr										MT/yr					
2027	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914
Maximum	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914

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					
2027	0.0108	0.0555	0.6500	9.4000e-004	0.0000	1.4100e-003	1.4100e-003	0.0000	1.4100e-003	1.4100e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913
Maximum	0.0108	0.0555	0.6500	9.4000e-004	0.0000	1.4100e-003	1.4100e-003	0.0000	1.4100e-003	1.4100e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913

	ROG	NOx	CO	SO2	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	73.40	85.20	-12.02	0.00	0.00	91.77	91.77	0.00	91.24	91.24	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2027	3-31-2027	0.3143	0.0501
2	4-1-2027	6-30-2027	0.1013	0.0162
		Highest	0.3143	0.0501

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	1/1/2027	4/29/2027	6	102	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Air Compressors	0	0.00	0	0.48
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.10	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43
Infrastructure	Pumps	0	0.00	84	0.74
Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Infrastructure	Welders	0	0.00	0	0.45

Trips and VMT

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0405	0.3751	0.5802	9.4000e-004		0.0171	0.0171		0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914
Total	0.0405	0.3751	0.5802	9.4000e-004	0.0000	0.0171	0.0171	0.0000	0.0161	0.0161	0.0000	80.9886	80.9886	0.0201	0.0000	81.4914

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 3, City Util - Infrastructure - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.0555	0.6500	9.4000e-004		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913
Total	0.0108	0.0555	0.6500	9.4000e-004	0.0000	1.4100e-003	1.4100e-003	0.0000	1.4100e-003	1.4100e-003	0.0000	80.9885	80.9885	0.0201	0.0000	81.4913

Mitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	689.06	1000sqft	12.33	689,061.00	0
Enclosed Parking with Elevator	1,969.00	Space	0.00	420,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2031
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - As per supplied construction schedule

Land Use - As per supplied construction schedule

Construction Phase - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Off-road Equipment - As per supplied construction schedule

Trips and VMT - 0 trips for emfac2021 adjustments, demo = 10,106 ton asphalt, site prep - 1 water truck

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Demolition - existing building demo = 132,996-sf

Grading - grading = 110,949-cy export + 1,713-cy export geothermal bore

Architectural Coating - At least 80% of paints have to be super-compliant VOC = effectively 20g/L interior and 30g/L exterior

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final+Electrical

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	20.00
tblArchitecturalCoating	EF_Parking	150.00	30.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	30.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	20.00
tblAreaCoating	Area_Nonresidential_Exterior	344531	343500
tblAreaCoating	Area_Nonresidential_Interior	1033592	1030500
tblAreaCoating	Area_Parking	25200	47184
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	205.00
tblConstructionPhase	NumDays	300.00	1,120.00
tblConstructionPhase	NumDays	20.00	234.00
tblConstructionPhase	NumDays	30.00	86.00

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

tblConstructionPhase	NumDays	20.00	205.00
tblConstructionPhase	NumDays	10.00	54.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	112,662.00
tblLandUse	LandUseSquareFeet	689,060.00	689,061.00
tblLandUse	LandUseSquareFeet	787,600.00	420,000.00
tblLandUse	LotAcreage	15.82	12.33
tblLandUse	LotAcreage	17.72	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	HorsePower	130.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	63.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	231.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00

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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	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.30
tblOffRoadEquipment	UsageHours	8.00	8.20
tblOffRoadEquipment	UsageHours	7.00	10.30
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.90
tblOffRoadEquipment	UsageHours	8.00	7.50
tblOffRoadEquipment	UsageHours	8.00	5.40
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.80
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	6.60
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	9.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.80
tblOffRoadEquipment	UsageHours	8.00	10.80

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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	8.00	8.10
tblOffRoadEquipment	UsageHours	8.00	2.20
tblSolidWaste	SolidWasteGenerationRate	640.83	638.91
tblTripsAndVMT	HaulingTripNumber	605.00	0.00
tblTripsAndVMT	HaulingTripNumber	14,083.00	0.00
tblTripsAndVMT	VendorTripNumber	182.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	73.00	0.00
tblTripsAndVMT	WorkerTripNumber	40.00	0.00
tblTripsAndVMT	WorkerTripNumber	397.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	79.00	0.00
tblWater	IndoorWaterUseRate	122,469,216.39	122,103,084.87
tblWater	OutdoorWaterUseRate	75,061,777.79	74,837,374.60

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2026	0.6440	5.9804	7.0179	0.0139	1.6567	0.2640	1.9207	0.8254	0.2460	1.0714	0.0000	1,216.7848	1,216.7848	0.3308	0.0000	1,225.0550
2027	0.1883	1.7021	2.4606	4.1900e-003	0.0000	0.0781	0.0781	0.0000	0.0746	0.0746	0.0000	363.9883	363.9883	0.0620	0.0000	365.5393
2028	0.9995	2.4347	3.4958	5.7500e-003	0.0000	0.1127	0.1127	0.0000	0.1070	0.1070	0.0000	499.7134	499.7134	0.0935	0.0000	502.0509

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2026	6-30-2026	1.7418	0.3228
2	7-1-2026	9-30-2026	3.6637	0.6400
3	10-1-2026	12-31-2026	1.2091	0.2031
4	1-1-2027	3-31-2027	0.4162	0.0550
5	4-1-2027	6-30-2027	0.4209	0.0556
6	7-1-2027	9-30-2027	0.4397	0.0579
7	10-1-2027	12-31-2027	0.6121	0.0786
8	1-1-2028	3-31-2028	0.9546	0.3031
9	4-1-2028	6-30-2028	1.0253	0.3738
10	7-1-2028	9-30-2028	0.8882	0.3282
11	10-1-2028	12-31-2028	0.5703	0.0738
12	1-1-2029	3-31-2029	0.1602	0.0196
13	4-1-2029	6-30-2029	0.1433	0.0174
14	7-1-2029	9-30-2029	0.1449	0.0176
15	10-1-2029	12-31-2029	0.1449	0.0176
16	1-1-2030	3-31-2030	0.0997	0.0172
17	4-1-2030	6-30-2030	0.1008	0.0174
18	7-1-2030	9-30-2030	0.1019	0.0176
19	10-1-2030	12-31-2030	0.1019	0.0176
20	1-1-2031	3-31-2031	0.0997	0.0172
21	4-1-2031	6-30-2031	0.0210	0.0036
		Highest	3.6637	0.6400

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

1	Demolition	Demolition	4/1/2026	12/29/2026	6	234
2	Site Preparation	Site Preparation	5/22/2026	7/23/2026	6	54
3	Grading	Grading	6/5/2026	9/12/2026	6	86
4	Trenching/Foundation	Trenching	7/26/2026	1/4/2029	6	766
5	Building Construction	Building Construction	9/22/2027	4/19/2031	6	1120
6	Paving	Paving	12/11/2027	8/5/2028	6	205
7	Architectural Coating	Architectural Coating	1/24/2028	9/18/2028	6	205

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 241.88

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,033,592; Non-Residential Outdoor: 344,531; Striped Parking Area: 25,200

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Aerial Lifts	1	6.50	0	0.31
Demolition	Air Compressors	1	4.20	0	0.48
Demolition	Concrete/Industrial Saws	3	8.20	0	0.73
Demolition	Excavators	4	7.90	158	0.38
Demolition	Forklifts	1	10.00	89	0.20
Demolition	Generator Sets	1	5.40	84	0.74
Demolition	Rubber Tired Dozers	1	10.00	247	0.40
Demolition	Sweepers/Scrubbers	1	6.50	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.10	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Sweepers/Scrubbers	1	4.30	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	2	8.10	97	0.37
Grading	Air Compressors	1	4.20	0	0.48

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

Grading	Bore/Drill Rigs	2	2.00	221	0.50
Grading	Bore/Drill Rigs	2	4.00	221	0.50
Grading	Bore/Drill Rigs	4	6.70	221	0.50
Grading	Excavators	4	7.90	158	0.38
Grading	Generator Sets	1	8.10	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Plate Compactors	2	2.00	8	0.43
Grading	Pumps	1	24.00	84	0.74
Grading	Rubber Tired Dozers	5	9.00	247	0.40
Grading	Skid Steer Loaders	1	3.60	65	0.37
Grading	Sweepers/Scrubbers	2	8.70	64	0.46
Grading	Tractors/Loaders/Backhoes	4	10.80	97	0.37
Trenching/Foundation	Aerial Lifts	2	5.20	0	0.31
Trenching/Foundation	Bore/Drill Rigs	4	0.60	221	0.50
Trenching/Foundation	Cranes	1	6.90	0	0.29
Trenching/Foundation	Forklifts	4	10.00	89	0.20
Trenching/Foundation	Generator Sets	1	5.40	84	0.74
Trenching/Foundation	Pumps	2	5.40	84	0.74
Trenching/Foundation	Tractors/Loaders/Backhoes	2	0.50	97	0.37
Building Construction	Aerial Lifts	2	9.70	0	0.31
Building Construction	Cement and Mortar Mixers	1	7.10	0	0.56
Building Construction	Cranes	1	10.30	0	0.29
Building Construction	Forklifts	2	7.50	89	0.20
Building Construction	Generator Sets	1	5.40	84	0.74
Building Construction	Plate Compactors	1	0.90	8	0.43
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Building Construction	Welders	1	2.20	0	0.45
Paving	Concrete/Industrial Saws	2	0.40	0	0.73
Paving	Pavers	1	4.80	0	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

Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	1	5.30	80	0.38
Paving	Rollers	2	6.60	80	0.38
Paving	Tractors/Loaders/Backhoes	1	5.40	97	0.37
Architectural Coating	Air Compressors	1	8.30	0	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	14	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	29	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	16	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					0.0655	0.0000	0.0655	9.9100e-003	0.0000	9.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2364	2.1405	2.8445	4.9900e-003		0.0983	0.0983		0.0911	0.0911	0.0000	437.4555	437.4555	0.1287	0.0000	440.6729
Total	0.2364	2.1405	2.8445	4.9900e-003	0.0655	0.0983	0.1638	9.9100e-003	0.0911	0.1010	0.0000	437.4555	437.4555	0.1287	0.0000	440.6729

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					0.0255	0.0000	0.0255	1.9300e-003	0.0000	1.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0630	0.3827	3.3217	4.9900e-003		8.0100e-003	8.0100e-003		8.0100e-003	8.0100e-003	0.0000	437.4550	437.4550	0.1287	0.0000	440.6724
Total	0.0630	0.3827	3.3217	4.9900e-003	0.0255	8.0100e-003	0.0335	1.9300e-003	8.0100e-003	9.9400e-003	0.0000	437.4550	437.4550	0.1287	0.0000	440.6724

Mitigated Construction Off-Site

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

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0942	0.1495	2.1000e-004		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3705
Total	9.5100e-003	0.0942	0.1495	2.1000e-004	0.0000	4.1600e-003	4.1600e-003	0.0000	3.8300e-003	3.8300e-003	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3705

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0297	0.1559	2.1000e-004		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3704
Total	2.9800e-003	0.0297	0.1559	2.1000e-004	0.0000	3.4000e-004	3.4000e-004	0.0000	3.4000e-004	3.4000e-004	0.0000	18.2231	18.2231	5.8900e-003	0.0000	18.3704

Mitigated Construction Off-Site

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

3.4 Grading - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					1.5912	0.0000	1.5912	0.8155	0.0000	0.8155	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3247	3.0853	3.0688	7.0700e-003		0.1313	0.1313		0.1222	0.1222	0.0000	618.3137	618.3137	0.1722	0.0000	622.6174
Total	0.3247	3.0853	3.0688	7.0700e-003	1.5912	0.1313	1.7225	0.8155	0.1222	0.9376	0.0000	618.3137	618.3137	0.1722	0.0000	622.6174

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - 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					0.6206	0.0000	0.6206	0.1590	0.0000	0.1590	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0875	0.5050	3.9406	7.0700e-003		0.0112	0.0112		0.0112	0.0112	0.0000	618.3130	618.3130	0.1722	0.0000	622.6167
Total	0.0875	0.5050	3.9406	7.0700e-003	0.6206	0.0112	0.6318	0.1590	0.0112	0.1702	0.0000	618.3130	618.3130	0.1722	0.0000	622.6167

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2026

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0734	0.6604	0.9550	1.6500e-003		0.0302	0.0302		0.0289	0.0289	0.0000	142.7924	142.7924	0.0241	0.0000	143.3942
Total	0.0734	0.6604	0.9550	1.6500e-003		0.0302	0.0302		0.0289	0.0289	0.0000	142.7924	142.7924	0.0241	0.0000	143.3942

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	0.0182	0.0787	1.0609	1.6500e-003		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003	0.0000	142.7923	142.7923	0.0241	0.0000
Total	0.0182	0.0787	1.0609	1.6500e-003		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003	0.0000	142.7923	142.7923	0.0241	0.0000	143.3940

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2027

Unmitigated Construction On-Site

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

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Off-Road	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175
Total	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0418	0.1812	2.4416	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Total	0.0418	0.1812	2.4416	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171
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Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2028

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	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175
Total	0.1690	1.5198	2.1979	3.7900e-003		0.0696	0.0696		0.0666	0.0666	0.0000	328.6326	328.6326	0.0554	0.0000	330.0175

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0418	0.1812	2.4416	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171
Total	0.0418	0.1812	2.4416	3.7900e-003		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003	0.0000	328.6322	328.6322	0.0554	0.0000	330.0171

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Mitigated Construction Off-Site

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

3.5 Trenching/Foundation - 2029

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	2.1600e-003	0.0194	0.0281	5.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175
Total	2.1600e-003	0.0194	0.0281	5.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3000e-004	2.3200e-003	0.0312	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175
Total	5.3000e-004	2.3200e-003	0.0312	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.1998	4.1998	7.1000e-004	0.0000	4.2175

Mitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1441	0.2107	3.3000e-004		6.6600e-003	6.6600e-003		6.3500e-003	6.3500e-003	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080
Total	0.0157	0.1441	0.2107	3.3000e-004		6.6600e-003	6.6600e-003		6.3500e-003	6.3500e-003	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080

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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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6300e-003	0.0157	0.2240	3.3000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080
Total	3.6300e-003	0.0157	0.2240	3.3000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	28.8941	28.8941	4.5600e-003	0.0000	29.0080

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					

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0131	0.0566	0.8060	1.3200e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	112.8582	112.8582	4.0400e-003	0.0000	112.9593
Total	0.0131	0.0566	0.8060	1.3200e-003		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	112.8582	112.8582	4.0400e-003	0.0000	112.9593

Mitigated Construction Off-Site

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

3.6 Building Construction - 2031

Unmitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.1064	0.2326	4.0000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	33.8936	33.8936	1.2100e-003	0.0000	33.9239
Total	0.0150	0.1064	0.2326	4.0000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	33.8936	33.8936	1.2100e-003	0.0000	33.9239

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9300e-003	0.0170	0.2421	4.0000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.8935	33.8935	1.2100e-003	0.0000	33.9239
Total	3.9300e-003	0.0170	0.2421	4.0000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	33.8935	33.8935	1.2100e-003	0.0000	33.9239

Mitigated Construction Off-Site

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

3.7 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	3.6500e-003	0.0381	0.0520	7.0000e-005		1.8400e-003	1.8400e-003		1.6900e-003	1.6900e-003	0.0000	6.4616	6.4616	2.0900e-003	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.6500e-003	0.0381	0.0520	7.0000e-005		1.8400e-003	1.8400e-003		1.6900e-003	1.6900e-003	0.0000	6.4616	6.4616	2.0900e-003	0.0000	6.5138

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
	Off-Road	9.0000e-004	3.9000e-003	0.0555	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.4616	6.4616	2.0900e-003	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.0000e-004	3.9000e-003	0.0555	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.4616	6.4616	2.0900e-003	0.0000	6.5138

Mitigated Construction Off-Site

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

3.7 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr										MT/yr					
	Off-Road	0.0380	0.3963	0.5400	7.6000e-004		0.0191	0.0191		0.0176	0.0176	0.0000	67.1285	67.1285	0.0217	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0380	0.3963	0.5400	7.6000e-004		0.0191	0.0191		0.0176	0.0176	0.0000	67.1285	67.1285	0.0217	0.0000	67.6712

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
	Off-Road	9.3500e-003	0.0405	0.5768	7.6000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	67.1284	67.1284	0.0217	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.3500e-003	0.0405	0.5768	7.6000e-004		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	67.1284	67.1284	0.0217	0.0000	67.6711

Mitigated Construction Off-Site

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

3.8 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Google Middlefield, Const Phase 4, District Util - O3,O4,O5,P1,P2 - Santa Clara County, Annual

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

Category	tons/yr									MT/yr						
Archit. Coating	0.7361					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.7361					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

**Google Middlefield, Const Phase 4, District Util - Infrastructure - Mitigated
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - As per supplied construction schedule
- Land Use -
- Construction Phase - As per supplied construction schedule
- Off-road Equipment -
- Off-road Equipment - provided construction equipment
- Trips and VMT - 0 trips emfac 2021, infra = 1 striper truck
- Grading -
- Architectural Coating -
- Construction Off-road Equipment Mitigation - BMPs, Tier 4 final + Electrical

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	150	0

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

tblAreaCoating	Area_Parking	2614	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	68.00

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

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFleetMix	HHD	6.2400e-003	0.00
tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2570e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	2.6240e-003	0.00
tblFleetMix	MHD	8.1590e-003	0.00
tblFleetMix	OBUS	8.7700e-004	0.00
tblFleetMix	SBUS	8.7400e-004	0.00
tblFleetMix	UBUS	3.5600e-004	0.00
tblOffRoadEquipment	HorsePower	78.00	0.00
tblOffRoadEquipment	HorsePower	9.00	0.00
tblOffRoadEquipment	HorsePower	81.00	0.00
tblOffRoadEquipment	HorsePower	46.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblTripsAndVMT	WorkerTripNumber	25.00	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					
2028	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276
Maximum	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276

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					
2028	7.1900e-003	0.0370	0.4333	6.2000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275
Maximum	7.1900e-003	0.0370	0.4333	6.2000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275

	ROG	NOx	CO	SO2	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	73.38	85.20	-12.02	0.00	0.00	91.78	91.78	0.00	91.24	91.24	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	3-1-2028	5-31-2028	0.2759	0.0440
		Highest	0.2759	0.0440

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Infrastructure	Grading	3/1/2028	5/18/2028	6	68	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Infrastructure	Air Compressors	0	0.00	0	0.48
Infrastructure	Cement and Mortar Mixers	1	10.70	0	0.56
Infrastructure	Concrete/Industrial Saws	1	1.40	0	0.73
Infrastructure	Generator Sets	1	5.40	84	0.74
Infrastructure	Graders	0	0.00	187	0.41
Infrastructure	Pavers	2	7.10	130	0.42
Infrastructure	Plate Compactors	2	5.80	8	0.43
Infrastructure	Pumps	0	0.00	84	0.74
Infrastructure	Rollers	1	10.50	80	0.38
Infrastructure	Rubber Tired Dozers	0	0.00	247	0.40
Infrastructure	Sweepers/Scrubbers	1	1.20	64	0.46
Infrastructure	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Infrastructure	Welders	0	0.00	0	0.45

Trips and VMT

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

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
Infrastructure	10	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Infrastructure - 2028

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0270	0.2501	0.3868	6.2000e-004		0.0114	0.0114		0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276
Total	0.0270	0.2501	0.3868	6.2000e-004	0.0000	0.0114	0.0114	0.0000	0.0107	0.0107	0.0000	53.9924	53.9924	0.0134	0.0000	54.3276

Unmitigated Construction Off-Site

Google Middlefield, Const Phase 4, District Util - Infrastructure - Santa Clara County, Annual

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

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1900e-003	0.0370	0.4333	6.2000e-004		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275
Total	7.1900e-003	0.0370	0.4333	6.2000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	9.4000e-004	9.4000e-004	0.0000	53.9923	53.9923	0.0134	0.0000	54.3275

Mitigated Construction Off-Site

Google Middlefield Campus - Operational - Santa Clara County, Annual

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

Google Middlefield Campus - Operational
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,317.00	1000sqft	0.00	1,317,000.00	0
Enclosed Parking with Elevator	2,507.00	Space	0.00	833,000.00	0
Unenclosed Parking with Elevator	1,969.00	Space	0.00	420,000.00	0
City Park	5.00	Acre	5.00	217,800.00	0
Recreational Swimming Pool	9.00	1000sqft	0.00	9,000.00	0
Apartments Mid Rise	1,900.00	Dwelling Unit	35.00	1,726,000.00	5434
Strip Mall	41.00	1000sqft	0.00	41,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2032
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Based on Traffic Land Uses for Trip Generation 9/28/2021 + Parking
- Construction Phase - Operation only
- Off-road Equipment - Operation only
- Demolition - Operation only
- Grading -

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

Vehicle Trips - Res 4.69/4.23/3.53 Off 5.25/1.19/0.38 Ret 32.10/30.45/14.80 Comm 28.82/9.0/13.4 Park 15.38/...

Vehicle Emission Factors - Emfac2021

Road Dust - Santa Clara County average silt loading 0.0435

Woodstoves - No hearth

Consumer Products - Consumer Product = 80% of CalEEMod default in 2030 = 0.0000171

Energy Use - No natural gas accept office and retail (ie restaurants)

Water And Wastewater - WTP only

Area Mitigation - Low VOC paints (10%) for exterior and 50% interior

Fleet Mix - Emfac2021

Stationary Sources - Emergency Generators and Fire Pumps - 11 standby diesel gen: 6 @500kw and 5 @900kw

Stationary Sources - Emergency Generators and Fire Pumps EF - BACT applies to >999hp of 0.5 NOx and 0.02 PM

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	15
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	15
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	50
tblConsumerProducts	ROG_EF	2.14E-05	1.71E-05
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	0.06	0.00
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	16.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	285.00	0.00
tblFireplaces	NumberNoFireplace	76.00	0.00
tblFireplaces	NumberWood	323.00	0.00
tblFleetMix	HHD	5.9810e-003	8.0080e-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	HHD	5.9810e-003	8.0080e-003
tblFleetMix	HHD	5.9810e-003	8.0080e-003
tblFleetMix	HHD	5.9810e-003	8.0080e-003
tblFleetMix	HHD	5.9810e-003	8.0080e-003
tblFleetMix	HHD	5.9810e-003	8.0080e-003
tblFleetMix	HHD	5.9810e-003	8.0080e-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	LDA	0.58	0.51
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	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
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	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

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

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	LHD1	0.02	0.02
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-003
tblFleetMix	LHD2	5.4800e-003	6.3180e-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	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	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MDV	0.12	0.14
tblFleetMix	MH	2.4970e-003	2.1960e-003
tblFleetMix	MH	2.4970e-003	2.1960e-003
tblFleetMix	MH	2.4970e-003	2.1960e-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	MH	2.4970e-003	2.1960e-003
tblFleetMix	MH	2.4970e-003	2.1960e-003
tblFleetMix	MH	2.4970e-003	2.1960e-003
tblFleetMix	MH	2.4970e-003	2.1960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	MHD	8.1500e-003	9.7960e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	OBUS	8.3400e-004	1.0580e-003
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	SBUS	8.1000e-004	6.7700e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004

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

tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblFleetMix	UBUS	3.2300e-004	3.9100e-004
tblLandUse	LandUseSquareFeet	1,002,800.00	833,000.00
tblLandUse	LandUseSquareFeet	787,600.00	420,000.00
tblLandUse	LandUseSquareFeet	1,900,000.00	1,726,000.00
tblLandUse	LotAcreage	30.23	0.00
tblLandUse	LotAcreage	22.56	0.00
tblLandUse	LotAcreage	17.72	0.00
tblLandUse	LotAcreage	0.21	0.00
tblLandUse	LotAcreage	50.00	35.00
tblLandUse	LotAcreage	0.94	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblRoadDust	RoadSiltLoading	0.1	0.04
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,206.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	670.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	5.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	6.00
tblVehicleEF	HHD	0.02	0.18
tblVehicleEF	HHD	0.04	0.07
tblVehicleEF	HHD	6.31	4.89
tblVehicleEF	HHD	0.41	0.56
tblVehicleEF	HHD	7.1980e-003	9.0500e-004

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tblVehicleEF	HHD	900.79	684.14
tblVehicleEF	HHD	1,177.32	1,313.45
tblVehicleEF	HHD	0.05	8.0690e-003
tblVehicleEF	HHD	0.14	0.11
tblVehicleEF	HHD	0.19	0.21
tblVehicleEF	HHD	2.0000e-006	3.0000e-006
tblVehicleEF	HHD	5.18	3.70
tblVehicleEF	HHD	2.50	1.35
tblVehicleEF	HHD	2.31	2.51
tblVehicleEF	HHD	2.0620e-003	1.6290e-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	1.9730e-003	1.5510e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9100e-003	8.7900e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	1.8000e-005
tblVehicleEF	HHD	5.6000e-005	6.0000e-006
tblVehicleEF	HHD	0.42	0.30
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.3000e-005	5.1000e-005
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.3820e-003	5.9010e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00

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tblVehicleEF	HHD	1.0000e-006	1.8000e-005
tblVehicleEF	HHD	5.6000e-005	6.0000e-006
tblVehicleEF	HHD	0.49	0.52
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.09
tblVehicleEF	HHD	2.3000e-005	5.1000e-005
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	8.3700e-004	1.1380e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.39	0.46
tblVehicleEF	LDA	1.61	1.92
tblVehicleEF	LDA	192.92	213.22
tblVehicleEF	LDA	40.52	54.23
tblVehicleEF	LDA	3.0820e-003	3.0260e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.12	0.17
tblVehicleEF	LDA	0.04	7.2060e-003
tblVehicleEF	LDA	8.0200e-004	7.4300e-004
tblVehicleEF	LDA	1.1340e-003	1.3220e-003
tblVehicleEF	LDA	0.02	2.5220e-003
tblVehicleEF	LDA	7.3800e-004	6.8300e-004
tblVehicleEF	LDA	1.0420e-003	1.2150e-003
tblVehicleEF	LDA	0.02	0.22
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	2.7370e-003	3.8330e-003
tblVehicleEF	LDA	0.02	0.16
tblVehicleEF	LDA	0.10	0.18

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tblVehicleEF	LDA	1.9080e-003	2.1080e-003
tblVehicleEF	LDA	4.0100e-004	5.3600e-004
tblVehicleEF	LDA	0.02	0.22
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.00
tblVehicleEF	LDA	3.9760e-003	5.5900e-003
tblVehicleEF	LDA	0.02	0.16
tblVehicleEF	LDA	0.11	0.19
tblVehicleEF	LDT1	1.3310e-003	2.6660e-003
tblVehicleEF	LDT1	0.03	0.06
tblVehicleEF	LDT1	0.48	0.79
tblVehicleEF	LDT1	1.73	2.97
tblVehicleEF	LDT1	233.03	287.56
tblVehicleEF	LDT1	49.56	73.42
tblVehicleEF	LDT1	3.4190e-003	5.0740e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.14	0.25
tblVehicleEF	LDT1	0.04	9.2860e-003
tblVehicleEF	LDT1	9.1200e-004	1.0900e-003
tblVehicleEF	LDT1	1.2880e-003	1.8250e-003
tblVehicleEF	LDT1	0.02	3.2500e-003
tblVehicleEF	LDT1	8.3900e-004	1.0020e-003
tblVehicleEF	LDT1	1.1840e-003	1.6780e-003
tblVehicleEF	LDT1	0.04	0.43
tblVehicleEF	LDT1	0.08	0.11
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	4.9370e-003	0.01
tblVehicleEF	LDT1	0.05	0.32

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tblVehicleEF	LDT1	0.13	0.29
tblVehicleEF	LDT1	2.3060e-003	2.8430e-003
tblVehicleEF	LDT1	4.9000e-004	7.2600e-004
tblVehicleEF	LDT1	0.04	0.43
tblVehicleEF	LDT1	0.08	0.11
tblVehicleEF	LDT1	0.04	0.00
tblVehicleEF	LDT1	7.2040e-003	0.02
tblVehicleEF	LDT1	0.05	0.32
tblVehicleEF	LDT1	0.14	0.32
tblVehicleEF	LDT2	1.4870e-003	1.7280e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.52	0.61
tblVehicleEF	LDT2	2.15	2.55
tblVehicleEF	LDT2	238.62	297.32
tblVehicleEF	LDT2	51.13	74.83
tblVehicleEF	LDT2	3.7670e-003	4.2280e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.15	0.23
tblVehicleEF	LDT2	0.04	9.0180e-003
tblVehicleEF	LDT2	8.9900e-004	8.8500e-004
tblVehicleEF	LDT2	1.2020e-003	1.4860e-003
tblVehicleEF	LDT2	0.02	3.1560e-003
tblVehicleEF	LDT2	8.2800e-004	8.1400e-004
tblVehicleEF	LDT2	1.1050e-003	1.3660e-003
tblVehicleEF	LDT2	0.04	0.24
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	5.5060e-003	6.1680e-003

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tblVehicleEF	LDT2	0.05	0.18
tblVehicleEF	LDT2	0.16	0.24
tblVehicleEF	LDT2	2.3600e-003	2.9390e-003
tblVehicleEF	LDT2	5.0600e-004	7.4000e-004
tblVehicleEF	LDT2	0.04	0.24
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.04	0.00
tblVehicleEF	LDT2	7.9950e-003	8.9870e-003
tblVehicleEF	LDT2	0.05	0.18
tblVehicleEF	LDT2	0.17	0.26
tblVehicleEF	LHD1	3.9430e-003	3.9910e-003
tblVehicleEF	LHD1	4.6520e-003	3.1520e-003
tblVehicleEF	LHD1	7.9680e-003	0.01
tblVehicleEF	LHD1	0.18	0.17
tblVehicleEF	LHD1	0.41	0.46
tblVehicleEF	LHD1	0.85	1.95
tblVehicleEF	LHD1	8.08	7.39
tblVehicleEF	LHD1	680.27	619.11
tblVehicleEF	LHD1	9.72	14.96
tblVehicleEF	LHD1	7.2100e-004	5.5900e-004
tblVehicleEF	LHD1	0.04	0.03
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.04	0.03
tblVehicleEF	LHD1	0.23	0.24
tblVehicleEF	LHD1	0.21	0.30
tblVehicleEF	LHD1	9.3200e-004	6.4300e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9250e-003	9.2750e-003
tblVehicleEF	LHD1	6.4550e-003	8.1170e-003

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tblVehicleEF	LHD1	2.0200e-004	1.1200e-004
tblVehicleEF	LHD1	8.9200e-004	6.1500e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4810e-003	2.3190e-003
tblVehicleEF	LHD1	6.1320e-003	7.7380e-003
tblVehicleEF	LHD1	1.8500e-004	1.0300e-004
tblVehicleEF	LHD1	1.2840e-003	0.08
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.2400e-004	0.00
tblVehicleEF	LHD1	0.07	0.04
tblVehicleEF	LHD1	0.15	0.11
tblVehicleEF	LHD1	0.04	0.07
tblVehicleEF	LHD1	7.8000e-005	7.2000e-005
tblVehicleEF	LHD1	6.6320e-003	6.0400e-003
tblVehicleEF	LHD1	9.6000e-005	1.4800e-004
tblVehicleEF	LHD1	1.2840e-003	0.08
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.2400e-004	0.00
tblVehicleEF	LHD1	0.08	0.05
tblVehicleEF	LHD1	0.15	0.11
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD2	2.3850e-003	2.3610e-003
tblVehicleEF	LHD2	5.1380e-003	3.9200e-003
tblVehicleEF	LHD2	4.2200e-003	7.9180e-003
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.48	0.34
tblVehicleEF	LHD2	0.47	1.09

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tblVehicleEF	LHD2	12.75	13.27
tblVehicleEF	LHD2	663.31	664.99
tblVehicleEF	LHD2	6.19	8.24
tblVehicleEF	LHD2	1.6410e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.31	0.41
tblVehicleEF	LHD2	0.11	0.16
tblVehicleEF	LHD2	1.5020e-003	1.4640e-003
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0300e-004	4.8000e-005
tblVehicleEF	LHD2	1.4370e-003	1.4000e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7140e-003	2.6030e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.5000e-005	4.4000e-005
tblVehicleEF	LHD2	5.8200e-004	0.05
tblVehicleEF	LHD2	0.02	9.9900e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.4800e-004	0.00
tblVehicleEF	LHD2	0.10	0.07
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2200e-004	1.2700e-004
tblVehicleEF	LHD2	6.3970e-003	6.3950e-003
tblVehicleEF	LHD2	6.1000e-005	8.2000e-005

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tblVehicleEF	LHD2	5.8200e-004	0.05
tblVehicleEF	LHD2	0.02	9.9900e-003
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.4800e-004	0.00
tblVehicleEF	LHD2	0.11	0.09
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.15
tblVehicleEF	MCY	17.43	10.79
tblVehicleEF	MCY	9.23	7.80
tblVehicleEF	MCY	209.70	185.51
tblVehicleEF	MCY	58.86	41.43
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	5.9170e-003
tblVehicleEF	MCY	1.14	0.50
tblVehicleEF	MCY	0.27	0.09
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.1610e-003	2.0330e-003
tblVehicleEF	MCY	2.8170e-003	3.3580e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	2.0150e-003	1.8970e-003
tblVehicleEF	MCY	2.6310e-003	3.1380e-003
tblVehicleEF	MCY	0.89	3.55
tblVehicleEF	MCY	0.63	3.55
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.12	0.86
tblVehicleEF	MCY	0.44	3.78
tblVehicleEF	MCY	1.87	1.08

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tblVehicleEF	MCY	2.0750e-003	1.8340e-003
tblVehicleEF	MCY	5.8200e-004	4.1000e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.55
tblVehicleEF	MCY	0.47	0.00
tblVehicleEF	MCY	2.66	1.06
tblVehicleEF	MCY	0.44	3.78
tblVehicleEF	MCY	2.03	1.18
tblVehicleEF	MDV	1.5060e-003	1.8800e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.51	0.63
tblVehicleEF	MDV	2.17	2.58
tblVehicleEF	MDV	287.90	354.25
tblVehicleEF	MDV	60.31	88.60
tblVehicleEF	MDV	4.9180e-003	4.9600e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.16	0.25
tblVehicleEF	MDV	0.04	9.0670e-003
tblVehicleEF	MDV	9.0200e-004	8.6800e-004
tblVehicleEF	MDV	1.2020e-003	1.4420e-003
tblVehicleEF	MDV	0.02	3.1740e-003
tblVehicleEF	MDV	8.3200e-004	7.9900e-004
tblVehicleEF	MDV	1.1050e-003	1.3260e-003
tblVehicleEF	MDV	0.05	0.27
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.05	0.00
tblVehicleEF	MDV	5.6960e-003	7.0410e-003
tblVehicleEF	MDV	0.05	0.20

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tblVehicleEF	MDV	0.17	0.27
tblVehicleEF	MDV	2.8450e-003	3.5000e-003
tblVehicleEF	MDV	5.9700e-004	8.7600e-004
tblVehicleEF	MDV	0.05	0.27
tblVehicleEF	MDV	0.09	0.06
tblVehicleEF	MDV	0.05	0.00
tblVehicleEF	MDV	8.2490e-003	0.01
tblVehicleEF	MDV	0.05	0.20
tblVehicleEF	MDV	0.19	0.29
tblVehicleEF	MH	4.5570e-003	5.3580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.26	0.31
tblVehicleEF	MH	1.57	1.81
tblVehicleEF	MH	1,317.47	1,650.08
tblVehicleEF	MH	14.98	19.59
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.01	1.22
tblVehicleEF	MH	0.23	0.29
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	2.0800e-004	2.2500e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.3000e-003	3.3430e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.9100e-004	2.0700e-004
tblVehicleEF	MH	0.29	17.44
tblVehicleEF	MH	0.02	4.02

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tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	4.2040e-003	0.10
tblVehicleEF	MH	0.07	0.08
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.4800e-004	1.9400e-004
tblVehicleEF	MH	0.29	17.44
tblVehicleEF	MH	0.02	4.02
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.04	0.06
tblVehicleEF	MH	4.2040e-003	0.10
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MHD	3.9410e-003	0.02
tblVehicleEF	MHD	9.5900e-004	9.1920e-003
tblVehicleEF	MHD	8.4940e-003	6.0070e-003
tblVehicleEF	MHD	0.41	0.60
tblVehicleEF	MHD	0.14	0.13
tblVehicleEF	MHD	0.86	0.63
tblVehicleEF	MHD	63.15	133.49
tblVehicleEF	MHD	970.67	983.88
tblVehicleEF	MHD	8.57	6.19
tblVehicleEF	MHD	9.0610e-003	0.02
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	8.0290e-003	4.3710e-003
tblVehicleEF	MHD	0.33	0.67
tblVehicleEF	MHD	1.42	0.47
tblVehicleEF	MHD	1.68	1.11
tblVehicleEF	MHD	1.3000e-004	4.5300e-004
tblVehicleEF	MHD	0.13	0.04

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tblVehicleEF	MHD	6.9560e-003	4.1570e-003
tblVehicleEF	MHD	1.1400e-004	7.6000e-005
tblVehicleEF	MHD	1.2400e-004	4.3200e-004
tblVehicleEF	MHD	0.06	0.01
tblVehicleEF	MHD	6.6470e-003	3.9700e-003
tblVehicleEF	MHD	1.0500e-004	6.9000e-005
tblVehicleEF	MHD	2.8300e-004	0.01
tblVehicleEF	MHD	0.01	2.8890e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7000e-004	0.00
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	5.9900e-004	1.2250e-003
tblVehicleEF	MHD	9.2640e-003	9.3010e-003
tblVehicleEF	MHD	8.5000e-005	6.1000e-005
tblVehicleEF	MHD	2.8300e-004	0.01
tblVehicleEF	MHD	0.01	2.8890e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.7000e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.05	0.03
tblVehicleEF	OBUS	7.1140e-003	7.4520e-003
tblVehicleEF	OBUS	1.9920e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.65	0.55
tblVehicleEF	OBUS	0.24	0.24
tblVehicleEF	OBUS	1.55	1.35

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tblVehicleEF	OBUS	95.97	88.80
tblVehicleEF	OBUS	1,186.24	1,200.29
tblVehicleEF	OBUS	13.22	11.07
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.32
tblVehicleEF	OBUS	1.46	0.76
tblVehicleEF	OBUS	1.13	0.88
tblVehicleEF	OBUS	1.4300e-004	2.6600e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	8.0290e-003	0.01
tblVehicleEF	OBUS	1.6100e-004	1.1000e-004
tblVehicleEF	OBUS	1.3700e-004	2.5400e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.6670e-003	0.01
tblVehicleEF	OBUS	1.4800e-004	1.0100e-004
tblVehicleEF	OBUS	1.0700e-003	0.06
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.9400e-004	0.00
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.1100e-004	8.3600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3100e-004	1.0900e-004
tblVehicleEF	OBUS	1.0700e-003	0.06
tblVehicleEF	OBUS	0.02	0.01

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tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.9400e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	SBUS	0.08	0.08
tblVehicleEF	SBUS	3.7810e-003	0.08
tblVehicleEF	SBUS	6.9130e-003	5.1590e-003
tblVehicleEF	SBUS	3.18	1.83
tblVehicleEF	SBUS	0.33	0.61
tblVehicleEF	SBUS	0.92	0.64
tblVehicleEF	SBUS	332.18	175.19
tblVehicleEF	SBUS	940.73	895.15
tblVehicleEF	SBUS	5.43	3.87
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	7.1420e-003	4.9710e-003
tblVehicleEF	SBUS	2.38	0.95
tblVehicleEF	SBUS	2.49	1.20
tblVehicleEF	SBUS	1.32	0.53
tblVehicleEF	SBUS	1.5650e-003	5.7000e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	6.9360e-003
tblVehicleEF	SBUS	7.5000e-005	4.6000e-005
tblVehicleEF	SBUS	1.4970e-003	5.4400e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6510e-003	2.6010e-003
tblVehicleEF	SBUS	0.02	6.6190e-003

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tblVehicleEF	SBUS	6.9000e-005	4.2000e-005
tblVehicleEF	SBUS	1.0230e-003	0.05
tblVehicleEF	SBUS	9.6430e-003	0.01
tblVehicleEF	SBUS	0.35	0.20
tblVehicleEF	SBUS	4.8900e-004	0.00
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.1710e-003	1.5730e-003
tblVehicleEF	SBUS	9.0110e-003	8.2990e-003
tblVehicleEF	SBUS	5.4000e-005	3.8000e-005
tblVehicleEF	SBUS	1.0230e-003	0.05
tblVehicleEF	SBUS	9.6430e-003	0.01
tblVehicleEF	SBUS	0.50	0.32
tblVehicleEF	SBUS	4.8900e-004	0.00
tblVehicleEF	SBUS	0.06	0.12
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.3200e-003	2.3900e-003
tblVehicleEF	UBUS	14.11	7.31
tblVehicleEF	UBUS	0.14	0.49
tblVehicleEF	UBUS	1,668.51	711.24
tblVehicleEF	UBUS	1.40	2.96
tblVehicleEF	UBUS	0.28	0.11
tblVehicleEF	UBUS	1.2960e-003	4.2510e-003
tblVehicleEF	UBUS	0.71	0.15
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	0.07	0.21

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tblVehicleEF	UBUS	0.03	0.11
tblVehicleEF	UBUS	5.1160e-003	2.9010e-003
tblVehicleEF	UBUS	1.5000e-005	1.3000e-005
tblVehicleEF	UBUS	0.03	0.07
tblVehicleEF	UBUS	8.3320e-003	0.03
tblVehicleEF	UBUS	4.8930e-003	2.7720e-003
tblVehicleEF	UBUS	1.4000e-005	1.2000e-005
tblVehicleEF	UBUS	9.3000e-005	7.2670e-003
tblVehicleEF	UBUS	1.3310e-003	1.9420e-003
tblVehicleEF	UBUS	5.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	3.2100e-004	7.8800e-003
tblVehicleEF	UBUS	9.8660e-003	7.9120e-003
tblVehicleEF	UBUS	0.01	4.9480e-003
tblVehicleEF	UBUS	1.4000e-005	2.9000e-005
tblVehicleEF	UBUS	9.3000e-005	7.2670e-003
tblVehicleEF	UBUS	1.3310e-003	1.9420e-003
tblVehicleEF	UBUS	5.6000e-005	0.00
tblVehicleEF	UBUS	1.90	0.67
tblVehicleEF	UBUS	3.2100e-004	7.8800e-003
tblVehicleEF	UBUS	0.01	8.6620e-003
tblVehicleTrips	ST_TR	4.91	4.23
tblVehicleTrips	ST_TR	1.96	15.38
tblVehicleTrips	ST_TR	2.21	1.19
tblVehicleTrips	ST_TR	42.04	30.45
tblVehicleTrips	SU_TR	4.09	3.53
tblVehicleTrips	SU_TR	2.19	15.38
tblVehicleTrips	SU_TR	0.70	0.38
tblVehicleTrips	SU_TR	20.43	14.80

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tblVehicleTrips	WD_TR	5.44	4.69
tblVehicleTrips	WD_TR	0.78	15.38
tblVehicleTrips	WD_TR	9.74	5.25
tblVehicleTrips	WD_TR	44.32	32.10
tblWoodstoves	NumberCatalytic	38.00	0.00
tblWoodstoves	NumberNoncatalytic	38.00	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	12.0824	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048
Energy	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	3,311.1252	3,311.1252	0.5350	0.0649	3,343.8461
Mobile	6.8227	4.1530	43.1005	0.1119	5.4998	0.0610	5.5607	1.3965	0.0569	1.4533	0.0000	10,340.4776	10,340.4776	0.4700	0.4557	10,488.0296
Stationary	0.4123	0.5823	1.0513	1.9800e-003		0.0291	0.0291		0.0291	0.0291	0.0000	191.3506	191.3506	0.0268	0.0000	192.0213
Waste						0.0000	0.0000		0.0000	0.0000	445.2790	0.0000	445.2790	26.3152	0.0000	1,103.1597
Water						0.0000	0.0000		0.0000	0.0000	114.6674	255.3217	369.9890	11.8187	0.2831	749.8207
Total	19.3180	4.9026	58.2797	0.1147	5.4998	0.1689	5.6686	1.3965	0.1648	1.5612	559.9463	14,121.4243	14,681.3706	39.1880	0.8037	15,900.5824

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

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	10.8645	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048
Energy	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	3,311.1252	3,311.1252	0.5350	0.0649	3,343.8461
Mobile	6.8227	4.1530	43.1005	0.1119	5.4998	0.0610	5.5607	1.3965	0.0569	1.4533	0.0000	10,340.4776	10,340.4776	0.4700	0.4557	10,488.0296
Stationary	0.4123	0.5823	1.0513	1.9800e-003		0.0291	0.0291		0.0291	0.0291	0.0000	191.3506	191.3506	0.0268	0.0000	192.0213
Waste						0.0000	0.0000		0.0000	0.0000	445.2790	0.0000	445.2790	26.3152	0.0000	1,103.1597
Water						0.0000	0.0000		0.0000	0.0000	114.6674	255.3217	369.9890	11.8187	0.2831	749.8207
Total	18.1000	4.9026	58.2797	0.1147	5.4998	0.1689	5.6686	1.3965	0.1648	1.5612	559.9463	14,121.4243	14,681.3706	39.1880	0.8037	15,900.5824

	ROG	NOx	CO	SO2	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	6.30	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	6.8227	4.1530	43.1005	0.1119	5.4998	0.0610	5.5607	1.3965	0.0569	1.4533	0.0000	10,340.4776	10,340.4776	0.4700	0.4557	10,488.0296
Unmitigated	6.8227	4.1530	43.1005	0.1119	5.4998	0.0610	5.5607	1.3965	0.0569	1.4533	0.0000	10,340.4776	10,340.4776	0.4700	0.4557	10,488.0296

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	8,911.00	8,037.00	6707.00	19,565,343	19,565,343
City Park	76.90	76.90	76.90	164,170	164,170
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	6,914.25	1,567.23	500.46	12,508,287	12,508,287
Recreational Swimming Pool	259.38	81.90	122.40	387,584	387,584
Strip Mall	1,316.10	1,248.45	606.80	1,855,905	1,855,905
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	17,477.63	11,011.48	8,013.56	34,481,290	34,481,290

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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

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

Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Unenclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
City Park	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
Enclosed Parking with Elevator	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
General Office Building	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
Recreational Swimming Pool	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
Strip Mall	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196
Unenclosed Parking with Elevator	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.021910	0.000677	0.002196

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,306.0055	3,306.0055	0.5349	0.0648	3,338.6960
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,306.0055	3,306.0055	0.5349	0.0648	3,338.6960
Natural Gas Mitigated	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502

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NaturalGas Unmitigated	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502
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5.2 Energy by Land Use - NaturalGas Unmitigated

Land Use	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	95940	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502

Mitigated

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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					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	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
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	95940	5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		5.2000e-004	4.7000e-003	3.9500e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1197	5.1197	1.0000e-004	9.0000e-005	5.1502

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	7.34622e+006	679.6997	0.1100	0.0133	686.4207
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	4.53152e+006	419.2733	0.0678	8.2200e-003	423.4192
General Office Building	2.26129e+007	2,092.2299	0.3385	0.0410	2,112.9183

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

Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	425990	39.4142	6.3800e-003	7.7000e-004	39.8039
Unenclosed Parking with Elevator	814800	75.3884	0.0122	1.4800e-003	76.1338
Total		3,306.0055	0.5349	0.0648	3,338.6960

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartments Mid Rise	7.34622e+006	679.6997	0.1100	0.0133	686.4207
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	4.53152e+006	419.2733	0.0678	8.2200e-003	423.4192
General Office Building	2.26129e+007	2,092.2299	0.3385	0.0410	2,112.9183
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	425990	39.4142	6.3800e-003	7.7000e-004	39.8039
Unenclosed Parking with Elevator	814800	75.3884	0.0122	1.4800e-003	76.1338
Total		3,306.0055	0.5349	0.0648	3,338.6960

6.0 Area Detail

Google Middlefield Campus - Operational - Santa Clara County, Annual

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
Landscaping	0.4258	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048
Total	12.0824	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048

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	0.7313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.7074					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	0.4258	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048
Total	10.8645	0.1627	14.1239	7.5000e-004		0.0784	0.0784		0.0784	0.0784	0.0000	23.1492	23.1492	0.0222	0.0000	23.7048

7.0 Water Detail

7.1 Mitigation Measures Water

Google Middlefield Campus - Operational - Santa Clara County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	369.9890	11.8187	0.2831	749.8207
Unmitigated	369.9890	11.8187	0.2831	749.8207

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	123.793 / 78.0432	126.5230	4.0479	0.0970	256.6138
City Park	0 / 5.95741	1.9292	3.1000e-004	4.0000e-005	1.9483
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	234.075 / 143.466	237.9091	7.6538	0.1833	483.8803
Recreational Swimming Pool	0.532288 / 0.326241	0.5410	0.0174	4.2000e-004	1.1004
Strip Mall	3.03697 / 1.86137	3.0867	0.0993	2.3800e-003	6.2780
Unenclosed Parking with Elevator	0 / 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

Total	369.9890	11.8187	0.2831	749.8207
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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	123.793 / 78.0432	126.5230	4.0479	0.0970	256.6138
City Park	0 / 5.95741	1.9292	3.1000e-004	4.0000e-005	1.9483
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	234.075 / 143.466	237.9091	7.6538	0.1833	483.8803
Recreational Swimming Pool	0.532288 / 0.326241	0.5410	0.0174	4.2000e-004	1.1004
Strip Mall	3.03697 / 1.86137	3.0867	0.0993	2.3800e-003	6.2780
Unenclosed Parking with	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		369.9890	11.8187	0.2831	749.8207

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

Google Middlefield Campus - Operational - Santa Clara County, Annual

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	445.2790	26.3152	0.0000	1,103.1597
Unmitigated	445.2790	26.3152	0.0000	1,103.1597

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	874	177.4141	10.4849	0.0000	439.5359
City Park	0.43	0.0873	5.1600e-003	0.0000	0.2163
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1224.81	248.6254	14.6933	0.0000	615.9588
Recreational Swimming Pool	51.3	10.4134	0.6154	0.0000	25.7989
Strip Mall	43.05	8.7388	0.5165	0.0000	21.6499
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		445.2790	26.3152	0.0000	1,103.1598

Google Middlefield Campus - Operational - Santa Clara County, Annual

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

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	874	177.4141	10.4849	0.0000	439.5359
City Park	0.43	0.0873	5.1600e-003	0.0000	0.2163
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	1224.81	248.6254	14.6933	0.0000	615.9588
Recreational Swimming Pool	51.3	10.4134	0.6154	0.0000	25.7989
Strip Mall	43.05	8.7388	0.5165	0.0000	21.6499
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		445.2790	26.3152	0.0000	1,103.1598

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

Google Middlefield Campus - Operational - Santa Clara County, Annual

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

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	6	0	50	670	0.73	Diesel
Emergency Generator	5	0	50	1206	0.73	Diesel

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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10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (600...750 HP)	0.1649	0.4610	0.4205	7.9000e-004		0.0243	0.0243		0.0243	0.0243	0.0000	76.5402	76.5402	0.0107	0.0000	76.8085
Emergency Generator - Diesel (750...800 HP)	0.2474	0.1213	0.6308	1.1900e-003		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003	0.0000	114.8104	114.8104	0.0161	0.0000	115.2128
Total	0.4123	0.5823	1.0513	1.9800e-003		0.0291	0.0291		0.0291	0.0291	0.0000	191.3506	191.3506	0.0268	0.0000	192.0213

11.0 Vegetation

Existing Google Middlefield - Santa Clara County, Annual

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

Existing Google Middlefield
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	685.00	1000sqft	15.73	685,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2021
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Existing use from Traffic Trip Generation table 9/28/2021
- Vehicle Trips - Exist Office = 9.16/2.08/0.66
- Vehicle Emission Factors - Emfac2021
- Road Dust - Santa Clara County silt loading average
- Energy Use - Existing uses
- Fleet Mix - Emfac2021

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	4.72	3.88
tblEnergyUse	T24E	8.01	5.45
tblEnergyUse	T24NG	19.90	16.14

Existing Google Middlefield - Santa Clara County, Annual

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

tblFleetMix	HHD	6.4250e-003	6.9330e-003
tblFleetMix	LDA	0.57	0.54
tblFleetMix	LDT1	0.05	0.05
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	4.8940e-003	5.3010e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.9780e-003	2.9920e-003
tblFleetMix	MHD	8.2890e-003	9.4610e-003
tblFleetMix	OBUS	9.6600e-004	1.0730e-003
tblFleetMix	SBUS	9.5000e-004	6.7500e-004
tblFleetMix	UBUS	4.0700e-004	4.2700e-004
tblRoadDust	RoadSiltLoading	0.1	0.04
tblVehicleEF	HHD	0.03	0.20
tblVehicleEF	HHD	0.06	0.13
tblVehicleEF	HHD	5.63	4.80
tblVehicleEF	HHD	0.68	0.86
tblVehicleEF	HHD	5.9160e-003	2.8700e-004
tblVehicleEF	HHD	1,088.79	882.48
tblVehicleEF	HHD	1,552.03	1,685.13
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.25	0.27
tblVehicleEF	HHD	1.5000e-005	2.5000e-005
tblVehicleEF	HHD	5.97	4.57
tblVehicleEF	HHD	4.12	2.78
tblVehicleEF	HHD	1.86	2.24
tblVehicleEF	HHD	8.5660e-003	4.3030e-003

Existing Google Middlefield - Santa Clara County, Annual

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

tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	1.0000e-006	2.0000e-006
tblVehicleEF	HHD	8.1960e-003	4.1120e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.7790e-003
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	4.0000e-006	4.5600e-004
tblVehicleEF	HHD	1.8500e-004	1.3600e-004
tblVehicleEF	HHD	0.43	0.34
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.14	0.05
tblVehicleEF	HHD	1.0000e-004	1.2210e-003
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.01	7.8730e-003
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	4.0000e-006	4.5600e-004
tblVehicleEF	HHD	1.8500e-004	1.3600e-004
tblVehicleEF	HHD	0.50	0.57
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.21	0.18
tblVehicleEF	HHD	1.0000e-004	1.2210e-003
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	2.6060e-003	2.9950e-003
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.66	0.83
tblVehicleEF	LDA	2.29	3.58

Existing Google Middlefield - Santa Clara County, Annual

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

tblVehicleEF	LDA	257.27	266.46
tblVehicleEF	LDA	54.50	68.97
tblVehicleEF	LDA	4.9650e-003	5.4030e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.20	0.28
tblVehicleEF	LDA	0.04	7.2670e-003
tblVehicleEF	LDA	1.4910e-003	1.3570e-003
tblVehicleEF	LDA	1.8970e-003	2.1510e-003
tblVehicleEF	LDA	0.02	2.5430e-003
tblVehicleEF	LDA	1.3730e-003	1.2500e-003
tblVehicleEF	LDA	1.7440e-003	1.9780e-003
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.04	0.00
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.24
tblVehicleEF	LDA	0.26	0.38
tblVehicleEF	LDA	2.5450e-003	2.6340e-003
tblVehicleEF	LDA	5.3900e-004	6.8200e-004
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.04	0.00
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.24
tblVehicleEF	LDA	0.28	0.41
tblVehicleEF	LDT1	5.6210e-003	8.6440e-003
tblVehicleEF	LDT1	0.08	0.13
tblVehicleEF	LDT1	1.19	1.85

Existing Google Middlefield - Santa Clara County, Annual

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

tblVehicleEF	LDT1	2.52	6.58
tblVehicleEF	LDT1	305.87	341.20
tblVehicleEF	LDT1	65.70	91.83
tblVehicleEF	LDT1	8.0230e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.18
tblVehicleEF	LDT1	0.27	0.45
tblVehicleEF	LDT1	0.04	9.2200e-003
tblVehicleEF	LDT1	2.0610e-003	2.3470e-003
tblVehicleEF	LDT1	2.5740e-003	3.4520e-003
tblVehicleEF	LDT1	0.02	3.2270e-003
tblVehicleEF	LDT1	1.8980e-003	2.1610e-003
tblVehicleEF	LDT1	2.3670e-003	3.1750e-003
tblVehicleEF	LDT1	0.10	0.68
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.08	0.00
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.09	0.56
tblVehicleEF	LDT1	0.38	0.68
tblVehicleEF	LDT1	3.0270e-003	3.3730e-003
tblVehicleEF	LDT1	6.5000e-004	9.0800e-004
tblVehicleEF	LDT1	0.10	0.68
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.08	0.00
tblVehicleEF	LDT1	0.04	0.06
tblVehicleEF	LDT1	0.09	0.56
tblVehicleEF	LDT1	0.42	0.74
tblVehicleEF	LDT2	4.0150e-003	3.7370e-003
tblVehicleEF	LDT2	0.08	0.10

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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	0.92	1.03
tblVehicleEF	LDT2	2.97	4.37
tblVehicleEF	LDT2	335.42	363.40
tblVehicleEF	LDT2	72.55	93.76
tblVehicleEF	LDT2	7.3230e-003	7.6890e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.09	0.10
tblVehicleEF	LDT2	0.32	0.42
tblVehicleEF	LDT2	0.04	8.9000e-003
tblVehicleEF	LDT2	1.4890e-003	1.4880e-003
tblVehicleEF	LDT2	1.8600e-003	2.2930e-003
tblVehicleEF	LDT2	0.02	3.1150e-003
tblVehicleEF	LDT2	1.3700e-003	1.3690e-003
tblVehicleEF	LDT2	1.7100e-003	2.1080e-003
tblVehicleEF	LDT2	0.07	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	0.47
tblVehicleEF	LDT2	3.3180e-003	3.5920e-003
tblVehicleEF	LDT2	7.1800e-004	9.2700e-004
tblVehicleEF	LDT2	0.07	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	0.40	0.51
tblVehicleEF	LHD1	5.5240e-003	5.8780e-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	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.92	1.15
tblVehicleEF	LHD1	1.18	2.12
tblVehicleEF	LHD1	9.08	8.98
tblVehicleEF	LHD1	823.31	834.15
tblVehicleEF	LHD1	12.42	18.35
tblVehicleEF	LHD1	7.2900e-004	6.4200e-004
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.93	0.97
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	7.8900e-004	6.5900e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.6690e-003	9.3520e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.8300e-004	2.9700e-004
tblVehicleEF	LHD1	7.5500e-004	6.3100e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4170e-003	2.3380e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.6000e-004	2.7300e-004
tblVehicleEF	LHD1	2.2740e-003	0.15
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1320e-003	0.00
tblVehicleEF	LHD1	0.10	0.11

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

tblVehicleEF	LHD1	0.23	0.21
tblVehicleEF	LHD1	0.09	0.14
tblVehicleEF	LHD1	8.0450e-003	8.1570e-003
tblVehicleEF	LHD1	1.2300e-004	1.8100e-004
tblVehicleEF	LHD1	2.2740e-003	0.15
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.1320e-003	0.00
tblVehicleEF	LHD1	0.13	0.14
tblVehicleEF	LHD1	0.23	0.21
tblVehicleEF	LHD1	0.10	0.15
tblVehicleEF	LHD2	3.4180e-003	3.6190e-003
tblVehicleEF	LHD2	8.1220e-003	9.1300e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.14	0.15
tblVehicleEF	LHD2	0.71	0.74
tblVehicleEF	LHD2	0.71	1.29
tblVehicleEF	LHD2	14.19	14.03
tblVehicleEF	LHD2	796.11	872.36
tblVehicleEF	LHD2	8.35	10.91
tblVehicleEF	LHD2	1.7420e-003	1.6730e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	1.13	1.26
tblVehicleEF	LHD2	0.21	0.28
tblVehicleEF	LHD2	1.3930e-003	1.3140e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01

Existing Google Middlefield - Santa Clara County, Annual

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

tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.5100e-004	1.4400e-004
tblVehicleEF	LHD2	1.3330e-003	1.2570e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6760e-003	2.6430e-003
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	1.3800e-004	1.3200e-004
tblVehicleEF	LHD2	1.2620e-003	0.08
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.1900e-004	0.00
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.05	0.08
tblVehicleEF	LHD2	1.3600e-004	1.3500e-004
tblVehicleEF	LHD2	7.6920e-003	8.4180e-003
tblVehicleEF	LHD2	8.3000e-005	1.0800e-004
tblVehicleEF	LHD2	1.2620e-003	0.08
tblVehicleEF	LHD2	0.05	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.1900e-004	0.00
tblVehicleEF	LHD2	0.14	0.16
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	MCY	0.33	0.18
tblVehicleEF	MCY	0.26	0.20
tblVehicleEF	MCY	19.56	14.16
tblVehicleEF	MCY	8.98	8.17
tblVehicleEF	MCY	210.39	189.76

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

tblVehicleEF	MCY	61.76	52.23
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	9.1460e-003
tblVehicleEF	MCY	1.15	0.63
tblVehicleEF	MCY	0.27	0.16
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.8930e-003	1.8720e-003
tblVehicleEF	MCY	3.2130e-003	3.8430e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.7720e-003	1.7550e-003
tblVehicleEF	MCY	3.0300e-003	3.6260e-003
tblVehicleEF	MCY	0.91	3.99
tblVehicleEF	MCY	0.72	3.56
tblVehicleEF	MCY	0.50	0.00
tblVehicleEF	MCY	2.25	1.21
tblVehicleEF	MCY	0.57	3.72
tblVehicleEF	MCY	1.97	1.49
tblVehicleEF	MCY	2.0820e-003	1.8760e-003
tblVehicleEF	MCY	6.1100e-004	5.1600e-004
tblVehicleEF	MCY	0.91	0.09
tblVehicleEF	MCY	0.72	3.56
tblVehicleEF	MCY	0.50	0.00
tblVehicleEF	MCY	2.77	1.44
tblVehicleEF	MCY	0.57	3.72
tblVehicleEF	MCY	2.14	1.62
tblVehicleEF	MDV	5.3420e-003	5.7600e-003
tblVehicleEF	MDV	0.09	0.13
tblVehicleEF	MDV	1.10	1.30
tblVehicleEF	MDV	3.49	4.94

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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	406.59	439.91
tblVehicleEF	MDV	87.26	112.73
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.12	0.16
tblVehicleEF	MDV	0.40	0.56
tblVehicleEF	MDV	0.04	9.1080e-003
tblVehicleEF	MDV	1.6790e-003	1.6270e-003
tblVehicleEF	MDV	2.1320e-003	2.5440e-003
tblVehicleEF	MDV	0.02	3.1880e-003
tblVehicleEF	MDV	1.5490e-003	1.5000e-003
tblVehicleEF	MDV	1.9610e-003	2.3400e-003
tblVehicleEF	MDV	0.08	0.38
tblVehicleEF	MDV	0.15	0.11
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.07	0.29
tblVehicleEF	MDV	0.47	0.66
tblVehicleEF	MDV	4.0190e-003	4.3460e-003
tblVehicleEF	MDV	8.6400e-004	1.1140e-003
tblVehicleEF	MDV	0.08	0.38
tblVehicleEF	MDV	0.15	0.11
tblVehicleEF	MDV	0.07	0.00
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.07	0.29
tblVehicleEF	MDV	0.51	0.73
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.62	2.55

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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	2.37	2.95
tblVehicleEF	MH	1,583.82	1,711.66
tblVehicleEF	MH	19.77	24.31
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.51	1.72
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	3.1000e-004	4.0300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2650e-003	3.2740e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	2.8500e-004	3.7100e-004
tblVehicleEF	MH	0.87	38.95
tblVehicleEF	MH	0.07	11.50
tblVehicleEF	MH	0.29	0.00
tblVehicleEF	MH	0.09	0.12
tblVehicleEF	MH	0.02	0.26
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9600e-004	2.4000e-004
tblVehicleEF	MH	0.87	38.95
tblVehicleEF	MH	0.07	11.50
tblVehicleEF	MH	0.29	0.00
tblVehicleEF	MH	0.12	0.17
tblVehicleEF	MH	0.02	0.26
tblVehicleEF	MH	0.12	0.14

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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	3.3710e-003	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.5540e-003	0.01
tblVehicleEF	MHD	0.37	0.65
tblVehicleEF	MHD	0.76	0.60
tblVehicleEF	MHD	1.20	1.33
tblVehicleEF	MHD	77.13	165.91
tblVehicleEF	MHD	1,160.41	1,253.35
tblVehicleEF	MHD	9.11	9.47
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	6.5660e-003	6.0720e-003
tblVehicleEF	MHD	0.67	1.09
tblVehicleEF	MHD	2.89	1.74
tblVehicleEF	MHD	1.17	1.25
tblVehicleEF	MHD	2.1340e-003	3.6160e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	0.07	0.02
tblVehicleEF	MHD	1.2300e-004	1.3300e-004
tblVehicleEF	MHD	2.0410e-003	3.4600e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.07	0.02
tblVehicleEF	MHD	1.1300e-004	1.2200e-004
tblVehicleEF	MHD	4.8800e-004	0.03
tblVehicleEF	MHD	0.02	8.6750e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.3700e-004	0.00
tblVehicleEF	MHD	0.19	0.07
tblVehicleEF	MHD	0.03	0.07

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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	0.05	0.06
tblVehicleEF	MHD	7.3100e-004	1.5480e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.0000e-005	9.4000e-005
tblVehicleEF	MHD	4.8800e-004	0.03
tblVehicleEF	MHD	0.02	8.6750e-003
tblVehicleEF	MHD	0.03	0.05
tblVehicleEF	MHD	2.3700e-004	0.00
tblVehicleEF	MHD	0.22	0.09
tblVehicleEF	MHD	0.03	0.07
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.4560e-003	7.5900e-003
tblVehicleEF	OBUS	8.2760e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.57	0.48
tblVehicleEF	OBUS	0.77	0.73
tblVehicleEF	OBUS	1.97	2.22
tblVehicleEF	OBUS	98.57	85.13
tblVehicleEF	OBUS	1,386.54	1,432.80
tblVehicleEF	OBUS	15.72	17.14
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.14	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.61	0.42
tblVehicleEF	OBUS	2.07	1.32
tblVehicleEF	OBUS	0.95	0.88
tblVehicleEF	OBUS	2.1490e-003	7.8500e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.03	0.02

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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	1.3500e-004	1.5000e-004
tblVehicleEF	OBUS	2.0560e-003	7.5100e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	1.2400e-004	1.3800e-004
tblVehicleEF	OBUS	1.0870e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.04
tblVehicleEF	OBUS	4.7200e-004	0.00
tblVehicleEF	OBUS	0.10	0.07
tblVehicleEF	OBUS	0.04	0.07
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	9.3600e-004	8.0700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5600e-004	1.6900e-004
tblVehicleEF	OBUS	1.0870e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.07	0.06
tblVehicleEF	OBUS	4.7200e-004	0.00
tblVehicleEF	OBUS	0.12	0.09
tblVehicleEF	OBUS	0.04	0.07
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.8250e-003	0.09
tblVehicleEF	SBUS	4.3890e-003	4.5290e-003
tblVehicleEF	SBUS	1.99	1.57
tblVehicleEF	SBUS	0.56	0.97
tblVehicleEF	SBUS	0.66	0.66
tblVehicleEF	SBUS	347.43	194.78

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

tblVehicleEF	SBUS	1,081.24	1,079.66
tblVehicleEF	SBUS	3.67	3.62
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	3.9430e-003	3.7760e-003
tblVehicleEF	SBUS	3.69	1.54
tblVehicleEF	SBUS	5.30	3.17
tblVehicleEF	SBUS	0.73	0.45
tblVehicleEF	SBUS	4.5040e-003	1.6970e-003
tblVehicleEF	SBUS	0.74	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	4.0000e-005	3.6000e-005
tblVehicleEF	SBUS	4.3090e-003	1.6230e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	0.03	0.02
tblVehicleEF	SBUS	3.7000e-005	3.3000e-005
tblVehicleEF	SBUS	4.6600e-004	0.02
tblVehicleEF	SBUS	4.4900e-003	6.3100e-003
tblVehicleEF	SBUS	0.22	0.17
tblVehicleEF	SBUS	1.8600e-004	0.00
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	9.2720e-003	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3040e-003	1.7790e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6600e-004	0.02
tblVehicleEF	SBUS	4.4900e-003	6.3100e-003
tblVehicleEF	SBUS	0.31	0.28

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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	1.8600e-004	0.00
tblVehicleEF	SBUS	0.11	0.17
tblVehicleEF	SBUS	9.2720e-003	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.38	0.35
tblVehicleEF	UBUS	2.6650e-003	4.6730e-003
tblVehicleEF	UBUS	10.36	4.10
tblVehicleEF	UBUS	0.14	0.49
tblVehicleEF	UBUS	1,606.74	1,102.61
tblVehicleEF	UBUS	1.64	3.33
tblVehicleEF	UBUS	0.27	0.17
tblVehicleEF	UBUS	1.3980e-003	7.2220e-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	6.2220e-003
tblVehicleEF	UBUS	2.0000e-006	8.0000e-006
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1250e-003
tblVehicleEF	UBUS	5.0490e-003	5.9500e-003
tblVehicleEF	UBUS	2.0000e-006	8.0000e-006
tblVehicleEF	UBUS	1.7500e-004	0.01
tblVehicleEF	UBUS	2.6930e-003	4.5950e-003
tblVehicleEF	UBUS	1.1000e-004	0.00
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	6.6900e-004	8.1290e-003
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.01	9.4800e-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	UBUS	1.6000e-005	3.3000e-005
tblVehicleEF	UBUS	1.7500e-004	0.01
tblVehicleEF	UBUS	2.6930e-003	4.5950e-003
tblVehicleEF	UBUS	1.1000e-004	0.00
tblVehicleEF	UBUS	1.41	0.42
tblVehicleEF	UBUS	6.6900e-004	8.1290e-003
tblVehicleEF	UBUS	0.01	0.02
tblVehicleTrips	ST_TR	2.21	2.08
tblVehicleTrips	SU_TR	0.70	0.66
tblVehicleTrips	WD_TR	9.74	9.16

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131
Energy	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	602.8480	602.8480	0.0114	0.0109	606.3670
Mobile	3.4795	2.8892	23.8790	0.0449	1.8082	0.0364	1.8446	0.4590	0.0341	0.4930	0.0000	4,144.5366	4,144.5366	0.2633	0.2107	4,213.8989
Waste						0.0000	0.0000		0.0000	0.0000	129.3154	0.0000	129.3154	7.6423	0.0000	320.3734
Water						0.0000	0.0000		0.0000	0.0000	38.6249	0.8346	39.4595	3.9672	0.0937	166.5527
Total	6.5724	3.4332	24.3423	0.0482	1.8082	0.0778	1.8860	0.4590	0.0754	0.5344	167.9403	4,748.2314	4,916.1717	11.8841	0.3152	5,307.2051

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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131
Energy	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	602.8480	602.8480	0.0114	0.0109	606.3670
Mobile	3.4795	2.8892	23.8790	0.0449	1.8082	0.0364	1.8446	0.4590	0.0341	0.4930	0.0000	4,144.5366	4,144.5366	0.2633	0.2107	4,213.8989
Waste						0.0000	0.0000		0.0000	0.0000	129.3154	0.0000	129.3154	7.6423	0.0000	320.3734
Water						0.0000	0.0000		0.0000	0.0000	38.6249	0.8346	39.4595	3.9672	0.0937	166.5527
Total	6.5724	3.4332	24.3423	0.0482	1.8082	0.0778	1.8860	0.4590	0.0754	0.5344	167.9403	4,748.2314	4,916.1717	11.8841	0.3152	5,307.2051

	ROG	NOx	CO	SO2	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

Existing Google Middlefield - Santa Clara County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.4795	2.8892	23.8790	0.0449	1.8082	0.0364	1.8446	0.4590	0.0341	0.4930	0.0000	4,144.5366	4,144.5366	0.2633	0.2107	4,213.8989
Unmitigated	3.4795	2.8892	23.8790	0.0449	1.8082	0.0364	1.8446	0.4590	0.0341	0.4930	0.0000	4,144.5366	4,144.5366	0.2633	0.2107	4,213.8989

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	6,274.60	1,424.80	452.10	11,351,292	11,351,292
Total	6,274.60	1,424.80	452.10	11,351,292	11,351,292

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.540455	0.045763	0.219871	0.122171	0.022751	0.005301	0.009461	0.006933	0.001073	0.000427	0.022127	0.000675	0.002992

5.0 Energy Detail

Historical Energy Use: Y

Existing Google Middlefield - Santa Clara County, Annual

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

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	10.6698	10.6698	0.0000	0.0000	10.6698
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10.6698	10.6698	0.0000	0.0000	10.6698
NaturalGas Mitigated	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972
NaturalGas Unmitigated	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1.1097e+07	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972
Total		0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972

Existing Google Middlefield - Santa Clara County, Annual

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

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					
General Office Building	1.1097e+07	0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972
Total		0.0598	0.5440	0.4569	3.2600e-003		0.0413	0.0413		0.0413	0.0413	0.0000	592.1782	592.1782	0.0114	0.0109	595.6972

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.17614e+07	10.6698	0.0000	0.0000	10.6698
Total		10.6698	0.0000	0.0000	10.6698

Mitigated

Existing Google Middlefield - Santa Clara County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.17614e+007	10.6698	0.0000	0.0000	10.6698
Total		10.6698	0.0000	0.0000	10.6698

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131
Unmitigated	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131

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

SubCategory	tons/yr								MT/yr							
Architectural Coating	0.3572					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	2.6753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	5.9000e-004	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131
Total	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr											MT/yr					
Architectural Coating	0.3572					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9000e-004	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131
Total	3.0330	6.0000e-005	6.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0122	0.0122	3.0000e-005	0.0000	0.0131

7.0 Water Detail

7.1 Mitigation Measures Water

Existing Google Middlefield - Santa Clara County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	39.4595	3.9672	0.0937	166.5527
Unmitigated	39.4595	3.9672	0.0937	166.5527

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	121.748 / 74.6195	39.4595	3.9672	0.0937	166.5527
Total		39.4595	3.9672	0.0937	166.5527

Mitigated

Existing Google Middlefield - Santa Clara County, Annual

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

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	121.748 / 74.6195	39.4595	3.9672	0.0937	166.5527
Total		39.4595	3.9672	0.0937	166.5527

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	129.3154	7.6423	0.0000	320.3734
Unmitigated	129.3154	7.6423	0.0000	320.3734

8.2 Waste by Land Use

Unmitigated

Waste Disposed	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

Land Use	tons	MT/yr			
General Office Building	637.05	129.3154	7.6423	0.0000	320.3734
Total		129.3154	7.6423	0.0000	320.3734

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
General Office Building	637.05	129.3154	7.6423	0.0000	320.3734
Total		129.3154	7.6423	0.0000	320.3734

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

Existing Google Middlefield - Santa Clara County, Annual

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

Equipment Type	Number	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

P1 (R1+R2) - 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	50	0	2800	0	1849	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	30240	0	36980
Site Preparation	15	2	240	32	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2592	233.6	0
Grading	103	0	5768	0	25429	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	62294.4	0	508580
Trenching	60	0	9660	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	104328	0	0
Building Construction	691	140	272945	55300	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	2947806	403690	0
Paving	23	0	1104	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	11923.2	0	0
Architectural Coating	138	0	6624	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	71539.2	0	0

Number of Days Per Year

2022-2023	11/1/22	12/31/23	426	366
2024	1/1/24	12/31/24	366	314
2025	1/1/25	4/30/25	120	103
			912	783 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	11/1/2022	1/4/2023	6	56
Site Preparation	1/5/2023	1/23/2023	6	16
Grading	1/24/2023	3/29/2023	6	56
Trenching	3/31/2023	10/4/2023	6	161
Building Construction	10/5/2023	1/7/2025	6	395
Paving	1/8/2025	3/4/2025	6	48
Architectural Coating	3/6/2025	4/30/2025	6	48

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive			Fugitive			NBio- CO2	CH4	N2O	CO2e		
					PM10	Exhaust PM10	PM10 Total	PM2.5	Exhaust PM2.5	PM2.5 Total						
					<i>Grams</i>											
Hauling	19755.16	1240196.88	575806.93	8323.34	163122.44	77750.00	240872.44	24544.74	33882.99	58427.74	#####	74982.44	146752.67	#####		
Vendor	26884.63	889983.47	436798.36	5632.92	120773.16	43518.03	164291.19	18172.52	19354.96	37527.48	#####	34516.46	89878.34	#####		
Worker	401382.40	338686.22	4267026.17	9703.98	965986.12	57545.12	1023531.24	145350.22	20663.51	166013.73	#####	37037.92	31188.74	#####		
Total (g)	448022.20	2468866.57	5279631.46	23660.24	1249881.71	178813.16	1428694.87	188067.49	73901.47	261968.95	#####	146536.82	267819.75	#####		
Total (lbs)	987.72	5442.92	11639.59	52.16	2755.52	394.22	3149.73	414.62	162.92	577.54	5537280.73	323.06	590.44	#####		
Total (tons)	0.49	2.72	5.82	0.03	1.38	0.20	1.57	0.21	0.08	0.29	2768.64	0.16	0.30	2860.65		
Total (MT)											2511.67	0.15	0.27	2595.14		

YEAR	<i>Tons</i>													
2022-2023	0.2307	1.2712	2.7185	0.0122	0.6436	0.0921	0.7356	0.0968	0.0381	0.1349	1173.2135	0.0684	0.1251	1212.2045
2024	0.1982	1.0922	2.3356	0.0105	0.5529	0.0791	0.6320	0.0832	0.0327	0.1159	1007.9721	0.0588	0.1075	1041.4715
2025	0.0650	0.3581	0.7658	0.0034	0.1813	0.0259	0.2072	0.0273	0.0107	0.0380	330.4827	0.0193	0.0352	341.4661

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_ILI EX	PM10_RU NEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDL EX	PM25_RUN EX	PM25_STR EX	CO2_NBIO IDLEX	CO2_NBIO RUNEX	CO2_NBIO STREX	CH4_IDLE X	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX			
Hauling	100.0	1	0.00207604	8.55424E-05	0.322404817	0	0.01953334	0.0077057	0.28839E-07	4.1629787	1.92848649	2.692504236	5.2118988	0.79481483	0.0030555	0.00746083	0.01488345	2.65981E-07	0.0814444	0.025123	0.0022823	0.025823	9.98684E-07	0.028506	0.008781	0.001179	0.0247116	9.183E-07	850.51039	1643.9479	0.0306948	0.235881	0.125647179	9.74075E-08	0.136898	0.262148415	2.46823E-05	0.024829	0.159885109	0.00696523		
	0.0	0	0.028424515	0.006961572	0.027529656	0	0.04434978	0.0566825	0.052337336	0.9240436	1.235274528	1.956113281	0.673566	0.46372012	1.152494	0.00150213	0.011767743	8.73536E-05	0.299	0.045469	0.012	0.002542	0.014931	0.000112942	0.044499	0.015914	0.003	0.002481	0.0142769	0.0001038	161.33734	1239.5984	8.8359741	0.013943	0.009906777	0.009245497	0.024829	0.159885109	0.00696523			
Vendor	50.0	0.5	0.00243802	4.37712E-05	0.136203408	0	0.00796667	0.0038029	2.6442E-07	2.0814953	0.803340325	1.346252013	2.605994	0.35740743	0.000277	0.00373041	0.007444735	1.33093E-07	0.040722	0.017561	0.001142	0.012916	4.93942E-07	0.014263	0.004639	0.001089	0.0123058	4.051E-07	422.2522	821.5295	0.0134624	0.11794	0.06282359	4.87037E-08	0.008449	0.131074308	1.23611E-05	0.024829	0.159885109	0.00696523		
	50.0	0.5	0.014212257	0.003480786	0.032764828	0	0.02217489	0.0283043	0.026168668	0.4620218	0.609637264	0.698056641	0.338783	0.20188506	0.579247	0.00975106	0.000883871	4.36763E-05	0.299	0.02735	0.006	0.001271	0.007465	5.68711E-05	0.007957	0.00315	0.0001216	0.0073384	5.192E-05	80.66807	612.79918	4.417387	0.006471	0.00493388	0.004622749	0.012414	0.079942554	0.003048262	0.024829	0.159885109	0.00696523	
		1	0.01435606	0.003523557	0.179967236	0	0.01349156	0.02868941	0.026168932	2.5435111	1.574875589	2.044308854	2.942777	0.59929248	0.576524	0.00448148	0.013325596	4.38093E-05	0.299	0.063457	0.023561	0.002413	0.020382	5.69705E-05	0.044499	0.02221	0.00589	0.0002305	0.0194942	5.238E-05	505.92387	1441.3231	4.4314394	0.0124412	0.067776978	0.004622797	0.080863	0.211016762	0.003060603	0.024829	0.159885109	0.00696523
Worker	50.0	0.5	0.143306127	0.043683769	0	0.0045285	0.10768412	0.159592017	0	0.021192179	0.122461753	0	0.35029031	1.546631	0	0.001252255	0.000232762	0	0.0036	0.004	0	0.000614	0.000990927	0.00126	0.001	0	0.0005655	0.0009111	0	126.68013	32.749475	0	0.001154545	0.034539145	0	0.002249406	0.015441065	0	0.024829	0.159885109	0.00696523	
	25.0	0.25	0.156677436	0.0432923	0	0.00778025	0.12516577	0.145126489	0	0.035722679	0.10064187	0	0.38639431	1.408382	0	0.000820722	0.000217772	0	0.002307	0.002	0	0.000514	0.000767762	0.000807	0.00005	0	0.0004735	0.000706	0	83.018433	22.02833	0	0.000173807	0.028010471	0	0.002554131	0.009913954	0	0.024829	0.159885109	0.00696523	
	25.0	0.25	0.074138092	0.021036563	0	0.00307324	0.05534742	0.101568939	0	0.019062039	0.088569484	0	0.22137686	0.96209	0	0.000860099	0.000220741	0	0.002219	0.002	0	0.000345	0.000540097	0.000777	0.00005	0	0.0003173	0.0004966	0	87.013301	22.328622	0	0.000076908	0.021709383	0	0.001617133	0.009562758	0	0.024829	0.159885109	0.00696523	
	1	0.374122236	0.107049562	0	0.0153862	0.28819731	0.406286645	0	0.079376897	0.311454925	0	0.95807047	3.917103	0	0.00293076	0.000762276	0	0.299	0.008126	0.008	0	0.001473	0.002298785	0.044499	0.002844	0.002	0	0.0013963	0.0021137	0	296.71296	77.106427	0	0.003662514	0.084258998	0	0.00442067	0.034917777	0	0.024829	0.159885109	0.00696523

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	3.45400877	2.69956E-05	114.3092811	0.0001094	69.10780752	0.00054
	HHDT	DSL	8235.05861	0.064362977	991289.0051	0.9485014	120860.7913	0.944615
	HHDT	ELEC	6.70171019	5.23787E-05	411.5053623	0.0003937	103.2043986	0.000807
	HHDT	NG	753.736566	0.005891	53295.9669	0.0509955	6914.033693	0.054038
			8998.9509		1045110.787		127947.1372	
	LDA	GAS	601938.315	0.19206191	22370251.09	0.8808827	2795479.204	0.89196
	LDA	DSL	1871.12468	0.000597024	56220.79718	0.0022138	8000.531418	0.002553
	LDA	ELEC	53751.1479	0.017150508	2268185.318	0.0893153	265250.078	0.084634
	LDA	PIH	15805.3202	0.005043042	700610.9132	0.0275882	65354.99917	0.020853
			673365.908		25395268.12		3134084.812	
	LDT1	GAS	53782.2529	0.223247606	1744480.187	0.994579	239737.9214	0.995141
	LDT1	DSL	26.0471372	0.00010812	391.8698325	0.0002234	75.17736541	0.000312
	LDT1	ELEC	194.894071	0.000808996	7068.184366	0.0040298	916.4831754	0.003804
	LDT1	PIH	43.2767736	0.00017964	2048.369176	0.0011678	178.9494589	0.000743
			54046.4708		1753988.611		240908.5314	
	LDT2	GAS	280180.421	0.21079713	10140966.51	0.9851236	1311795.544	0.986945
	LDT2	DSL	978.496696	0.000736184	36936.87393	0.0035882	4673.40093	0.003516
	LDT2	ELEC	1105.87891	0.000832021	38931.70292	0.0037819	5663.050709	0.004261
	LDT2	PIH	1696.54984	0.00127642	77270.65796	0.0075063	7015.233604	0.005278
			283961.347		10294105.74		1329147.229	
	LHDT1	GAS	19180.9619	0.046881935	711085.4725	0.6492922	285767.7523	0.698471
	LHDT1	DSL	9807.465	0.023971318	384084.7884	0.3507078	123365.5719	0.301529
			28988.4269	0.070853253	1095170.261		409133.3242	
	LHDT2	GAS	2494.38222	0.026675189	90793.03842	0.3393343	37162.5785	0.397421
	LHDT2	DSL	4479.53156	0.047904587	176769.2012	0.6606657	56346.87178	0.602579
			6973.91378	0.074579775	267562.2397		93509.45028	
	MCY	GAS	27894.4952	0.022129605	164894.5081		1 55788.99047	1
	MDV	GAS	153799.111	0.209656025	5358084.151	0.9694571	712433.9369	0.971176
	MDV	DSL	2374.91797	0.003237443	86834.44186	0.0157113	11267.05043	0.015359
	MDV	ELEC	1130.11541	0.001540552	40073.70084	0.0072507	5799.833494	0.007906
	MDV	PIH	986.08952	0.001344218	41899.13712	0.007581	4077.480166	0.005558
			158290.234		5526891.431		733578.301	
	MH	GAS	2522.74469	7.243206206	22546.87041	0.706982	252.3753785	0.72461
	MH	DSL	959.157809	2.753896511	9344.849437	0.293018	95.91578086	0.27539
			3481.9025		31891.71984		348.2911593	
	MHDT	GAS	1418.70283	0.009356561	70785.85764	0.1397588	28385.40626	0.187206
	MHDT	DSL	10273.5539	0.067755654	431550.3805	0.8520481	122418.6563	0.80737
	MHDT	ELEC	4.74983535	3.13259E-05	101.802183	0.000201	59.6458006	0.000393
	MHDT	NG	83.840997	0.000552944	4047.873672	0.0079921	762.8100386	0.005031
			11780.8476		506485.9139		151626.5184	
	OBUS	GAS	458.8974	0.025287686	20830.07544	0.2513121	9181.619188	0.505956
	OBUS	DSL	870.420888	0.047964818	61645.65846	0.7437468	8910.754707	0.49103
	OBUS	NG	6.14560043	0.000338655	409.546615	0.0049411	54.69584387	0.003014
			1335.46389		82885.28051		18147.06974	
	SBUS	GAS	166.986694	0.015646312	8309.307836	0.3419275	667.946776	0.062585
	SBUS	DSL	667.118492	0.06250764	15392.68347	0.633408	9659.875763	0.905111
	SBUS	ELEC	0.30237325	2.83318E-05	3.510494287	0.0001445	4.378364621	0.00041
	SBUS	NG	23.50762	0.002202616	595.8705457	0.02452	340.3903371	0.031894
			857.915179		24301.37234		10672.59124	
	UBUS	GAS	45.9470881	0.021676301	4798.243635	0.0818022	183.7883525	0.086705
	UBUS	DSL	436.6681	0.206005416	48829.71129	0.832467	1746.672398	0.824022
	UBUS	ELEC	5.04675694	0.029854597	199.0027319	0.0412042	20.18702775	0.119418
	UBUS	NG	42.2611383	0.019937393	4829.672688	0.0823381	169.0445533	0.07975
			529.923083		58656.63034		2119.692332	

Source: EMFAC2021 (v1.0.1) Emission Rates

Region: Santa Clara
 Calendar Year: 2023
 Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/gal for CVMT and EVMT, Trip/gal for Trips, kWh/day for Energy Consumption, g/mile for RUMEX, PMWB and PM10W, g/gal for STREX, HOTSDAK and RUNDSD, g/vehicle/day for IDEXX and DURIN

Region	Calendar	Vehicle	Category	Fuel	Population	CVMT	EVMT	Trips	Energy	RUMEX	PMWB	PM10W	STREX	HOTSDAK	RUNDSD	IDEXX	DURIN	
Santa Clara	2023	HH07	Aggregate	Gasoline	3,94000	114,300	214,200	0	0.010761	0	0.010764	0	0.002015	0	0.002015	0	0.002015	
Santa Clara	2023	HH07	Aggregate	Gasoline	8,235,009	991,289	991,289	0	120,660.8	0	1,969,938	63,404.8	2,849,445	0.029957	0.033611	0	0.000009	
Santa Clara	2023	HH07	Aggregate	Gasoline	6,70121	411,505	0	0	0.00074	0.01383	0	0	0	0	0	0	0	
Santa Clara	2023	HH07	Aggregate	Natural Gas	751,786	52,925.97	52,925.97	0	0.004412	0	0.004412	0	0.000192	0.002266	0.003123	0.000217	0.000192	
Santa Clara	2023	IDA	Aggregate	Gasoline	60,1983	2,170,251	2,170,251	0	0.000192	0.002266	0.003123	0.000217	0.000192	0.002266	0.003123	0.000217	0.000192	
Santa Clara	2023	IDA	Aggregate	Gasoline	187,115	56,225.8	56,225.8	0	0.000192	0.002266	0.003123	0.000217	0.000192	0.002266	0.003123	0.000217	0.000192	
Santa Clara	2023	IDA	Aggregate	Electricity	157,615	2,088,851	87,506.7	0	0	0	0	0	0	0	0	0	0	
Santa Clara	2023	IDA	Aggregate	Plug-in Hy	15,805.32	70,061.9	15,805.32	0	0.11551	0.000664	0.000317	0.000173	0.000317	0.000173	0.000317	0.000173	0.000317	
Santa Clara	2023	LD11	Aggregate	Gasoline	53,782.5	174,480	174,480	0	0.000387	0.001239	0.002012	0.000387	0.000387	0.001239	0.002012	0.000387	0.000387	
Santa Clara	2023	LD11	Aggregate	Gasoline	26,0474	391,808	391,808	0	0.0002	0.001728	0.002528	0.0002	0.0002	0.001728	0.002528	0.0002	0.0002	
Santa Clara	2023	LD11	Aggregate	Gasoline	194,894	708,184	708,184	0	0.0002	0.001728	0.002528	0.0002	0.0002	0.001728	0.002528	0.0002	0.0002	
Santa Clara	2023	LD11	Aggregate	Plug-in Hy	41,797.7	204,839	94,157.9	110,671	178,995	131,5047	0.003025	0.011551	0.000387	0.000387	0.000387	0.000387	0.000387	0.000387
Santa Clara	2023	LD12	Aggregate	Gasoline	280,180	1,014,967	1,014,967	0	0.000203	0.002103	0.003175	0.000203	0.000203	0.002103	0.003175	0.000203	0.000203	
Santa Clara	2023	LD12	Aggregate	Gasoline	978,4007	39,916.57	39,916.57	0	0.004574	0	0.004574	0	0	0	0	0	0	
Santa Clara	2023	LD12	Aggregate	Electricity	110,579	389,317	0	0	0.0002	0.001525	0	0.0002	0.0002	0.001525	0	0.0002	0.0002	
Santa Clara	2023	LD12	Aggregate	Plug-in Hy	16,965.5	77,720.66	77,720.66	40,177.58	701,234	12,119.85	0.003154	0.011551	0.000664	0.000664	0.000664	0.000664	0.000664	
Santa Clara	2023	LD12	Aggregate	Gasoline	15,810.56	71,085.5	71,085.5	0	0.000258	0.000819	0.001195	0.000258	0.000258	0.000819	0.001195	0.000258	0.000258	
Santa Clara	2023	LD12	Aggregate	Gasoline	980,745	38,048.8	38,048.8	0	0.0003	0.001383	0.002027	0.0003	0.0003	0.001383	0.002027	0.0003	0.0003	
Santa Clara	2023	LD12	Aggregate	Gasoline	24,983	30,973.04	30,973.04	0	0.000026	0.000185	0.000272	0.000026	0.000026	0.000185	0.000272	0.000026	0.000026	
Santa Clara	2023	LD12	Aggregate	Gasoline	44,913.2	17,976.2	17,976.2	0	0.000467	0	0.000467	0	0	0	0	0	0	
Santa Clara	2023	MCV	Aggregate	Gasoline	27,9845	164,8945	164,8945	0	0.000343	0.001	0.0042	0.000343	0.000343	0.001	0.0042	0.000343	0.000343	
Santa Clara	2023	MCV	Aggregate	Gasoline	153,799.1	1,530,864	1,530,864	0	0.000144	0.000187	0.000289	0.000144	0.000144	0.000187	0.000289	0.000144	0.000144	
Santa Clara	2023	MCV	Aggregate	Gasoline	237,438	868,844	868,844	0	0.000127	0.000136	0.000183	0.000127	0.000127	0.000136	0.000183	0.000127	0.000127	
Santa Clara	2023	MCV	Aggregate	Electricity	119,115	40,073.7	0	0	0.0002	0.001524	0	0.0002	0.0002	0.001524	0	0.0002	0.0002	
Santa Clara	2023	MCV	Aggregate	Plug-in Hy	988,085	41,899.14	39,737.5	2,111.79	407,741	637,389	0.003154	0.011551	0.000664	0.000664	0.000664	0.000664	0.000664	
Santa Clara	2023	MH	Aggregate	Gasoline	252,245	224,467	224,467	0	0.000428	0.003	0.01576	0.000428	0.000428	0.003	0.01576	0.000428	0.000428	
Santa Clara	2023	MH	Aggregate	Gasoline	999,1379	93,449	93,449	0	0.004	0.01875	0.022384	0.004	0.004	0.01875	0.022384	0.004	0.004	
Santa Clara	2023	MH07	Aggregate	Gasoline	1418,703	7978,86	7978,86	0	0.00055	0.003	0.01576	0.00055	0.00055	0.003	0.01576	0.00055	0.00055	
Santa Clara	2023	MH07	Aggregate	Electricity	10,7735	43,150.4	43,150.4	0	0.0003	0.001941	0.01726	0.0003	0.0003	0.001941	0.01726	0.0003	0.0003	
Santa Clara	2023	MH07	Aggregate	Electricity	4,740,65	101,822	59,448	0	0.0003	0.001941	0.01726	0.0003	0.0003	0.001941	0.01726	0.0003	0.0003	
Santa Clara	2023	MH07	Aggregate	Natural Gas	88,841	4047,874	4047,874	0	0.0003	0.010002	0.02126	0.0003	0.0003	0.010002	0.02126	0.0003	0.0003	
Santa Clara	2023	OBUS	Aggregate	Gasoline	484,8794	20,830	20,830	0	0.000064	0.001568	0.002072	0.000064	0.000064	0.001568	0.002072	0.000064	0.000064	
Santa Clara	2023	OBUS	Aggregate	Gasoline	870,428	61,645.66	61,645.66	0	0.000215	0.000316	0.000408	0.000215	0.000215	0.000316	0.000408	0.000215	0.000215	
Santa Clara	2023	OBUS	Aggregate	Natural Gas	4,146	409,546	409,546	0	0.0003	0.01418	0.020004	0.0003	0.0003	0.01418	0.020004	0.0003	0.0003	
Santa Clara	2023	SBUS	Aggregate	Gasoline	186,8807	8,839.58	8,839.58	0	0.000069	0.001017	0.001301	0.000069	0.000069	0.001017	0.001301	0.000069	0.000069	
Santa Clara	2023	SBUS	Aggregate	Gasoline	697,186	13,927.68	13,927.68	0	0.0003	0.001721	0.002185	0.0003	0.0003	0.001721	0.002185	0.0003	0.0003	
Santa Clara	2023	SBUS	Aggregate	Electricity	3,30273	3,150,94	0	3,150,94	437,863	3,69815	0	0	0	0	0	0	0	
Santa Clara	2023	SBUS	Aggregate	Natural Gas	23,5070	565,8705	565,8705	0	0.0003	0.015721	0.020764	0.0003	0.0003	0.015721	0.020764	0.0003	0.0003	
Santa Clara	2023	UBUS	Aggregate	Gasoline	45,9470	47,98,244	47,98,244	0	0.000028	0.002185	0.00143	0.000028	0.000028	0.002185	0.00143	0.000028	0.000028	
Santa Clara	2023	UBUS	Aggregate	Gasoline	493,668	48,829.71	48,829.71	0	0.0003	0.00185	0.00274	0.0003	0.0003	0.00185	0.00274	0.0003	0.0003	
Santa Clara	2023	UBUS	Aggregate	Electricity	5,06777	199,007	0	199,007	20,1870	348,9103	0	0	0	0	0	0	0	
Santa Clara	2023	UBUS	Aggregate	Natural Gas	42,36114	4829,673	4829,673	0	0.000082	0.00385	0.000295	0.000082	0.000082	0.00385	0.000295	0.000082	0.000082	

P1 Aff R6 - 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	30	0	1470	0	216	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	15876	0	4320
Site Preparation	8	1	112	14	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1209.6	102.2	0
Grading	48	0	2352	0	2,942	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	25401.6	0	58840
Trenching/Foundation	25	0	3500	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	37800	0	0
Building Construction	137	24	47128	8256	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	508982.4	60268.8	0
Paving	13	0	546	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5896.8	0	0
Architectural Coating	27	0	1134	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	12247.2	0	0

Number of Days Per Year

2023	1/1/23	12/31/23	365	313
2024	1/1/24	12/31/24	366	314
2025	1/1/25	3/4/25	63	54
			794	682 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2023	2/27/2023	6	49
Site Preparation	2/27/2023	3/14/2023	6	14
Grading	3/15/2023	5/10/2023	6	49
Trenching/Foundation	5/12/2023	10/21/2023	6	140
Building Construction	10/22/2023	11/26/2024	6	344
Paving	11/27/2024	1/14/2025	6	42
Architectural Coating	1/15/2025	3/4/2025	6	42

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	2287.07	143578.77	66661.72	963.60	18884.84	9001.19	27886.03	2841.57	3922.67	6764.23	#####	8680.79	16989.70	#####
Vendor	4018.22	133018.20	65284.51	841.90	18050.93	6504.27	24555.20	2716.09	2892.82	5608.91	91234757.40	5158.88	13433.35	#####
Worker	75464.58	63676.96	802250.73	1824.46	181616.67	10819.16	192435.82	27327.54	3884.98	31212.52	#####	6963.56	5863.85	#####
Total (g)	81769.87	340273.94	934196.95	3629.97	218552.44	26324.61	244877.05	32885.20	10700.47	43585.67	#####	20803.23	36286.89	#####
Total (lbs)	180.27	750.18	2059.55	8.00	481.83	58.04	539.86	72.50	23.59	96.09	842738.40	45.86	80.00	867724.65
Total (tons)	0.09	0.38	1.03	0.00	0.24	0.03	0.27	0.04	0.01	0.05	421.37	0.02	0.04	433.86
Total (MT)											382.26	0.02	0.04	393.59

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2023	0.0414	0.1724	0.4734	0.0018	0.1107	0.0133	0.1241	0.0167	0.0054	0.0221	175.7239	0.0096	0.0167	180.9339
2024	0.0415	0.1729	0.4747	0.0018	0.1111	0.0134	0.1244	0.0167	0.0054	0.0221	176.2054	0.0096	0.0167	181.4296
2025	0.0072	0.0298	0.0817	0.0003	0.0191	0.0023	0.0214	0.0029	0.0009	0.0038	30.3304	0.0017	0.0029	31.2297

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	CO2_NBIO	CO2_NBIO	CO2_NBIO	CH4_IDLE	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
			BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	BW	TW	EX	NEX	EX	BW	TW	BW	TW	EX	EX	EX	X						
Hauling	100.0	1	0.00207604	8.55424E-05	0.322404817	0	0.01953334	0.0077057	0.28839E-07	4.1629787	1.92848649	2.692504236	5.2118988	0.79481483	0.0030555	0.00746083	0.01488345	2.65981E-07	0.0814444	0.025123	0.0022823	0.025833	9.98684E-07	0.028506	0.008781	0.001179	0.0247116	9.183E-07	850.51039	1643.9479	0.0306948	0.235881	0.125647179	9.74075E-08	0.136898	0.262148415	2.46823E-05	0.024829	0.159885109	0.00696523	
	0.0	0	0.028424515	0.006961572	0.027529656	0	0.04434978	0.0566825	0.052337336	0.9240436	1.235274528	1.966113281	0.673566	0.46372012	1.152494	0.00150213	0.011767743	8.73536E-05	0.299	0.045469	0.012	0.002542	0.014931	0.000112942	0.044499	0.015914	0.003	0.002481	0.0142769	0.0001038	161.33734	1239.5984	8.8359741	0.013943	0.009906777	0.009245497	0.024829	0.159885109	0.00696523		
Vendor	50.0	0.5	0.00243802	4.37712E-05	0.136203408	0	0.00796667	0.0038029	2.6442E-07	2.0814953	0.803340325	1.346252013	2.605994	0.35740743	0.000277	0.00373041	0.007444735	1.33093E-07	0.040722	0.017561	0.001142	0.012916	4.93942E-07	0.014263	0.004639	0.001089	0.0123058	4.051E-07	425.2552	821.5295	0.0134624	0.11794	0.06282359	4.87037E-08	0.008449	0.131074308	1.23611E-05	0.024829	0.159885109	0.00696523	
	50.0	0.5	0.014212257	0.003480786	0.032764828	0	0.02217489	0.0283043	0.026168668	0.4620218	0.609637264	0.698656641	0.338783	0.20188506	0.579247	0.00075106	0.000883871	4.36763E-05	0.299	0.027355	0.006	0.001271	0.007465	5.68711E-05	0.007957	0.00315	0.0001216	0.0073384	5.192E-05	80.66807	612.79918	4.417387	0.006471	0.00493388	0.004622749	0.012414	0.079942554	0.003048262	0.024829	0.159885109	0.00696523
		1	0.01435606	0.003523557	0.179967236	0	0.01349156	0.02868941	0.026168932	2.5435111	1.574875589	2.044308854	2.942777	0.59929248	0.576524	0.00448148	0.013325596	4.38093E-05	0.299	0.063457	0.023561	0.002413	0.020382	5.69705E-05	0.044499	0.02221	0.00589	0.0002305	0.0194942	5.238E-05	505.92387	1441.3231	4.4314394	0.124412	0.067776978	0.004622797	0.080863	0.211016762	0.003060603		
Worker	50.0	0.5	0.143306127	0.043683769	0	0.0045285	0.10768412	0.159592017	0	0.021192179	0.122461753	0	0.35029031	1.546631	0	0.001252255	0.000232762	0	0.0036	0.004	0	0.000614	0.000990927	0.00126	0.001	0	0.0005655	0.0009111	0	126.68013	32.749475	0	0.001154545	0.034539145	0	0.002249406	0.015441065	0			
	25.0	0.25	0.156677436	0.0432923	0	0.00778025	0.12516577	0.145126489	0	0.035722679	0.10064187	0	0.38639431	1.408382	0	0.000820722	0.000217772	0	0.002307	0.002	0	0.000514	0.000767762	0.000807	0.00005	0	0.0004735	0.000706	0	83.018433	22.02833	0	0.00173807	0.028010471	0	0.002554131	0.009913954	0			
	25.0	0.25	0.074138092	0.021036563	0	0.00307324	0.05534742	0.101568939	0	0.019062039	0.088569484	0	0.22137686	0.96209	0	0.000860099	0.000220741	0	0.002219	0.002	0	0.000345	0.000540097	0.000777	0.00005	0	0.0003173	0.0004966	0	87.013301	22.328622	0	0.000769908	0.021709383	0	0.001617133	0.009562758	0			
	1	0.374122236	0.107049562	0	0	0.013382	0.28819731	0.40628645	0	0.079376897	0.311454925	0	0.35029031	1.546631	0	0.001252255	0.000232762	0	0.299	0.008126	0.008	0	0.001473	0.002298785	0.044499	0.002844	0.002	0	0.0013963	0.0021137	0	296.71296	77.106427	0	0.003662514	0.084258998	0	0.00442067	0.034917777	0	

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	3.45400877	2.69956E-05	114.3092811	0.0001094	69.10780752	0.00054
	HHDT	DSL	8235.05861	0.064362977	991289.0051	0.9485014	120860.7913	0.944615
	HHDT	ELEC	6.70171019	5.23787E-05	411.5053623	0.0003937	103.2043986	0.000807
	HHDT	NG	753.736566	0.005891	53295.9669	0.0509955	6914.033693	0.054038
			8998.9509		1045110.787		127947.1372	
	LDA	GAS	601938.315	0.19206191	22370251.09	0.8808827	2795479.204	0.89196
	LDA	DSL	1871.12468	0.000597024	56220.79718	0.0022138	8000.531418	0.002553
	LDA	ELEC	53751.1479	0.017150508	2268185.318	0.0893153	265250.078	0.084634
	LDA	PIH	15805.3202	0.005043042	700610.9132	0.0275882	65354.99917	0.020853
			673365.908		25395268.12		3134084.812	
	LDT1	GAS	53782.2529	0.223247606	1744480.187	0.994579	239737.9214	0.995141
	LDT1	DSL	26.0471372	0.00010812	391.8698325	0.0002234	75.17736541	0.000312
	LDT1	ELEC	194.894071	0.000808996	7068.184366	0.0040298	916.4831754	0.003804
	LDT1	PIH	43.2767736	0.00017964	2048.369176	0.0011678	178.9494589	0.000743
			54046.4708		1753988.611		240908.5314	
	LDT2	GAS	280180.421	0.21079713	10140966.51	0.9851236	1311795.544	0.986945
	LDT2	DSL	978.496696	0.000736184	36936.87393	0.0035882	4673.40093	0.003516
	LDT2	ELEC	1105.87891	0.000832021	38931.70292	0.0037819	5663.050709	0.004261
	LDT2	PIH	1696.54984	0.00127642	77270.65796	0.0075063	7015.233604	0.005278
			283961.347		10294105.74		1329147.229	
	LHDT1	GAS	19180.9619	0.046881935	711085.4725	0.6492922	285767.7523	0.698471
	LHDT1	DSL	9807.465	0.023971318	384084.7884	0.3507078	123365.5719	0.301529
			28988.4269	0.070853253	1095170.261		409133.3242	
	LHDT2	GAS	2494.38222	0.026675189	90793.03842	0.3393343	37162.5785	0.397421
	LHDT2	DSL	4479.53156	0.047904587	176769.2012	0.6606657	56346.87178	0.602579
			6973.91378	0.074579775	267562.2397		93509.45028	
	MCY	GAS	27894.4952	0.022129605	164894.5081		1 55788.99047	1
	MDV	GAS	153799.111	0.209656025	5358084.151	0.9694571	712433.9369	0.971176
	MDV	DSL	2374.91797	0.003237443	86834.44186	0.0157113	11267.05043	0.015359
	MDV	ELEC	1130.11541	0.001540552	40073.70084	0.0072507	5799.833494	0.007906
	MDV	PIH	986.08952	0.001344218	41899.13712	0.007581	4077.480166	0.005558
			158290.234		5526891.431		733578.301	
	MH	GAS	2522.74469	7.243206206	22546.87041	0.706982	252.3753785	0.72461
	MH	DSL	959.157809	2.753896511	9344.849437	0.293018	95.91578086	0.27539
			3481.9025		31891.71984		348.2911593	
	MHDT	GAS	1418.70283	0.009356561	70785.85764	0.1397588	28385.40626	0.187206
	MHDT	DSL	10273.5539	0.067755654	431550.3805	0.8520481	122418.6563	0.80737
	MHDT	ELEC	4.74983535	3.13259E-05	101.802183	0.000201	59.6458006	0.000393
	MHDT	NG	83.840997	0.000552944	4047.873672	0.0079921	762.8100386	0.005031
			11780.8476		506485.9139		151626.5184	
	OBUS	GAS	458.8974	0.025287686	20830.07544	0.2513121	9181.619188	0.505956
	OBUS	DSL	870.420888	0.047964818	61645.65846	0.7437468	8910.754707	0.49103
	OBUS	NG	6.14560043	0.000338655	409.546615	0.0049411	54.69584387	0.003014
			1335.46389		82885.28051		18147.06974	
	SBUS	GAS	166.986694	0.015646312	8309.307836	0.3419275	667.946776	0.062585
	SBUS	DSL	667.118492	0.06250764	15392.68347	0.633408	9659.875763	0.905111
	SBUS	ELEC	0.30237325	2.83318E-05	3.510494287	0.0001445	4.378364621	0.00041
	SBUS	NG	23.50762	0.002202616	595.8705457	0.02452	340.3903371	0.031894
			857.915179		24301.37234		10672.59124	
	UBUS	GAS	45.9470881	0.021676301	4798.243635	0.0818022	183.7883525	0.086705
	UBUS	DSL	436.6681	0.206005416	48829.71129	0.832467	1746.672398	0.824022
	UBUS	ELEC	5.04675694	0.029854597	199.0027319	0.0412042	20.18702775	0.119418
	UBUS	NG	42.2611383	0.019937393	4829.672688	0.0823381	169.0445533	0.07975
			529.923083		58656.63034		2119.692332	

P1 Infra - CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	Worker VMT	Vendor VMT	Hauling VMT
Infrastructure	25	1	3400	136	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	36720	992.8	0

Number of Days Per Year				
2024	10/31/24	12/31/24	62	54
2025	1/1/25	4/7/25	97	84
			159	137 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Infrastructure	10/31/2024	4/7/2025	6	136

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	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
Vendor	61.40	2092.94	1028.54	13.66	296.85	105.68	402.52	44.67	46.41	91.07	1480984.96	82.54	217.87	#####
Worker	4271.76	3479.31	45002.94	107.93	10979.28	650.38	11629.66	1652.03	231.86	1883.89	10917913.23	389.44	332.51	#####
Total (g)	4333.16	5572.26	46031.48	121.58	11276.13	756.06	12032.18	1696.70	278.27	1974.97	12398898.20	471.99	550.39	#####
Total (lbs)	9.55	12.28	101.48	0.27	24.86	1.67	26.53	3.74	0.61	4.35	27334.89	1.04	1.21	27722.50
Total (tons)	0.00	0.01	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	13.67	0.00	0.00	13.86
Total (MT)											12.40	0.00	0.00	12.57

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2024	0.0019	0.0024	0.0198	0.0001	0.0048	0.0003	0.0052	0.0007	0.0001	0.0008	4.8348	0.0002	0.0002	4.9033
2025	0.0029	0.0037	0.0310	0.0001	0.0076	0.0005	0.0081	0.0011	0.0002	0.0013	7.5641	0.0003	0.0003	7.6714

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	PM25_PM	PM25_PM	PM25_IDL	PM25_RUN	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																																	
Hauling	100.0	1	0.000199377	5.83846E-05	0.339789936	0	0.01860554	0.00032501	4.36152E-07	4.1112137	1.850604526	2.731403881	5.19556	0.77488683	0.000626	0.00728035	0.014635772	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	832.31659	1617.1297	0.010573	0.222934	0.121678903	8.02769E-08	0.134072	0.258070714	1.34765E-05	0.024668	0.158249654	0.006031915		
	0.0	0	0.025794994	0.006359754	0.026359118	0	0.03811329	0.00596401	0.04894298	0.8943127	1.12291974	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	0.002035	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	0.164894908	0	0.009302771	0.0002625	1.18076E-07	2.0524069	0.925202263	1.38170419	2.50778	0.38744341	0.000313	0.00364017	0.007317886	9.87497E-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	0.4473553	0.556460987	0.70394807	0.335691	0.17398639	0.537165	0.00074499	0.005821247	4.21460E-05	0.0227	0.006	0.001064	0.006902	5.3407E-05	0.007945	0.0015	0.0001018	0.0062075	4.921E-05	80.239514	614.5903	4.2646561	0.006691	0.004829164	0.004386338	0.021344	0.079124827	0.003015058	0.024668	0.158249654	0.006031915		
		1	0.012995486	0.003195019	0.178074527	0	0.02835941	0.02574451	0.024471708	2.5027632	1.48176325	2.06965226	2.933471	0.5605298	0.537478	0.00438516	0.013150033	4.22572E-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	0.004386338	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	0.32485557	1.445873	0	0.001219878	0.000315615	0.003584	0.004	0	0.000585	0.000954881	0.001254	0.001	0	0.000539	0.000878	0	123.40405	31.925346	0	0.001026569	0.03235985	0	0.002081025	0.014940319	0.024668	0.158249654	0.006031915			
	25.0	0.25	0.148814258	0.041150424	0	0.00690435	0.11745495	0.134116008	0	0.0319581	0.094816504	0	0.35468144	1.306204	0	0.00080836	0.000213259	0.002306	0.002	0	0.000482	0.00072446	0.000807	0.00005	0	0.0004415	0.0006661	0	81.76883	21.571794	0	0.001555571	0.026204278	0	0.00234364	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	0.2073317	0.905899	0	0.00084201	0.000215546	0.002217	0.002	0	0.000333	0.000526973	0.000776	0.00005	0	0.0003065	0.0004845	0	85.183477	21.80511	0	0.000794556	0.020482249	0	0.001504676	0.009197602	0.024668	0.158249654	0.006031915			
		1	0.1307654326	0.1021769681	0	0.01362228	0.2734126	0.376447505	0	0.067650567	0.292701033	0	0.88686871	3.657977	0	0.002870248	0.000744439	0.299	0.008107	0.008	0	0.001401	0.002296134	0.044499	0.002837	0.002	0	0.001289	0.00020286	0	290.35636	79.302249	0	0.001286696	0.079046277	0	0.00509341	0.033761535	0.024668	0.158249654	0.006031915	

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	2.58870796	1.95479E-05	115.1525769	0.0001088	51.79486882	0.000391
	HHDT	DSL	8486.69344	0.064085007	1001095.457	0.9456821	124748.3826	0.942004
	HHDT	ELEC	28.3303862	0.000213929	2794.260589	0.0026396	378.794564	0.00286
	HHDT	NG	794.400964	0.005998707	54591.27048	0.0515695	7249.716942	0.054744
			9312.0135		1058596.14		132428.689	
	LDA	GAS	600108.166	0.190572388	22290343.74	0.8713379	2786616.833	0.884928
	LDA	DSL	1750.02352	0.000555743	51573.47594	0.002016	7442.609511	0.002364
	LDA	ELEC	57627.4034	0.018300354	2472767.413	0.0966614	282732.9828	0.089786
	LDA	PIH	17457.0988	0.005543736	767059.2064	0.0299846	72185.10346	0.022923
			676942.692		25581743.84		3148977.529	
	LDT1	GAS	52693.3661	0.22315027	1706864.169	0.9932977	234793.4065	0.994323
	LDT1	DSL	23.4623252	9.93602E-05	343.9307557	0.0002001	66.44458855	0.000281
	LDT1	ELEC	211.002813	0.000893572	8008.645616	0.0046606	994.4346051	0.004211
	LDT1	PIH	67.6457784	0.000286472	3164.460326	0.0018415	279.7152939	0.001185
			52995.477		1718381.206		236134.001	
	LDT2	GAS	285585.435	0.210271162	10322758.41	0.9820916	1336438.482	0.983994
	LDT2	DSL	1015.45285	0.000747659	37944.25501	0.00361	4835.433637	0.00356
	LDT2	ELEC	1597.56671	0.001176258	55532.59168	0.0052833	8150.926864	0.006001
	LDT2	PIH	2116.57955	0.001558398	94757.7077	0.0090151	8752.056437	0.006444
			290315.034		10510992.96		1358176.899	
	LHDT1	GAS	19314.1424	0.046441179	722529.3133	0.6418809	287751.9438	0.691904
	LHDT1	DSL	10107.7368	0.024304222	398004.1011	0.353579	127142.6136	0.305717
	LHDT1	ELEC	70.8283556	0.000170308	5110.544281	0.0045401	989.4272741	0.002379
			29492.7076	0.070915709	1125643.959		415883.9847	
	LHDT2	GAS	2506.9057	0.026111	91452.57471	0.331033	37349.15959	0.389015
	LHDT2	DSL	4663.45548	0.048572823	183558.3761	0.6644305	58660.40334	0.610985
	LHDT2	ELEC	18.3325933	0.000190945	1253.286273	0.0045365	242.6680052	0.002528
			7188.69377	0.074874768	276264.2371		96009.56293	
	MCY	GAS	28171.5095	0.022104648	166022.3441	1	56343.01906	1
	MDV	GAS	156642.427	0.208531065	5468053.925	0.9650793	726101.0934	0.966626
	MDV	DSL	2400.61454	0.003195831	86292.68513	0.0152302	11318.82209	0.015068
	MDV	ELEC	1678.68445	0.002234758	58660.62986	0.0103533	8578.49571	0.01142
	MDV	PIH	1250.85709	0.00166521	52904.03132	0.0093373	5172.294058	0.006886
			161972.583		5665911.271		751170.7052	
	MH	GAS	2420.56984	7.121629885	22012.30271	0.6985681	242.1538069	0.712448
	MH	DSL	977.36061	2.875521464	9498.302477	0.3014319	97.73606104	0.287552
			3397.93045		31510.60519		339.8898679	
	MHDT	GAS	1414.55168	0.009216738	71600.35148	0.1399516	28302.34992	0.184409
	MHDT	DSL	10390.528	0.067701153	434043.5933	0.8483911	123938.9566	0.807544
	MHDT	ELEC	30.9160141	0.000201438	1660.353407	0.0032454	407.4535626	0.002655
	MHDT	NG	90.5944854	0.000590283	4303.5812	0.0084119	827.6228005	0.005393
			11926.5902		511607.8794		153476.3829	
	OBUS	GAS	443.146734	0.024493158	19894.31417	0.2414205	8866.47985	0.490059
	OBUS	DSL	893.137556	0.049364596	61949.05075	0.7517609	9141.625389	0.505267
	OBUS	ELEC	1.08748138	6.01062E-05	92.50104822	0.0011225	21.7583274	0.001203
	OBUS	NG	7.05736996	0.000390068	469.3876372	0.0056961	62.81059268	0.003472
			1344.42914		82405.25361		18092.67416	
	SBUS	GAS	172.694787	0.016022959	8584.865553	0.348885	690.7791473	0.064092
	SBUS	DSL	670.595844	0.062219191	15345.26177	0.6236244	9710.227827	0.900934
	SBUS	ELEC	2.06466629	0.000191564	64.35501341	0.0026154	23.64639413	0.002194
	SBUS	NG	24.3995047	0.002263834	612.0940704	0.0248752	353.3048277	0.03278
			869.754802		24606.57641		10777.9582	
	UBUS	GAS	46.0831322	0.021676301	4812.450683	0.0818022	184.3325287	0.086705
	UBUS	DSL	437.474468	0.205776552	48917.60551	0.8315035	1749.897872	0.823106
	UBUS	ELEC	5.34756545	0.031392036	235.0625504	0.0483152	21.3902618	0.125568
	UBUS	NG	42.5869588	0.020031792	4865.187143	0.0826987	170.347835	0.080127
			531.492124		58830.30589		2125.968497	

P2 (O1+O2) - 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	33	0	4851	0	1,771	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	52390.8	0	35420
Site Preparation	8	1	304	38	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3283.2	277.4	0
Grading	83	0	8549	0	33,220	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	92329.2	0	664400
Trenching/Foundation	50	0	16500	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	178200	0	0
Building Construction	294	139	294000	139000	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3175200	1014700	0
Paving	18	0	2304	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	24883.2	0	0
Architectural Coating	59	0	7552	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	81561.6	0	0

Number of Days Per Year

2024	11/1/24	12/31/24	61	52
2025	1/1/25	12/31/25	365	313
2026	1/1/26	12/31/26	365	313
2027	1/1/27	12/31/27	365	313
2028	1/1/28	12/31/28	366	314
2029	1/1/29	7/11/29	192	165
			1714	1470 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	11/1/2024	4/21/2025	6	147
Site Preparation	2/15/2025	3/31/2025	6	38
Grading	3/17/2025	7/14/2025	6	103
Trenching/Foundation	7/2/2025	7/21/2026	6	330
Building Construction	5/2/2026	7/11/2029	6	1,000
Paving	5/16/2028	10/11/2028	6	128
Architectural Coating	8/15/2028	1/10/2029	6	128

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive			Fugitive			NBio- CO2	CH4	N2O	CO2e
					PM10	Exhaust PM10	PM10 Total	PM2.5	Exhaust PM2.5	PM2.5 Total				
					<i>Grams</i>									
Hauling	24587.49	1534520.25	724101.05	10499.96	209246.18	99379.01	308625.19	31484.90	43184.79	74669.69	#####	93303.93	185351.34	#####
Vendor	62771.34	2139695.71	1051518.81	13967.91	303478.24	108037.56	411515.80	45663.83	47443.40	93107.23	#####	84385.75	222811.87	#####
Worker	422410.60	343610.69	4444306.09	10604.56	1078746.55	63901.75	1142648.30	162317.08	22781.20	185098.28	#####	38841.62	32833.44	#####
Total (g)	509769.43	4017826.65	6219925.95	35072.43	1591470.97	271318.31	1862789.29	239465.82	113409.38	352875.20	#####	216531.30	440996.65	#####
Total (lbs)	1123.85	8857.79	13712.59	77.32	3508.59	598.15	4106.75	527.93	250.02	777.96	8264165.77	477.37	972.23	#####
Total (tons)	0.56	4.43	6.86	0.04	1.75	0.30	2.05	0.26	0.13	0.39	4132.08	0.24	0.49	4282.91
Total (MT)											3748.56	0.22	0.44	3885.39

YEAR	<i>Tons</i>													
2024	0.0200	0.1576	0.2440	0.0014	0.0624	0.0106	0.0731	0.0094	0.0044	0.0138	133.4086	0.0077	0.0157	138.2783
2025	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2026	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2027	0.1197	0.9431	1.4601	0.0082	0.3736	0.0637	0.4373	0.0562	0.0266	0.0828	798.2645	0.0461	0.0939	827.4028
2028	0.1200	0.9457	1.4641	0.0083	0.3746	0.0639	0.4385	0.0564	0.0267	0.0831	800.4515	0.0462	0.0942	829.6696
2029	0.0629	0.4961	0.7680	0.0043	0.1965	0.0335	0.2300	0.0296	0.0140	0.0436	419.9090	0.0243	0.0494	435.2365

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	CO2_NBIO	CO2_NBIO	CO2_NBIO	CH4_IDLE	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
			19	22	23	8	9	10	222934	0.121678903	8.027696-08	0.134118	0.25814886	1.347656-05	0.024699	0.158314421	0.006031915																								
Hauling	100.0	1	0.000199377	5.838466-05	0.239789936	0	0.01869554	0.00032501	4.361526-07	4.1112137	1.850604526	2.731403831	5.139556	0.77488683	0.002626	0.0073827	0.014639651	1.335486-07	0.081298	0.025125	0.002182	0.025474	6.096821-07	0.028454	0.008781	0.000382	0.0243688	5.6066-07	832.60057	1613.577	0.0195579	0.110467	0.006892451	4.013805-08	0.007059	0.12707443	9.738131E-05				
			0.0	0.022574994	0.006359754	0.026359118	0	0.03811329	0.00596401	0.04894298	0.8943127	1.11291974	1.40789614	0.673181	0.34617278	1.07433	0.00149055	0.011670536	8.43591E-05	0.299	0.045389	0.012	0.002128	0.012985	0.000106814	0.044499	0.01589	0.003	0.0002035	0.01245151	9.821E-05	160.32458	1229.8378	8.5331774	0.013383	0.009658327	0.008772715	0.024699	0.158314421	0.006031915	
Vendor	50.0	0.5	9.79886E-05	2.91423E-05	0.164894908	0	0.009302771	0.0002625	2.18076E-07	2.0254069	0.925202263	1.38170419	2.50778	0.38744341	0.000313	0.00964135	0.007319825	9.8774E-08	0.040649	0.017563	0.001091	0.012737	3.04841E-07	0.014217	0.004391	0.001041	0.0121844	2.803E-07	416.30009	898.78849	0.009799	0.110467	0.006892451	4.013805-08	0.007059	0.12707443	9.738131E-05				
			0.5	0.012897497	0.003129877	0.013179559	0	0.019056644	0.02548201	0.02447149	0.4473153	0.556460987	0.70394807	0.333691	0.17938639	0.537165	0.00074528	0.000583268	4.21796E-05	0.0227	0.006	0.001064	0.006092	5.3407E-05	0.007945	0.0015	0.0001018	0.0002075	4.921E-05	80.162188	614.91891	4.2665887	0.006691	0.004829164	0.004836358	0.012349	0.07915171	0.003015058			
Worker	50.0	0.5	0.012995486	0.003159019	0.178074527	0	0.02835941	0.02574451	0.024471708	2.5027632	1.48176325	2.06965226	2.933471	0.5665298	0.537478	0.00438663	0.013155094	4.22763E-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	496.46248	1423.7074	4.2763777	0.123158	0.065668615	0.004386398	0.079408	0.20823164	0.003025696		
			1	0.00394385	0.10192775	0.155739986	0	0.00690435	0.11742871	0.134315138	0	0.0319581	0.094926069	0	0.03468144	1.307588	0	0.00080836	0.000211281	0.002306	0.002	0.000482	0.000724379	0.000807	0.0005	0	0.0004415	0.0006661	0	81.76883	21.578992	0	0.001555335	0.026240792	0	0.002343558	0.009634715				
LDA	25.0	0.25	0.071955738	0.020125587	0	0.00277508	0.05352409	0.095925667	0	0.017007912	0.083018448	0	0.2073317	0.913906	0	0.00084201	0.0002157	0.002217	0.002	0	0.000333	0.000526864	0.000776	0.0005	0	0.0003065	0.0004844	0	85.183477	21.818074	0	0.000704371	0.02068762	0	0.001504255	0.009258515					
			1	0.1360944817	0.101557618	0	0.01362228	0.27288095	0.385971791	0	0.067650567	0.297963629	0	0.88686871	3.725794	0	0.002870248	0.000743799	0.299	0.008107	0.008	0	0.001401	0.002206675	0.044499	0.002837	0.002	0	0.001289	0.0002029	0	290.35636	75.439802	0	0.001285167	0.080791594	0	0.005929348	0.034286889		

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	2.58870796	1.95479E-05	115.1525769	0.0001088	51.79486882	0.000391
	HHDT	DSL	8486.69344	0.064085007	1001095.457	0.9456821	124748.3826	0.942004
	HHDT	ELEC	28.3303862	0.000213929	2794.260589	0.0026396	378.794564	0.00286
	HHDT	NG	794.400964	0.005998707	54591.27048	0.0515695	7249.716942	0.054744
			9312.0135		1058596.14		132428.689	
	LDA	GAS	600108.166	0.189751879	22290343.74	0.8713379	2786616.833	0.881117
	LDA	DSL	1750.02352	0.000553351	51573.47594	0.002016	7442.609511	0.002353
	LDA	ELEC	57627.4034	0.018221562	2472767.413	0.0966614	282732.9828	0.089399
	LDA	PIH	17457.0988	0.005519867	767059.2064	0.0299846	85801.6405	0.02713
			676942.692		25581743.84		3162594.066	
	LDT1	GAS	52693.3661	0.223100419	1706864.169	0.9932977	234793.4065	0.994101
	LDT1	DSL	23.4623252	9.9338E-05	343.9307557	0.0002001	66.44458855	0.000281
	LDT1	ELEC	211.002813	0.000893373	8008.645616	0.0046606	994.4346051	0.00421
	LDT1	PIH	67.6457784	0.000286408	3164.460326	0.0018415	332.4790011	0.001408
			52995.477		1718381.206		236186.7647	
	LDT2	GAS	285585.435	0.210015878	10322758.41	0.9820916	1336438.482	0.9828
	LDT2	DSL	1015.45285	0.000746751	37944.25501	0.00361	4835.433637	0.003556
	LDT2	ELEC	1597.56671	0.00117483	55532.59168	0.0052833	8150.926864	0.005994
	LDT2	PIH	2116.57955	0.001556506	94757.7077	0.0090151	10402.98849	0.00765
			290315.034		10510992.96		1359827.831	
	LHDT1	GAS	19314.1424	0.046441179	722529.3133	0.6418809	287751.9438	0.691904
	LHDT1	DSL	10107.7368	0.024304222	398004.1011	0.353579	127142.6136	0.305717
	LHDT1	ELEC	70.8283556	0.000170308	5110.544281	0.0045401	989.4272741	0.002379
			29492.7076	0.070915709	1125643.959		415883.9847	
	LHDT2	GAS	2506.9057	0.026111	91452.57471	0.331033	37349.15959	0.389015
	LHDT2	DSL	4663.45548	0.048572823	183558.3761	0.6644305	58660.40334	0.610985
	LHDT2	ELEC	18.3325933	0.000190945	1253.286273	0.0045365	242.6680052	0.002528
			7188.69377	0.074874768	276264.2371		96009.56293	
	MCY	GAS	28171.5095	0.022104648	166022.3441	1	56343.01906	1
	MDV	GAS	156642.427	0.208260563	5468053.925	0.9650793	726101.0934	0.965372
	MDV	DSL	2400.61454	0.003191685	86292.68513	0.0152302	11318.82209	0.015049
	MDV	ELEC	1678.68445	0.002231859	58660.62986	0.0103533	8578.49571	0.011405
	MDV	PIH	1250.85709	0.00166305	52904.03132	0.0093373	6147.962587	0.008174
			161972.583		5665911.271		752146.3738	
	MH	GAS	2420.56984	7.121629885	22012.30271	0.6985681	242.1538069	0.712448
	MH	DSL	977.36061	2.875521464	9498.302477	0.3014319	97.73606104	0.287552
			3397.93045		31510.60519		339.8898679	
	MHDT	GAS	1414.55168	0.009216738	71600.35148	0.1399516	28302.34992	0.184409
	MHDT	DSL	10390.528	0.067701153	434043.5933	0.8483911	123938.9566	0.807544
	MHDT	ELEC	30.9160141	0.000201438	1660.353407	0.0032454	407.4535626	0.002655
	MHDT	NG	90.5944854	0.000590283	4303.5812	0.0084119	827.6228005	0.005393
			11926.5902		511607.8794		153476.3829	
	OBUS	GAS	443.146734	0.024493158	19894.31417	0.2414205	8866.47985	0.490059
	OBUS	DSL	893.137556	0.049364596	61949.05075	0.7517609	9141.625389	0.505267
	OBUS	ELEC	1.08748138	6.01062E-05	92.50104822	0.0011225	21.7583274	0.001203
	OBUS	NG	7.05736996	0.000390068	469.3876372	0.0056961	62.81059268	0.003472
			1344.42914		82405.25361		18092.67416	
	SBUS	GAS	172.694787	0.016022959	8584.865553	0.348885	690.7791473	0.064092
	SBUS	DSL	670.595844	0.062219191	15345.26177	0.6236244	9710.227827	0.900934
	SBUS	ELEC	2.06466629	0.000191564	64.35501341	0.0026154	23.64639413	0.002194
	SBUS	NG	24.3995047	0.002263834	612.0940704	0.0248752	353.3048277	0.03278
			869.754802		24606.57641		10777.9582	
	UBUS	GAS	46.0831322	0.021676301	4812.450683	0.0818022	184.3325287	0.086705
	UBUS	DSL	437.474468	0.205776552	48917.60551	0.8315035	1749.897872	0.823106
	UBUS	ELEC	5.34756545	0.031392036	235.0625504	0.0483152	21.3902618	0.125568
	UBUS	NG	42.5869588	0.020031792	4865.187143	0.0826987	170.347835	0.080127
			531.492124		58830.30589		2125.968497	

Source: EMFAC2021 (v1.0.0) Emission Rates

Region: Type: County

Region: Santa Clara

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: mtcEqEq for CVMT and EVMT, TripEqEq for Trips, kWh/Day for Energy Consumption, g/mileX for RULEX, P/MWB and P/MWV, g/Trip for STREX, HOTSDAK and RUNHDSX, g/Vehkwh/Day for IDEX and DUOR

Table with columns for Region, Calendar Year, Vehicle Cat, Model Year, Speed, Fuel, Population Total, VMT, CVMT, EVMT, Energy Con, and various emission factors (CO2, CO, HC, NOx, PM, etc.). Rows include Santa Clara and various vehicle types like 2024 HHOT, 2024 HMDT, 2024 LDA, etc.

P2 Infra - CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	Worker VMT	Vendor VMT	Hauling VMT
Infrastructure	33	1	4488	136	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	48470.4	992.8	0

Number of Days Per Year				
2026	11/1/26	12/31/26	61	53
2027	1/1/27	4/8/27	98	85
			159	137 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Infrastructure	11/1/2026	4/8/2027	6	136

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	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
Vendor	53.50	1906.74	950.83	13.18	296.85	103.53	400.38	44.67	44.40	89.07	1431145.58	77.01	210.24	#####
Worker	5006.10	3838.65	51946.07	136.56	14492.65	850.20	15342.85	2180.68	299.22	2479.90	13814414.64	443.09	392.52	#####
Total (g)	5059.60	5745.39	52896.90	149.74	14789.50	953.74	15743.23	2225.35	343.62	2568.97	15245560.22	520.11	602.76	#####
Total (lbs)	11.15	12.67	116.62	0.33	32.61	2.10	34.71	4.91	0.76	5.66	33610.71	1.15	1.33	34035.37
Total (tons)	0.01	0.01	0.06	0.00	0.02	0.00	0.02	0.00	0.00	0.00	16.81	0.00	0.00	17.02
Total (MT)											15.25	0.00	0.00	15.44

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2026	0.0021	0.0024	0.0224	0.0001	0.0063	0.0004	0.0067	0.0009	0.0001	0.0011	5.8489	0.0002	0.0002	5.9228
2027	0.0034	0.0039	0.0359	0.0001	0.0100	0.0006	0.0107	0.0015	0.0002	0.0017	9.3966	0.0003	0.0004	9.5154

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_IDL	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
			19	22	23	8	9	10	X	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
Hauling	100.0	1	0.000106002	3.361438-05	0.22445582	0	0.01701891	0.00030273	0.068488-07	4.013652	1.701647234	2.760133946	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	0.003382	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	0.021312827	0.005105771	0.0242461021	0	0.027766184	0.04201809	0.043042965	0.837392	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	0.003382	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	3.30030E-05	1.88071E-05	0.16227751	0	0.000809045	0.00011136	0.03242E-07	2.068206	0.802823617	1.380660373	2.576828	0.38654996	0.000389	0.00346176	0.007018803	6.4888E-08	0.040729	0.017506	0.001006	0.012385	1.64687E-07	0.0014255	0.004391	0.00095	0.0118871	1.524E-07	397.83497	777.4807	0.0067939	0.112154	0.005923068	3.74914E-08	0.004173	0.12412973	4.0208E-05					
	50.0	0.5	0.010656414	0.002558885	0.01213051	0	0.01383092	0.002100905	0.021521482	0.418896	0.653114461	0.695845865	0.333381	0.1285746	0.467407	0.00072595	0.005973867	3.91122E-05	0.022544	0.006	0.000723	0.004818	4.81675E-05	0.0014255	0.004391	0.00095	0.0118871	1.524E-07	397.83497	777.4807	0.0067939	0.112154	0.005923068	3.74914E-08	0.004173	0.12412973	4.0208E-05					
		1	0.010709414	0.002569693	0.17435842	0	0.020234037	0.021116041	0.021516886	2.425522	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	0.017202	4.83322E-05	0.04499	0.022146	0.005891	0.0031651	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	0.127728959	0	0.015187697	0.103974769	0	0.2865276	1.277031	0	0.001162034	0.000300399	0.003561	0.004	0	0.000536	0.000895416	0.001246	0.001	0	0.000493	0.0008233	0	117.55101	30.386258	0	0.000837586	0.028479341	0	0.001839043	0.013991495						
	25.0	0.25	0.132430724	0.036849484	0	0.00546911	0.10347702	0.114576224	0	0.025800958	0.084390428	0	0.30194857	1.128878	0	0.000782025	0.000204392	0.002303	0.002	0	0.000427	0.000636611	0.000806	0.0005	0	0.0003926	0.000601	0	79.104787	20.674857	0	0.00125256	0.022898387	0	0.001992702	0.009041201						
	25.0	0.25	0.069772888	0.018822709	0	0.00238206	0.05209969	0.083130872	0	0.014000924	0.071061014	0	0.18549243	0.809666	0	0.000807532	0.000205841	0.002214	0.002	0	0.000111	0.000500467	0.000775	0.0005	0	0.000286	0.0004602	0	81.699543	20.821419	0	0.000600438	0.018292607	0	0.001336696	0.008608075						
		1	0.329455766	0.09236225	0	0.01088088	0.25107136	0.324837454	0	0.054989579	0.261426211	0	0.7739686	3.215575	0	0.002751591	0.000710632	0.299	0.008078	0.008	0	0.001273	0.002049544	0.04499	0.002827	0.002	0	0.0011716	0.0018845	0	278.35144	71.882534	0	0.002600584	0.069670334	0	0.005168441	0.031640771				

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

P3 (R3, R4b, R5) - 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	30	0	3000	0	1,874	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	32400	0	37480
Site Preparation	8	1	328	41	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3542.4	299.3	0
Grading	60	0	8640	0	17,762	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	93312	0	355240
Trenching/Foundation	35	0	14420	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	155736	0	0
Building Construction	656	122	661248	122976	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	7141478	897724.8	0
Paving	13	0	1599	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	17269.2	0	0
Architectural Coating	131	0	16113	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	174020.4	0	0

Number of Days Per Year

Year	Start Date	End Date	Days/Week	Workdays
2026	1/1/26	12/31/26	365	313
2027	1/1/27	12/31/27	365	313
2028	1/1/28	12/31/28	366	314
2029	1/1/29	12/31/29	365	313
2030	1/1/30	1/21/30	21	18
			1482	1271 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2026	4/27/2026	6	100
Site Preparation	3/1/2026	4/17/2026	6	41
Grading	3/18/2026	9/1/2026	6	144
Trenching/Foundation	5/17/2026	9/9/2027	6	412
Building Construction	11/3/2026	1/21/2030	6	1,008
Paving	12/24/2027	5/15/2028	6	123
Architectural Coating	2/13/2028	7/5/2028	6	123

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	13063.37	801280.96	389114.66	5653.51	117423.28	55554.13	172977.41	17668.47	23988.74	41657.22	#####	48328.74	100019.36	#####
Vendor	48395.42	1724720.83	860060.24	11921.90	268509.21	93650.09	362159.30	40402.10	40161.00	80563.10	#####	69662.20	190165.40	#####
Worker	786773.48	603293.78	8164004.90	21462.20	2277709.76	133620.67	2411330.43	342722.95	47026.45	389749.40	#####	69638.05	61689.69	#####
Total (g)	848232.27	3129295.58	9413179.79	39037.61	2663642.25	282824.89	2946467.13	400793.53	111176.19	511969.72	#####	187628.99	351874.45	#####
Total (lbs)	1870.03	6898.92	20752.51	86.06	5872.33	623.52	6495.85	883.60	245.10	1128.70	9021168.58	413.65	775.75	#####
Total (tons)	0.94	3.45	10.38	0.04	2.94	0.31	3.25	0.44	0.12	0.56	4510.58	0.21	0.39	4631.34
Total (MT)											4091.93	0.19	0.35	4201.48

YEAR	<i>Tons</i>													
2026	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2027	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2028	0.2309	0.8519	2.5626	0.0106	0.7251	0.0770	0.8021	0.1091	0.0303	0.1394	1010.5584	0.0463	0.0869	1037.6131
2029	0.2303	0.8496	2.5556	0.0106	0.7231	0.0768	0.7999	0.1088	0.0302	0.1390	1007.7973	0.0462	0.0867	1034.7781
2030	0.0132	0.0489	0.1470	0.0006	0.0416	0.0044	0.0460	0.0063	0.0017	0.0080	57.9829	0.0027	0.0050	59.5352

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNS	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	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
Hauling	100.0	1	0.000106002	3.361438-05	0.22445582	0	0.01701891	0.00030273	0.068488-07	4.013652	1.701647234	2.760133946	5.153655	0.73309991	0.000738	0.00692351	0.014049606	1.337396-07	0.081458	0.025132	0.002013	0.024769	2.29379E-07	0.000145	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.003382	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	0.021312827	0.005105771	0.0242461021	0	0.027766184	0.04201809	0.043042965	0.837392	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	0.003382	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	3.30030E-05	1.88071E-05	0.16221751	0	0.000809045	0.00011136	0.03242E-07	2.068206	0.802823617	1.380660373	2.576828	0.36654996	0.000389	0.00346176	0.007014803	6.4888E-08	0.040729	0.017506	0.001006	0.012385	1.64687E-07	0.000095	0.0118471	1.524E-07	397.83497	777.4807	0.0067939	0.000095	0.0046051	4.424E-05	78.2479	508.26431	3.957311	0.007164	0.004762274	0.000959532	0.012083	0.076789176	0.002848383	
	50.0	0.5	0.010656414	0.002558885	0.01213051	0	0.013830502	0.002100905	0.021521482	0.418896	0.653114461	0.695845865	0.333381	0.1285746	0.467407	0.00072595	0.000947867	3.91122E-05	0.022544	0.006	0.000723	0.004818	4.81675E-05	0.000095	0.0118471	1.524E-07	397.83497	777.4807	0.0067939	0.000095	0.0046051	4.424E-05	78.2479	508.26431	3.957311	0.007164	0.004762274	0.000959532	0.012083	0.076789176	0.002848383	
		1	0.010709414	0.002569693	0.17435842	0	0.020234037	0.021116041	0.021516886	2.425522	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	0.017202	4.83322E-05	0.04499	0.022146	0.005891	0.0031651	0.0164522	4.444E-05	476.18287	1375.751	3.9640749	0.119319	0.060685342	0.000959289	0.076266	0.200922149	0.002848604			
Worker	50.0	0.5	0.127252154	0.036844958	0	0.000310372	0.09549445	0.127728959	0	0.015187697	0.103947969	0	0.2865276	1.277031	0	0.001162034	0.000300399	0.0003561	0.004	0.000536	0.000895416	0.001246	0.001	0	0.000493	0.0008233	0	0.000493	0.0008233	0	117.55101	30.386258	0	0.000837586	0.028479341	0	0.001839043	0.013991495				
	25.0	0.25	0.132430724	0.036894584	0	0.00546911	0.10347702	0.114576224	0	0.025800958	0.084390428	0	0.30194857	1.128878	0	0.000782025	0.000204392	0.002303	0.002	0.000427	0.000636611	0.000806	0.0005	0	0.0003926	0.000601	0	0.0003926	0.000601	0	79.104787	20.674857	0	0.00125256	0.022898387	0	0.001992702	0.009041201				
	25.0	0.25	0.069772888	0.018822709	0	0.00238006	0.05209969	0.083130872	0	0.014000924	0.071061014	0	0.18549243	0.809666	0	0.000807532	0.000205841	0.002214	0.002	0.000111	0.000500467	0.000775	0.0005	0	0.000286	0.0004602	0	0.000286	0.0004602	0	81.699543	20.821419	0	0.000600438	0.018292607	0	0.001336696	0.008608075				
		1	0.329455766	0.09236225	0	0.01088008	0.25107136	0.324837454	0	0.054989579	0.261426211	0	0.7739606	3.215575	0	0.002751591	0.000710632	0.299	0.008078	0.008	0.001273	0.002049544	0.04499	0.002827	0.002	0	0.0011716	0.0018845	0	278.35144	71.882534	0	0.002600584	0.069670334	0	0.005168441	0.031640771					

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

Source: EMFAC2021 (v1.0.i) Emission Rates
 Region Type: County
 Region: Santa Clara
 Calendar Year: 2026
 Season: Annual

Vehicle Classification: EMFAC2007 Categories
 Units: miles/day for CVMV and EVMT, Trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUMEX, PMWB and PM10W, g/strip for STREX, HOTSJACK and RUNJDS05, g/vehicle/day for ICDEX and DU09

Region	Calendar Year	Vehicle Class	Fuel	Population Total	EMVT	Trips	Energy Con.	CO	CO2	CH4	N2O	PM10	PM2.5	PM2.5+10	PM10	PM2.5	PM10	NOx	NO2	NOx	SO2	SOx	OC	EC	Stk	Stk																			
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004
Santa Clara	2026	HHDT	Aggregate	Aggregated	Gasoline	1.82002E+13	123.7551	0	0.371037	0	0.318282	0	0.029367	0.00004	0	0.001119	0.005	0.0207	0.002632	0	0.001218	0.002	0.0008248	2020.337	0	0.000071	0.136022	0	0.020726	0.04165	1.19004	7.830977	1.217426	0	0.001947	0.124256	1.19004	7.830977	0.004212	21.21272	0	1.712013	0.020072	0	0.000004

P3 Aff R4a - 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	30	0	2580	0	442	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	27864	0	8840
Site Preparation	8	1	104	13	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1123.2	94.9	0
Grading	50	0	2300	0	5,348	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	24840	0	106960
Trenching/Foundation	25	0	3250	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	35100	0	0
Building Construction	178	33	56782	10527	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	613245.6	76847.1	0
Paving	13	0	507	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	5475.6	0	0
Architectural Coating	36	0	1404	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	15163.2	0	0

Number of Days Per Year

2026	11/15/26	12/31/26	47	40
2027	1/1/27	12/31/27	365	313
2028	1/1/28	10/6/28	280	240
			692	594 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	11/15/2026	2/23/2027	6	86
Site Preparation	2/23/2027	3/9/2027	6	13
Grading	3/10/2027	5/1/2027	6	46
Trenching/Foundation	5/2/2027	9/30/2027	6	130
Building Construction	10/1/2027	10/6/2028	6	319
Paving	10/8/2027	11/22/2027	6	39
Architectural Coating	11/22/2027	1/5/2028	6	39

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	3750.26	228053.56	111753.04	1627.56	34624.20	16384.21	51008.41	5209.84	7053.47	12263.31	#####	13543.79	28820.28	#####
Vendor	3901.81	141061.25	71020.77	999.72	23005.66	7962.84	30968.50	3461.62	3380.79	6842.41	#####	5714.60	15946.76	#####
Worker	71005.58	52763.81	729405.27	1997.72	216120.67	12610.68	228731.35	32519.29	4403.85	36923.15	#####	6166.46	5578.02	#####
Total (g)	78657.65	421878.62	912179.07	4625.00	273750.53	36957.73	310708.26	41190.76	14838.11	56028.86	#####	25424.85	50345.07	#####
Total (lbs)	173.41	930.08	2011.01	10.20	603.52	81.48	684.99	90.81	32.71	123.52	1082770.62	56.05	110.99	#####
Total (tons)	0.09	0.47	1.01	0.01	0.30	0.04	0.34	0.05	0.02	0.06	541.39	0.03	0.06	558.62
Total (MT)											491.14	0.03	0.05	506.77

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2026	0.0059	0.0316	0.0683	0.0003	0.0205	0.0028	0.0233	0.0031	0.0011	0.0042	33.3575	0.0017	0.0034	34.4197
2027	0.0457	0.2453	0.5304	0.0027	0.1592	0.0215	0.1807	0.0239	0.0086	0.0326	259.0532	0.0134	0.0266	267.3018
2028	0.0351	0.1882	0.4069	0.0021	0.1221	0.0165	0.1386	0.0184	0.0066	0.0250	198.7257	0.0103	0.0204	205.0534

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDL EX	PM10_RU NEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDL EX	PM25_RUN EX	PM25_STR EX	CO2_NBIO _IDLEX	CO2_NBIO _RUNEX	CO2_NBIO _STREX	CH4_IDLE X	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX		
			19	22	23	8	9	10	21	22	23	8	9	10	21	22	23	8	9	10	21	22	23	8	9	10	21	22	23	8	9	10	21	22	23	8	9	10	21	22	23
Hauling	100.0	1	9.15526E-05	2.30398E-05	0.2311981124	0	0.01628701	0.00036147	0.725161E-07	2.3650792	1.633848814	2.745433901	5.124778	0.70877415	0.030782	0.0667481	0.013717518	1.259E-07	0.081782	0.035135	0.001939	0.024473	2.86377E-07	0.028624	0.008784	0.003849	0.0224106	2.633E-07	777.08967	1519.3636	0.0177352	0.218219	0.1060475	6.86812E-08	0.125416	0.24208661	7.25107E-06	0.02384	0.150701674	0.095522907	
MHD	0.0	0	0.019771494	0.00466468	0.023376294	0	0.02362674	0.03865481	0.040569481	0.8108161	0.814699228	1.371110948	0.659814	0.22479796	0.875978	0.00142742	0.011318512	7.55078E-05	0.299	0.044837	0.012	0.001186	0.008315	9.25129E-05	0.04499	0.015693	0.003	0.003134	0.0079473	8.506E-05	154.3221	1175.4531	7.6378398	0.014761	0.009545183	0.00755705	0.02384	0.150701674	0.095522907		
Vendor	50.0	0.5	4.3796E-05	1.431199E-05	0.160795062	0	0.00844361	0.00013074	1.8625E-07	1.9823396	0.816244807	1.377716951	2.562389	0.35483708	0.000391	0.00379405	0.008688757	6.29501E-08	0.040891	0.017568	0.0007	0.012226	1.431188E-07	0.014312	0.004392	0.000924	0.0117054	1.317E-07	388.54474	799.63181	0.0603676	0.10511	0.052023725	3.43406E-08	0.02708	0.121304531	3.67533E-05	0.02384	0.150701674	0.095522907	
MHD	50.0	0.5	0.009885747	0.002333234	0.011680147	0	0.01181337	0.01932745	0.020284741	0.465408	0.407349614	0.685554374	0.329907	0.11239808	0.437989	0.00071371	0.005566956	3.77339E-05	0.022418	0.006	0.000593	0.004157	4.6256E-05	0.007846	0.0015	0.000567	0.0037796	4.253E-05	77.161049	587.79533	3.8189199	0.007381	0.004772667	0.003778525	0.01192	0.073359837	0.002761454	0.02384	0.150701674	0.095522907	
MHD	1	0.009931543	0.002347754	0.172483209	0	0.01995688	0.01945819	0.020284927	2.3879476	1.224274021	2.058272425	2.892296	0.46678606	0.43838	0.00408776	0.012428013	3.78169E-05	0.299	0.063309	0.023568	0.001563	0.016394	4.6396E-05	0.04499	0.022158	0.005892	0.003491	0.0156791	4.266E-05	465.70578	1347.3583	3.8252875	0.11649	0.057796992	0.00377856	0.074628	0.196655167	0.002765129	0.02384	0.150701674	0.095522907
Worker	50.0	0.5	0.124774953	0.03332579	0	0.00280128	0.09381266	0.118752298	0	0.013978935	0.09494609	0	0.27238771	1.207995	0	0.001138522	0.00029368	0.003554	0.004	0	0.000508	0.000861352	0.001244	0.001	0	0.0004677	0.000792	0	115.13786	29.70688	0	0.000769144	0.026851221	0	0.001755054	0.01360376	0.02384	0.150701674	0.095522907		
LDT1	25.0	0.25	0.127182533	0.034919795	0	0.00048531	0.09837243	0.106039612	0	0.02313956	0.079887107	0	0.27893015	1.050819	0	0.000768883	0.000200154	0.002299	0.002	0	0.000394	0.000618991	0.000805	0.0005	0	0.0003623	0.0005691	0	77.769662	20.246134	0	0.001123286	0.021436306	0	0.001841326	0.008783877	0.02384	0.150701674	0.095522907		
LDT2	25.0	0.25	0.064611887	0.018162188	0	0.00212373	0.05123426	0.078241944	0	0.012836987	0.069477589	0	0.17725184	0.771154	0	0.000792088	0.000201524	0.002213	0.002	0	0.000296	0.000481527	0.000775	0.0005	0	0.0002722	0.0004427	0	80.133179	20.184716	0	0.000599632	0.017367339	0	0.0012713	0.008386223	0.02384	0.150701674	0.095522907		
MHD	1	0.320469373	0.088414662	0	0.010977811	0.24341934	0.303033854	0	0.040995482	0.24889396	0	0.7285697	3.029968	0	0.00269944	0.000693357	0.299	0.008067	0.008	0	0.001198	0.00136187	0.04499	0.002823	0.002	0	0.0011022	0.0018039	0	273.0747	70.137438	0	0.001402082	0.066654866	0	0.00486768	0.010773861	0.02384	0.150701674	0.095522907	

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	695.9825537	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	

P3 Infra - CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	Worker VMT	Vendor VMT	Hauling VMT
Infrastructure	25	1	2550	102	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	27540	744.6	0

Number of Days Per Year				
2027	1/1/27	4/29/27	119	103
			119	103 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Infrastructure	1/1/2027	4/29/2027	6	102

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	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
Vendor	37.76	1365.11	687.30	9.67	222.64	77.06	299.70	33.50	32.72	66.22	1051135.19	55.30	154.32	#####
Worker	2705.40	2010.37	27791.23	76.12	8234.46	480.48	8714.94	1239.02	167.79	1406.82	7699837.82	234.95	212.53	#####
Total (g)	2743.16	3375.47	28478.52	85.79	8457.10	557.54	9014.64	1272.52	200.51	1473.03	8750973.01	290.25	366.85	#####
Total (lbs)	6.05	7.44	62.78	0.19	18.64	1.23	19.87	2.81	0.44	3.25	19292.59	0.64	0.81	19549.60
Total (tons)	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	9.65	0.00	0.00	9.77
Total (MT)											8.75	0.00	0.00	8.87

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2027	0.0030	0.0037	0.0314	0.0001	0.0093	0.0006	0.0099	0.0014	0.0002	0.0016	8.7510	0.0003	0.0004	8.8676

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNLS	ROG_STREX	NOX_IDLEX	NOX_RUNEX	NOX_STREX	CO_IDLEX	CO_RUNEX	CO_STREX	SO2_IDLEX	SO2_RUNEX	SO2_STREX	Road Dust PM10	PM10_PM BW	PM10_PM TW	PM10_IDL EX	PM10_RU NEX	PM10_STREX	Road Dust PM25	PM25_PM BW	PM25_PM TW	PM25_IDL EX	PM25_RUN EX	PM25_STR EX	CO2_NBIO _IDLEX	CO2_NBIO _RUNEX	CO2_NBIO _STREX	CH4_IDLE X	CH4_RUNEX	CH4_STREX	N2O_IDLEX	N2O_RUNEX	N2O_STREX
Hauling	100.0	1	9.15526-05	2.303986-05	0.231598124	0	0.01628701	0.00036147	3.72511E-07	3.5650792	1.633848814	2.745433901	5.124778	0.70877415	0.030782	0.0654861	0.013717513	1.259E-07	0.085782	0.035135	0.001939	0.024473	2.86377E-07	0.028824	0.008784	0.003849	0.0224106	2.638E-07	777.88967	1519.3636	0.017352	0.218219	0.10604745	6.86812E-08	0.225416	0.240288661	7.25107E-06		
	0.0	0	0.019771494	0.00466468	0.023376294	0	0.00362674	0.03865481	0.040569481	0.8108161	0.814699228	1.371110948	0.659814	0.22479796	0.875978	0.00142742	0.01138512	7.55078E-05	0.299	0.044837	0.012	0.001186	0.008315	9.25129E-05	0.04499	0.015693	0.003	0.003134	0.0079473	8.506E-05	154.3221	1175.4531	7.6378398	0.014761	0.009545183	0.00755705	0.02384	0.150701674	0.005522907
	50.0	0.5	4.3796E-05	1.451198E-05	0.160790262	0	0.00814351	0.00013074	1.8625E-07	1.5825396	0.816294407	1.377165951	2.562389	0.35483708	0.009391	0.00377405	0.008680757	6.29501E-08	0.040891	0.017568	0.0007	0.012236	1.43138E-07	0.014312	0.004392	0.000924	0.0117054	1.317E-07	388.54474	759.63181	0.0063676	0.10511	0.052023725	3.43406E-08	0.022708	0.121304531	1.67353E-05		
Vendor	50.0	0.5	0.009885747	0.002333234	0.011680147	0	0.01181337	0.01932745	0.020284741	0.465408	0.407349614	0.685554974	0.329907	0.11239898	0.437989	0.00071371	0.005566956	3.77339E-05	0.022418	0.006	0.000593	0.004157	4.62165E-05	0.007846	0.0015	0.000567	0.0037796	4.253E-05	77.161049	387.79353	3.9189399	0.007381	0.004772667	0.003778525	0.02192	0.073539837	0.002761454		
	1	0.009931543	0.002347754	0.172483209	0	0.01995688	0.01945819	0.020284927	2.3879476	1.224274021	2.058272425	2.892296	0.46678606	0.43838	0.00408776	0.012428013	3.78169E-05	0.299	0.063309	0.023568	0.001563	0.016394	4.63996E-05	0.04499	0.022158	0.005892	0.0031491	0.0156791	4.266E-05	465.70578	1347.3583	3.8252875	0.11649	0.057796392	0.00377856	0.074628	0.196655167	0.002765129	
	50.0	0.5	0.124774953	0.03532579	0	0.00280128	0.09381266	0.118752298	0	0.013978935	0.09494609	0	0.27238771	1.207995	0	0.001138522	0.00029368	0.003554	0.004	0	0.000508	0.000861352	0.001244	0.001	0	0.0004677	0.000792	0	115.13786	29.706888	0	0.000769144	0.026851221	0	0.001755054	0.01360376			
Worker	25.0	0.25	0.127182533	0.034919795	0	0.00048531	0.09837243	0.106039612	0	0.02313956	0.079887107	0	0.27893015	1.050819	0	0.000768883	0.000200154	0.002299	0.002	0	0.000394	0.000618991	0.000805	0.0005	0	0.0003623	0.0005691	0	77.769662	20.246134	0	0.001123286	0.021436306	0	0.001841326	0.008783877			
	25.0	0.25	0.064611887	0.018162188	0	0.00212373	0.05122426	0.078241944	0	0.012836987	0.069477589	0	0.17725184	0.771154	0	0.000792088	0.000201524	0.002213	0.002	0	0.000296	0.000481527	0.000775	0.0005	0	0.0002722	0.0004427	0	80.133179	20.184716	0	0.000599632	0.017367339	0	0.0012713	0.008386223			
	1	0.320469373	0.08844562	0	0	0.00977811	0.24341934	0.303033854	0	0.049955482	0.24889396	0	0.7285697	3.029968	0	0.00269944	0.000693357	0.299	0.008067	0.008	0	0.001198	0.00136187	0.04499	0.002823	0.002	0	0.0011022	0.0018039	0	273.0747	70.337438	0	0.002402682	0.066654866	0	0.00486768	0.010773861	

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	

P4 (O3+O4+O5+P1+P2) - 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	35	0	8190	0	2,626	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	88452	0	52520
Site Preparation	8	1	432	54	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4665.6	394.2	0
Grading	73	0	6278	0	14,083	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	67802.4	0	281660
Trenching/Foundation	40	0	30640	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	330912	0	0
Building Construction	397	182	444640	203840	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	4802112	1488032	0
Paving	18	0	3690	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	39852	0	0
Architectural Coating	79	0	16195	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	174906	0	0

Number of Days Per Year

Year	Start Date	End Date	Days/Week	Workdays
2026	4/1/26	12/31/26	6	236
2027	1/1/27	12/31/27	6	313
2028	1/1/28	12/31/28	6	314
2029	1/1/29	12/31/29	6	313
2030	1/1/30	12/31/30	6	313
2031	1/1/31	4/19/31	6	109
			1845	1582 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	4/1/2026	12/29/2026	6	234
Site Preparation	5/22/2026	7/23/2026	6	54
Grading	6/5/2026	9/12/2026	6	86
Trenching/Foundation	7/26/2026	1/4/2029	6	766
Building Construction	9/22/2027	4/19/2031	6	1,120
Paving	12/11/2027	8/5/2028	6	205
Architectural Coating	1/24/2028	9/18/2028	6	205

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive			Fugitive			NBio- CO2	CH4	N2O	CO2e		
					PM10	Exhaust PM10	PM10 Total	PM2.5	Exhaust PM2.5	PM2.5 Total						
					<i>Grams</i>											
Hauling	11116.11	681839.66	331112.08	4810.78	99919.82	47273.06	147192.88	15034.76	20412.91	35447.67	#####	41124.72	85110.18	#####		
Vendor	80212.79	2858631.15	1425503.16	19759.89	445039.43	155219.94	600259.38	66964.29	66564.68	133528.97	#####	115461.31	315188.83	#####		
Worker	568946.98	436265.56	5903714.42	15520.16	1647101.90	96626.38	1743728.28	247836.50	34006.68	281843.19	#####	50358.03	44610.25	#####		
Total (g)	660275.87	3976736.38	7660329.66	40090.84	2192061.15	299119.39	2491180.54	329835.56	120984.27	450819.83	#####	206944.05	444909.26	#####		
Total (lbs)	1455.66	8767.20	16888.14	88.39	4832.67	659.45	5492.11	727.16	266.72	993.89	9366469.11	456.23	980.86	#####		
Total (tons)	0.73	4.38	8.44	0.04	2.42	0.33	2.75	0.36	0.13	0.50	4683.23	0.23	0.49	4835.09		
Total (MT)											4248.56	0.21	0.44	4386.32		

YEAR	<i>Tons</i>													
2026	0.1085	0.6534	1.2586	0.0066	0.3602	0.0491	0.4093	0.0542	0.0199	0.0741	633.2540	0.0308	0.0663	653.7869
2027	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2028	0.1444	0.8696	1.6751	0.0088	0.4793	0.0654	0.5447	0.0721	0.0265	0.0986	842.8036	0.0411	0.0883	870.1309
2029	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2030	0.1440	0.8672	1.6705	0.0087	0.4780	0.0652	0.5433	0.0719	0.0264	0.0983	840.5008	0.0409	0.0880	867.7535
2031	0.0430	0.2590	0.4989	0.0026	0.1428	0.0195	0.1622	0.0215	0.0079	0.0294	250.9989	0.0122	0.0263	259.1373

Category	Mix %	Adj	ROG_DIURN	ROG_HTSK	ROG_IDLEX	ROG_RESTL	ROG_RUNEX	ROG_RUNS	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	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	EX
Hauling	100.0	1	0.000106002	3.361438-05	0.22445582	0	0.01701891	0.00030273	0.068488-07	4.013652	1.701647234	2.760133946	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	0.003382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.224309	0.111846137	7.49827E-08	0.128346	0.248265947	8.0417E-06	0.024186	0.153578352	0.095689167
	0.0	0	0.021312827	0.005105771	0.0242461021	0	0.027766184	0.04201809	0.043042965	0.837392	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	0.003382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.224309	0.111846137	7.49827E-08	0.128346	0.248265947	8.0417E-06	0.024186	0.153578352	0.095689167		
Vendor	50.0	0.5	3.30030E-05	1.84071E-05	0.16227791	0	0.000809045	0.00011136	0.02424E-07	2.068206	0.802823617	1.380660373	2.576828	0.34654996	0.000389	0.00346176	0.007014803	6.4888E-08	0.040729	0.017506	0.001006	0.012385	1.64687E-07	0.001445	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.003382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.224309	0.111846137	7.49827E-08	0.128346	0.248265947	8.0417E-06	0.024186	0.153578352	0.095689167
	50.0	0.5	0.010656414	0.002255885	0.01213051	0	0.01383052	0.02100905	0.021521482	0.418896	0.631144461	0.695845865	0.333381	0.1285746	0.467407	0.00072595	0.005973867	3.91122E-05	0.022544	0.006	0.000723	0.004818	4.81675E-05	0.001445	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.003382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.224309	0.111846137	7.49827E-08	0.128346	0.248265947	8.0417E-06	0.024186	0.153578352	0.095689167
1	0.010709414	0.002569693	0.17435842	0	0.020234037	0.021116041	0.021516886	2.425522	1.303938078	2.075912838	2.909209	0.49512456	0.467775	0.0041877	0.01269667	3.91889E-05	0.001445	0.009635	9.6335E-05	0.04499	0.015781	0.003	0.003382	0.0092102	8.858E-05	0.04499	0.015781	0.003	0.003382	0.0092102	8.858E-05	156.6958	1196.5286	7.914622	0.224309	0.111846137	7.49827E-08	0.128346	0.248265947	8.0417E-06	0.024186	0.153578352	0.095689167	
Worker	50.0	0.5	0.127252154	0.036844958	0	0.000310372	0.09549445	0.127728959	0	0.015187697	0.103974769	0	0.2865276	1.277031	0	0.001162034	0.000300399	0.003561	0.004	0	0.000536	0.000895416	0.001246	0.001	0	0.000493	0.0008233	0	0.000493	0.0008233	0	117.55101	30.386258	0	0.000837586	0.028479341	0	0.001839043	0.013991495	0	0.001839043	0.013991495		
	25.0	0.25	0.132430724	0.036849484	0	0.00546911	0.10347702	0.114576224	0	0.025800958	0.084390428	0	0.30194857	1.128878	0	0.000782025	0.000204392	0.002303	0.002	0	0.000427	0.000636611	0.000806	0.0005	0	0.0003926	0.000601	0	0.0003926	0.000601	0	79.104787	20.674857	0	0.00125256	0.022898387	0	0.001992702	0.009041201	0	0.001992702	0.009041201		
1	0.069772888	0.018822709	0	0.00282806	0.05209969	0.083130872	0	0.014000924	0.071061014	0	0.18549243	0.809666	0	0.000807532	0.000205841	0	0.000807532	0.000205841	0.002214	0.002	0	0.000111	0.000500467	0.000775	0.0005	0	0.000286	0.0004602	0	0.000286	0.0004602	0	81.699643	20.821419	0	0.000600438	0.018292607	0	0.001336696	0.008608075	0	0.001336696	0.008608075	
1	0.329455766	0.09236225	0	0.01088088	0.25107136	0.324837454	0	0.054989579	0.261426211	0	0.7739686	3.215575	0	0.002751591	0.000710632	0.299	0.008078	0.008	0	0.001273	0.000249544	0.04499	0.002827	0.002	0	0.0011716	0.0018845	0	0.0011716	0.0018845	0	278.35144	71.882534	0	0.002600584	0.069670334	0	0.005168441	0.031640771	0	0.005168441	0.031640771		

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

P4 Infra - CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	Worker VMT	Vendor VMT	Hauling VMT
Infrastructure	25	1	1700	68	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	18360	496.4	0

Number of Days Per Year	Start Date	End Date	Days/Week	Workdays
2028	3/1/28	5/18/28		79
				79
				69 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Infrastructure	3/1/2028	5/18/2028	6	68

Summary of Construction Traffic Emissions (EMFAC2021)

CATEGORY	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Grams</i>													
Hauling	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
Vendor	23.74	867.03	441.66	6.29	148.42	50.96	199.38	22.33	21.44	43.77	683350.14	35.20	100.29	714115.12
Worker	1725.41	1242.25	17542.74	49.84	5489.64	318.57	5808.21	826.02	110.36	936.38	5041359.34	146.75	135.63	#####
Total (g)	1749.15	2109.28	17984.40	56.12	5638.06	369.53	6007.59	848.35	131.80	980.15	5724709.48	181.95	235.92	#####
Total (lbs)	3.86	4.65	39.65	0.12	12.43	0.81	13.24	1.87	0.29	2.16	12620.82	0.40	0.52	12785.84
Total (tons)	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	6.31	0.00	0.00	6.39
Total (MT)											5.72	0.00	0.00	5.80

YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
	<i>Tons</i>													
2028	0.0019	0.0023	0.0198	0.0001	0.0062	0.0004	0.0066	0.0009	0.0001	0.0011	5.7247	0.0002	0.0002	5.7996

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_EX	PM10_RU	PM10_NEX	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
			PM10	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	EX	EX	EX	EX	EX	EX	EX
Hauling	100.0	1	5.52528E-05	1.75002E-05	0.318402282	0	0.01554384	0.00157328	0.265166-07	2.5142972	1.566149473	2.706912868	5.089184	0.68226811	0.000818	0.08656794	0.013349969	9.81351E-08	0.081989	0.025139	0.001864	0.024127	1.63816E-07	0.028696	0.008785	0.001776	0.0220796	1.506E-07	757.81994	1479.563	0.0099367	0.212116	0.100129994	6.02384E-08	0.122369	0.236311945	5.6833E-06	0.023392	0.14952559	0.005251572			
	0.0	0	0.018086411	0.004224003	0.022533624	0	0.0202507	0.03518802	0.0383006	0.7840844	0.730790143	1.328267001	0.652204	0.15813093	0.820911	0.00139723	0.010874145	7.2771E-05	0.044461	0.012	0.000973	0.007191	8.91338E-05	0.044499	0.015561	0.003	0.000093	0.00068725	8.196E-05	151.31368	1148.1122	7.3609993	0.015111	0.009557601	0.00717541	0.002392	0.14952559	0.005251572					
	0.0	0	0.018086411	0.004224003	0.022533624	0	0.0202507	0.03518802	0.0383006	0.7840844	0.730790143	1.328267001	0.652204	0.15813093	0.820911	0.00139723	0.010874145	7.2771E-05	0.044461	0.012	0.000973	0.007191	8.91338E-05	0.044499	0.015561	0.003	0.000093	0.00068725	8.196E-05	151.31368	1148.1122	7.3609993	0.015111	0.009557601	0.00717541	0.002392	0.14952559	0.005251572					
Vendor	50.0	0.5	2.76126E-05	8.75012E-06	0.120201101	0	0.00777192	7.808E-05	1.63388E-07	1.9571486	0.93207736	1.352466284	2.244932	0.34113406	0.000409	0.00238297	0.006674984	4.2067E-08	0.040995	0.017569	0.000932	0.012863	8.12079E-08	0.014348	0.004392	0.000888	0.0113298	7.531E-08	578.90597	738.7815	0.0049633	0.100258	0.00094967	3.0132E-08	0.001184	0.11815672	2.8416E-06	0.001184	0.11815672	2.8416E-06			
	50.0	0.5	0.009043205	0.002112001	0.011266812	0	0.001021535	0.01759401	0.0191503	0.3920427	0.365380071	0.664133501	0.328102	0.09906547	0.410456	0.00069861	0.005437072	3.63835E-05	0.022231	0.006	0.000487	0.002596	4.45679E-05	0.007781	0.0015	0.000465	0.0034362	8.098E-05	75.656638	574.05611	3.6804996	0.007556	0.0047788	0.00360977	0.011696	0.07353028	0.002625786	0.011696	0.07353028	0.002625786			
	1	0.009070818	0.002120752	0.170468003	0	0.01789727	0.0176727	0.019150463	2.3491908	1.148454808	2.017990434	2.870694	0.44019952	0.410865	0.00398259	0.012112057	3.64346E-05	0.0299	0.063225	0.023569	0.001418	0.015659	4.46498E-05	0.044499	0.022129	0.005892	0.001353	0.014976	4.105E-05	454.56681	1313.8376	3.685463	0.113613	0.054843767	0.0036088	0.07228	0.191681952	0.00262628	0.07228	0.191681952	0.00262628		
Worker	50.0	0.5	0.121405719	0.033868063	0	0.00225245	0.09132453	0.111329065	0	0.013011461	0.095680357	0	0.26055635	1.147115	0	0.001117153	0.000287519	0.003549	0.004	0	0.000477	0.000821871	0.001242	0.001	0	0.0004392	0.0007557	0	113.00952	29.08341	0	0.000712537	0.025390033	0	0.001686502	0.01263803	0	0.001686502	0.01263803				
	25.0	0.25	0.126607034	0.033524532	0	0.00433508	0.09650276	0.098324934	0	0.020776268	0.075692594	0	0.23921794	0.980939	0	0.000756073	0.000196114	0.002295	0.002	0	0.000366	0.000584797	0.000803	0.0005	0	0.0003368	0.0005377	0	76.479161	19.83747	0	0.001012977	0.020099971	0	0.001707138	0.008541119	0	0.001707138	0.008541119				
	25.0	0.25	0.066674332	0.01739701	0	0.00186624	0.04978744	0.073866077	0	0.011850272	0.066470894	0	0.170188364	0.737497	0	0.000778068	0.000197586	0.002212	0.002	0	0.000279	0.000450993	0.000774	0.0005	0	0.0002566	0.0004221	0	78.714852	19.886453	0	0.000524764	0.016532732	0	0.001215363	0.008301125	0	0.001215363	0.008301125				
1	0.131387085	0.084607056	0	0.00885377	0.23761472	0.283519076	0	0.040639021	0.237843844	0	0.69013792	2.865551	0	0.002651294	0.000681219	0.299	0.008056	0.008	0	0.001123	0.001860761	0.044499	0.00282	0.002	0	0.0010327	0.0017155	0	268.20353	68.907334	0	0.00220277	0.063022736	0	0.004690904	0.030006047	0	0.004690904	0.030006047				

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

CalEEMod EMFAC2021 Emission Factors Input - Year 2032

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
A	CH4_IDLEX		0	0	0	0.003991	0.002361	0.015527	0.184902558	0.007452		0	0	0.082826	0
A	CH4_RUNEX	0.001138	0.002666	0.001728	0.00188	0.003152	0.00392	0.009192	0.074120251	0.010998	0.628690329	0.140346	0.084546	0.005358	
A	CH4_STREX	0.041505	0.062164	0.05549	0.058843	0.014674	0.007918	0.006007	3.49226E-08	0.012251	0.002390134	0.151104	0.005159	0.021885	
A	CO_IDLEX		0	0	0	0.173797	0.134001	0.595465	4.892829621	0.546957		0	0	1.832381	0
A	CO_RUNEX	0.462579	0.785853	0.614459	0.6283	0.455892	0.344056	0.126228	0.562096535	0.242159	7.314376711	10.78988	0.612448	0.307914	
A	CO_STREX	1.924319	2.970454	2.553667	2.58442	1.95011	1.088027	0.630821	0.000905231	1.351156	0.49073103	7.795209	0.644726	1.806813	
A	CO2_NBIO_IDLEX		0	0	0	7.389741	13.26998	133.49	684.1408905	88.80226		0	0	175.1866	0
A	CO2_NBIO_RUNEX	213.2222	287.5593	297.3174	354.2515	619.1097	664.9868	983.8777	1313.448408	1200.289	711.2449054	185.5057	895.1543	1650.076	
A	CO2_NBIO_STREX	54.23165	73.42366	74.82628	88.60336	14.95757	8.244112	6.192225	0.008069245	11.0688	2.958722814	41.43188	3.868025	19.58768	
A	NOX_IDLEX		0	0	0	0.032582	0.072212	0.670644	3.698178693	0.31516		0	0	0.95185	0
A	NOX_RUNEX	0.021253	0.051613	0.036463	0.041141	0.243591	0.41318	0.468948	1.34629318	0.76358	0.154699349	0.498347	1.199773	1.217107	
A	NOX_STREX	0.16943	0.246602	0.233316	0.251274	0.295293	0.163876	1.106694	2.507904019	0.884507	0.022988599	0.094779	0.526199	0.293488	
A	PM10_IDLEX		0	0	0	0.000643	0.001464	0.000453	0.001628566	0.000266		0	0	0.00057	0
A	PM10_PMBW	0.007206	0.009286	0.009018	0.009067	0.072346	0.084581	0.041854	0.081826001	0.049855	0.21010984	0.012	0.042932	0.044938	
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009275	0.010412	0.012	0.035158484	0.012	0.106774642	0.004	0.010403	0.013372	
A	PM10_RUNEX	0.000743	0.00109	0.000885	0.000868	0.008117	0.01537	0.004157	0.02266981	0.011081	0.0029012	0.002033	0.006936	0.020536	
A	PM10_STREX	0.001322	0.001825	0.001486	0.001442	0.000112	4.83E-05	7.55E-05	1.06793E-07	0.00011	1.26121E-05	0.003358	4.6E-05	0.000225	
A	PM25_IDLEX		0	0	0	0.000615	0.0014	0.000432	0.001551244	0.000254		0	0	0.000544	0
A	PM25_PMBW	0.002522	0.00325	0.003156	0.003174	0.025321	0.029603	0.014649	0.0286391	0.017449	0.073538444	0.0042	0.015026	0.015728	
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002319	0.002603	0.003	0.008789621	0.003	0.02669366	0.001	0.002601	0.003343	
A	PM25_RUNEX	0.000683	0.001002	0.000814	0.000799	0.007738	0.014693	0.00397	0.021686069	0.010594	0.002771724	0.001897	0.006619	0.019612	
A	PM25_STREX	0.001215	0.001678	0.001366	0.001326	0.000103	4.44E-05	6.95E-05	9.81919E-08	0.000101	1.15963E-05	0.003138	4.23E-05	0.000207	
A	ROG_DIURN	0.21818	0.428495	0.243063	0.265379	0.077874	0.045849	0.013472	1.84172E-05	0.064259	0.007266684	3.553052	0.049117	17.4365	
A	ROG_HTSK	0.054829	0.105439	0.058778	0.063163	0.017986	0.00999	0.002889	5.65292E-06	0.012608	0.001942259	3.551931	0.010044	4.01527	
A	ROG_IDLEX		0	0	0	0.016179	0.013126	0.019238	0.303812131	0.038819		0	0	0.197594	0
A	ROG_RESTL		0	0	0	0	0	0	0	0		0	0	0	0
A	ROG_RUNEX	0.003833	0.010801	0.006168	0.007041	0.042133	0.074747	0.011307	0.013101816	0.027053	0.035260883	0.864333	0.032428	0.046858	
A	ROG_RUNLS	0.164229	0.320316	0.18195	0.198932	0.109789	0.061559	0.025618	5.08328E-05	0.071214	0.007879943	3.777197	0.033051	0.100297	
A	ROG_STREX	0.176108	0.28912	0.240523	0.266456	0.06862	0.036886	0.030737	1.89291E-07	0.065202	0.007911752	1.082383	0.028959	0.083751	
A	SO2_IDLEX		0	0	0	7.19E-05	0.000127	0.001225	0.00590108	0.000836		0	0	0.001573	0
A	SO2_RUNEX	0.002108	0.002843	0.002939	0.0035	0.00604	0.006395	0.009301	0.011838117	0.011386	0.004948157	0.001834	0.008299	0.01616	
A	SO2_STREX	0.000536	0.000726	0.00074	0.000876	0.000148	8.15E-05	6.12E-05	7.97727E-08	0.000109	2.925E-05	0.00041	3.82E-05	0.000194	
A	TOG_DIURN	0.21818	0.428495	0.243063	0.265379	0.077874	0.045849	0.013472	1.84172E-05	0.064259	0.007266684	0.077847	0.049117	17.4365	
A	TOG_HTSK	0.054829	0.105439	0.058778	0.063163	0.017986	0.00999	0.002889	5.65292E-06	0.012608	0.001942259	3.551931	0.010044	4.01527	
A	TOG_IDLEX		0	0	0	0.022782	0.017307	0.037398	0.517511266	0.051351		0	0	0.324033	0
A	TOG_RESTL		0	0	0	0	0	0	0	0		0	0	0	0
A	TOG_RUNEX	0.00559	0.01576	0.008987	0.010245	0.049938	0.08578	0.021946	0.088820826	0.041436	0.670307298	1.064955	0.12208	0.057383	
A	TOG_RUNLS	0.164229	0.320316	0.18195	0.198932	0.109789	0.061559	0.025618	5.08328E-05	0.071214	0.007879943	3.777197	0.033051	0.100297	
A	TOG_STREX	0.192816	0.31655	0.263342	0.291735	0.07513	0.040386	0.033654	2.0725E-07	0.071388	0.008662372	1.177756	0.031706	0.091697	
A	N2O_IDLEX		0	0	0	0.000559	0.00168	0.020688	0.11060984	0.013055		0	0	0.02247	0
A	N2O_RUNEX	0.003026	0.005074	0.004228	0.00496	0.033011	0.069781	0.126118	0.209837595	0.149662	0.110224683	0.036508	0.105046	0.06868	
A	N2O_STREX	0.024506	0.030871	0.030812	0.031136	0.026186	0.014179	0.004371	2.51289E-06	0.01018	0.004251226	0.005917	0.004971	0.033071	

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.510485	0.033966	0.242112	0.138317	0.024764	0.006318	0.009796	0.008008	0.001058	0.000391	0.02191	0.000677	0.002196

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	1.36669963	8.65091E-06	181.8206291	0.0001534	27.34492622	0.000173
	HHDT	DSL	9332.47516	0.059072522	1038650.086	0.8761424	138855.9968	0.878928
	HHDT	ELEC	867.296134	0.005489794	89073.78651	0.0751373	10788.79384	0.068291
	HHDT	NG	945.798898	0.0059867	57575.26427	0.048567	8311.218656	0.052608
			11146.9369		1185480.957		157983.3543	
	LDA	GAS	604966.756	0.183570966	22063255.54	0.8427058	2811212.447	0.853034
	LDA	DSL	785.736083	0.000238424	22835.99255	0.0008722	3405.783464	0.001033
	LDA	ELEC	78652.5363	0.023866307	3072934.904	0.1173707	372706.1196	0.113094
	LDA	PIH	26172.3604	0.007941735	1022419.206	0.0390513	108222.7104	0.032839
			710577.389		26181445.64		3295547.06	
	LDT1	GAS	46277.3755	0.219211265	1471605.193	0.9720985	206538.8504	0.978354
	LDT1	DSL	0.2976825	1.41009E-06	11.61670684	7.674E-06	1.450740599	6.87E-06
	LDT1	ELEC	584.400803	0.002768248	24907.19098	0.0164529	2841.466135	0.01346
	LDT1	PIH	417.605146	0.001978153	17319.74422	0.0114409	1726.797277	0.00818
			47279.6791		1513843.745		211108.5645	
	LDT2	GAS	323082.846	0.206630959	11190683.1	0.9589557	1499760.755	0.959187
	LDT2	DSL	1186.95452	0.000759129	41582.88972	0.0035633	5555.72307	0.003553
	LDT2	ELEC	6972.28509	0.004459197	213284.0743	0.0182768	34399.66175	0.022001
	LDT2	PIH	5769.79514	0.003690132	224105.9303	0.0192042	23858.10292	0.015259
			337011.88		11669655.99		1563574.243	
	LHDT1	GAS	19570.9061	0.040428876	707835.4203	0.5362403	291577.3409	0.60233
	LHDT1	DSL	11359.7321	0.023466527	420788.6943	0.3187801	142891.1396	0.295179
	LHDT1	ELEC	3540.47782	0.007313792	191372.6939	0.1449797	49613.88688	0.102491
			34471.1161	0.071209196	1319996.808		484082.3674	
	LHDT2	GAS	2398.96294	0.022846215	83632.60405	0.2558501	35740.9733	0.340375
	LHDT2	DSL	5506.42149	0.052439698	197130.7369	0.6030653	69263.85526	0.659625
	LHDT2	ELEC	889.649061	0.008472459	46117.90399	0.1410846	11794.62943	0.112325
			8795.03349	0.083758372	326881.2449		105004.8286	
	MCY	GAS	30497.802	0.021909907	171904.5006	1	60995.6041	1
	MDV	GAS	179884.41	0.201947685	6112050.651	0.9361457	832074.4724	0.93413
	MDV	DSL	2377.43645	0.002669035	77762.865	0.0119105	10886.35835	0.012222
	MDV	ELEC	6739.76445	0.007566413	204828.0947	0.0313723	33186.13387	0.037256
	MDV	PIH	3530.98198	0.003964066	134310.8613	0.0205716	14600.61048	0.016391
			192532.593		6528952.472		890747.5751	
	MH	GAS	1965.07529	6.427394946	19689.47478	0.6569703	196.5861316	0.642997
	MH	DSL	1091.48198	3.570034096	10280.63759	0.3430297	109.1481981	0.357003
			3056.55727		29970.11237		305.7343297	
	MHDT	GAS	1323.54754	0.007564799	66184.1984	0.1182233	26481.53917	0.151357
	MHDT	DSL	10414.5982	0.059525135	398561.5829	0.7119412	124459.1959	0.711352
	MHDT	ELEC	1751.38082	0.010010101	89075.56723	0.1591136	22588.64919	0.129107
	MHDT	NG	146.304076	0.000836208	6002.415973	0.010722	1431.970669	0.008184
			13635.8306		559823.7645		174961.3549	
	OBUS	GAS	349.704779	0.0185066	13472.42238	0.1637431	6996.893221	0.37028
	OBUS	DSL	1070.25937	0.056638809	64993.76415	0.7899307	10996.07294	0.581919
	OBUS	ELEC	39.0057524	0.002064209	2949.661776	0.03585	780.4270931	0.041301
	OBUS	NG	13.8007107	0.000730342	861.9556433	0.0104762	122.8263249	0.0065
			1472.77061		82277.80395		18896.21958	
	SBUS	GAS	199.994297	0.017621023	9700.135642	0.3644063	799.9771865	0.070484
	SBUS	DSL	638.699802	0.056274324	13873.93807	0.5212042	9248.373128	0.814852
	SBUS	ELEC	73.3296801	0.006460904	2353.423804	0.0884114	861.5551931	0.07591
	SBUS	NG	30.3763642	0.002676389	691.5111916	0.0259781	439.849754	0.038754
			942.400143		26619.00871		11349.75526	
	UBUS	GAS	47.1714846	0.021676301	4926.10707	0.0818022	188.6859383	0.086705
	UBUS	DSL	237.574024	0.109170318	22942.16384	0.3809743	950.296097	0.436681
	UBUS	ELEC	182.473379	0.593791187	23430.88261	2.6266166	729.8935173	2.375165
	UBUS	NG	76.8255673	0.035302982	8920.556737	0.1481335	307.3022692	0.141212
			544.044455		60219.71025		2176.177822	

CalEEMod EMFAC2021 Emission Factors Input - Year 2021

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
A	CH4_IDLEX		0	0	0	0.005878	0.003619	0.01275	0.197310169	0.00759		0	0	0.071404	0
A	CH4_RUNEX	0.002995	0.008644	0.003737	0.00576	0.011435	0.00913	0.01146	0.127744184	0.010302	0.347802153	0.180174	0.094354	0.020059	
A	CH4_STREX	0.079186	0.127685	0.097709	0.126721	0.026891	0.01529	0.010157	8.78733E-08	0.019671	0.004673445	0.199348	0.004529	0.029232	
A	CO_IDLEX		0	0	0	0.199636	0.147259	0.651685	4.795241999	0.484687		0	0	1.570195	0
A	CO_RUNEX	0.831642	1.849144	1.027398	1.303174	1.150341	0.743893	0.597226	0.862882972	0.730634	4.097383982	14.15601	0.96779	2.547311	
A	CO_STREX	3.58265	6.584775	4.36593	4.939692	2.123573	1.293773	1.327042	0.000286589	2.217538	0.494362033	8.172263	0.660879	2.954274	
A	CO2_NBIO_IDLEX		0	0	0	8.984091	14.02685	165.9133	882.4780817	85.13278		0	0	194.7841	0
A	CO2_NBIO_RUNEX	266.461	341.1964	363.4042	439.9142	834.145	872.3574	1253.351	1685.130969	1432.803	1102.614688	189.7631	1079.657	1711.662	
A	CO2_NBIO_STREX	68.96997	91.82657	93.75577	112.7349	18.35215	10.90562	9.46608	0.040010794	17.142	3.329258631	52.22767	3.619354	24.30833	
A	NOX_IDLEX		0	0	0	0.054179	0.104605	1.091448	4.572619478	0.420995		0	0	1.538643	0
A	NOX_RUNEX	0.056254	0.178015	0.09872	0.158197	0.966863	1.255921	1.736671	2.783925305	1.321764	0.329361175	0.626062	3.169118	1.721593	
A	NOX_STREX	0.279573	0.453347	0.418778	0.559929	0.498071	0.284397	1.251283	2.244984032	0.880933	0.049322633	0.157064	0.448803	0.296939	
A	PM10_IDLEX		0	0	0	0.000659	0.001314	0.003616	0.004302548	0.000785		0	0	0.001697	0
A	PM10_PMBW	0.007267	0.00922	0.0089	0.009108	0.078	0.091	0.045476	0.083454451	0.049902	0.110380504	0.012	0.046013	0.044954	
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009352	0.010571	0.012	0.035115542	0.012	0.032498647	0.004	0.010977	0.013097	
A	PM10_RUNEX	0.001357	0.002347	0.001488	0.001627	0.017801	0.027446	0.021891	0.037393579	0.020829	0.006222045	0.001872	0.016773	0.03363	
A	PM10_STREX	0.002151	0.003452	0.002293	0.002544	0.000297	0.000144	0.000133	1.5625E-06	0.00015	8.36171E-06	0.003843	3.56E-05	0.000403	
A	PM25_IDLEX		0	0	0	0.000631	0.001257	0.00346	0.00411213	0.000751		0	0	0.001623	0
A	PM25_PMBW	0.002543	0.003227	0.003115	0.003188	0.0273	0.03185	0.015916	0.029209058	0.017466	0.038633176	0.0042	0.016104	0.015734	
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002338	0.002643	0.003	0.008778886	0.003	0.008124662	0.001	0.002744	0.003274	
A	PM25_RUNEX	0.00125	0.002161	0.001369	0.0015	0.016984	0.026235	0.020936	0.035772344	0.019919	0.005949903	0.001755	0.016033	0.032115	
A	PM25_STREX	0.001978	0.003175	0.002108	0.00234	0.000273	0.000132	0.000122	1.43666E-06	0.000138	7.68828E-06	0.003626	3.27E-05	0.000371	
A	ROG_DIURN	0.309455	0.678142	0.31136	0.378396	0.148603	0.080683	0.034629	0.00045564	0.065453	0.013225285	3.986797	0.020936	38.94924	
A	ROG_HTSK	0.093693	0.191035	0.090889	0.109528	0.04011	0.021848	0.008675	0.000135519	0.018066	0.004594839	3.559817	0.00631	11.50157	
A	ROG_IDLEX		0	0	0	0.024216	0.017714	0.030685	0.336069813	0.041898		0	0	0.173119	0
A	ROG_RESTL		0	0	0	0	0	0	0	0		0	0	0	0
A	ROG_RUNEX	0.012242	0.039367	0.015345	0.02644	0.114665	0.13931	0.071106	0.050011766	0.072225	0.063168523	1.214328	0.06436	0.123178	
A	ROG_RUNLS	0.235045	0.558153	0.234635	0.29352	0.21251	0.11518	0.071045	0.001220861	0.073142	0.008128969	3.717016	0.013553	0.256068	
A	ROG_STREX	0.377534	0.678454	0.469079	0.663137	0.136176	0.076777	0.059255	4.777E-07	0.104549	0.017217717	1.494194	0.025886	0.130451	
A	SO2_IDLEX		0	0	0	8.75E-05	0.000135	0.001548	0.007873092	0.000807		0	0	0.001779	0
A	SO2_RUNEX	0.002634	0.003373	0.003592	0.004346	0.008157	0.008418	0.011904	0.015353196	0.01373	0.009480477	0.001876	0.010038	0.0168	
A	SO2_STREX	0.000682	0.000908	0.000927	0.001114	0.000181	0.000108	9.36E-05	3.95547E-07	0.000169	3.29131E-05	0.000516	3.58E-05	0.00024	
A	TOG_DIURN	0.309455	0.678142	0.31136	0.378396	0.148603	0.080683	0.034629	0.00045564	0.065453	0.013225285	0.088217	0.020936	38.94924	
A	TOG_HTSK	0.093693	0.191035	0.090889	0.109528	0.04011	0.021848	0.008675	0.000135519	0.018066	0.004594839	3.559817	0.00631	11.50157	
A	TOG_IDLEX		0	0	0	0.034526	0.024219	0.047486	0.565207661	0.055443		0	0	0.282561	0
A	TOG_RESTL		0	0	0	0	0	0	0	0		0	0	0	0
A	TOG_RUNEX	0.017827	0.057359	0.022368	0.037733	0.143496	0.163838	0.092465	0.183116743	0.093271	0.418504057	1.441721	0.168459	0.168335	
A	TOG_RUNLS	0.235045	0.558153	0.234635	0.29352	0.21251	0.11518	0.071045	0.001220861	0.073142	0.008128969	3.717016	0.013553	0.256068	
A	TOG_STREX	0.413351	0.742816	0.513582	0.726008	0.149096	0.084062	0.064876	5.23021E-07	0.114468	0.018851233	1.623911	0.028342	0.142828	
A	N2O_IDLEX		0	0	0	0.000642	0.001673	0.025499	0.14139888	0.011957		0	0	0.026112	0
A	N2O_RUNEX	0.005403	0.01215	0.007689	0.011539	0.043708	0.084061	0.162967	0.268435053	0.156939	0.166429843	0.041922	0.13813	0.071367	
A	N2O_STREX	0.033082	0.041997	0.041738	0.047009	0.037896	0.021819	0.006072	2.51656E-05	0.016155	0.007221707	0.009146	0.003776	0.029581	

CalEEMod EMFAC2021 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.540455	0.045763	0.219871	0.122171	0.022751	0.005301	0.009461	0.006933	0.001073	0.000427	0.022127	0.000675	0.002992

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	4.91167053	4.04903E-05	108.3320922	0.0001063	98.27270392	0.00081
	HHDT	DSL	7945.65267	0.065501476	974275.6038	0.9558813	115958.8769	0.955929
	HHDT	NG	604.485819	0.004983192	44859.31586	0.0440124	5247.791382	0.043261
			8555.05016		1019243.252		121304.941	
	LDA	GAS	606787.977	0.195261961	22328684.33	0.9006487	2819030.851	0.907153
	LDA	DSL	2097.28457	0.000674898	65438.92679	0.0026395	9106.700913	0.002931
	LDA	ELEC	45687.5929	0.014702086	1848394.432	0.0745567	228454.0271	0.073516
	LDA	PIH	12325.7494	0.003966377	549262.6478	0.022155	50966.97387	0.016401
			666898.604		24791780.34		3107558.553	
	LDT1	GAS	56250.2008	0.223198723	1810348.739	0.9961671	251042.1447	0.996126
	LDT1	DSL	32.0833283	0.000127305	503.068528	0.0002768	96.1477587	0.000382
	LDT1	ELEC	176.877398	0.000701843	5945.758431	0.0032717	835.4181192	0.003315
	LDT1	PIH	10.8247161	4.29521E-05	516.8070657	0.0002844	44.76020107	0.000178
			56469.9862		1817314.373		252018.4708	
	LDT2	GAS	269286.094	0.211942967	9644865.293	0.9914313	1261290.796	0.992705
	LDT2	DSL	883.652045	0.000695483	33892.88704	0.003484	4258.527289	0.003352
	LDT2	ELEC	295.513362	0.000232585	10300.33172	0.0010588	1512.362029	0.00119
	LDT2	PIH	845.839778	0.000665722	39165.02709	0.0040259	3497.54748	0.002753
			271311.099		9728223.539		1270559.233	
	LHDT1	GAS	18933.4215	0.047685632	672783.0793	0.6620799	282079.7689	0.710445
	LHDT1	DSL	9139.77716	0.023019403	343382.9252	0.3379201	114966.8989	0.289555
			28073.1986	0.070705035	1016166.005		397046.6678	
	LHDT2	GAS	2465.99966	0.028023685	87553.13797	0.3573656	36739.72062	0.417511
	LHDT2	DSL	4074.91137	0.046307401	157442.8322	0.6426344	51257.25882	0.582489
			6540.91103	0.074331086	244995.9702		87996.97944	
	MCY	GAS	27304.1711	0.022127328	160382.2212	1	54608.34222	1
	MDV	GAS	147596.411	0.211715716	5051242.336	0.9765837	682293.6698	0.978698
	MDV	DSL	2291.71379	0.003287287	86017.73007	0.0166303	11013.96254	0.015799
	MDV	ELEC	256.698991	0.000368215	9069.305494	0.0017534	1316.884036	0.001889
	MDV	PIH	609.386777	0.000874119	26030.39053	0.0050326	2519.814322	0.003614
			150754.211		5172359.762		697144.3307	
	MH	GAS	2769.69903	7.499882855	23630.01423	0.7256563	277.0806908	0.750288
	MH	DSL	922.182812	2.497117192	8933.6317	0.2743437	92.21828121	0.249712
			3691.88184		32563.64593		369.2989721	
	MHDT	GAS	1442.7352	0.009599056	67829.4691	0.1367234	28866.2459	0.192058
	MHDT	DSL	10153.189	0.067552959	424633.4026	0.8559304	120691.3986	0.803005
	MHDT	NG	78.3343314	0.000521188	3644.536924	0.0073463	742.048751	0.004937
			11674.2586		496107.4086		150299.6932	
	OBUS	GAS	483.683802	0.026426627	22502.67818	0.2680743	9677.545507	0.528744
	OBUS	DSL	834.688025	0.045604151	61084.28402	0.7276969	8576.672799	0.468596
	OBUS	NG	5.46937064	0.000298825	354.9736968	0.0042288	48.67739869	0.00266
			1323.8412		83941.93589		18302.8957	
	SBUS	GAS	153.636659	0.015155052	7565.400387	0.32898	614.546637	0.06062
	SBUS	DSL	657.673104	0.064874295	15431.13438	0.67102	9523.106546	0.93938
	SBUS	NG	21.6972703	0.002140266	560.930124	0.0243919	314.1764736	0.030991
			833.007034		22996.53477		10137.65318	
	UBUS	GAS	45.675	0.021676301	4769.829538	0.0818022	182.7000001	0.086705
	UBUS	DSL	434.626879	0.206263883	48602.55774	0.8335304	1738.507515	0.825056
	UBUS	ELEC	5.04675694	0.03044884	199.0027319	0.0420024	20.18702775	0.121795
	UBUS	NG	41.4363646	0.019664742	4737.889242	0.0812545	165.7454582	0.078659
			526.785		58309.27925		2107.140001	

Construction Emissions and Health Risk Calculations

Construction Emissions for Health Risk Modeling District Utilities

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Phase	Construction Area	Area Source	DPM (ton/year)	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
					(lb/yr)	(lb/hr)	(g/s)		
2023	Phase 1: R1+R2	R1-R2	DP1_R1-R2_23	0.3112	622.5	0.18137	2.29E-02	24,144.4	9.46E-07
2023	Phase 1: R6 Affordable	R6	DP1_R6_23	0.1246	249.1	0.07259	9.15E-03	6,896.4	1.33E-06
					0.0				
2024	Phase 1: R1+R2	R1-R2	DP1_R1-R2_24	0.0630	125.9	0.03669	4.62E-03	24,144.4	1.91E-07
2024	Phase 1: R6 Affordable	R6	DP1_R6_24	0.0293	58.5	0.01705	2.15E-03	6,896.4	3.12E-07
2024	Phase 1: Infrastructure R1+R2	R1-R2	DP1I_R1-2_24	0.0078	15.6	0.00455	5.73E-04	24,144.4	2.37E-08
2024	Phase 1: Infrastructure R6 Aff	R6	DP1I_R6_24	0.0022	4.5	0.00130	1.64E-04	6,896.4	2.37E-08
2024	Phase 2: O1 & O2	O1	DP2_O1_24	0.0125	24.9	0.00726	9.15E-04	17,017.0	5.38E-08
2024	Phase 2: O1 & O2	O2	DP2_O2_24	0.0135	27.0	0.00786	9.90E-04	18,426.7	5.38E-08
2025	Phase 1: R1+R2	R1-R2	DP1_R1-R2_25	0.0107	21.5	0.00626	7.88E-04	24,144.4	3.27E-08
2025	Phase 1: R6 Affordable	R6	DP1_R6_25	0.0012	2.3	0.00067	8.50E-05	6,896.4	1.23E-08
2025	Phase 1: Infrastructure R1+R2	R1-R2	DP1I_R1-2_25	0.0109	21.9	0.00637	8.03E-04	24,144.4	3.32E-08
2025	Phase 1: Infrastructure R6 Aff	R6	DP1I_R6_25	0.0031	6.2	0.00182	2.29E-04	6,896.4	3.32E-08
2025	Phase 2: O1 & O2	O1	DP2_O1_25	0.1327	265.4	0.07732	9.74E-03	17,017.0	5.73E-07
2025	Phase 2: O1 & O2	O2	DP2_O2_25	0.1437	287.4	0.08373	1.05E-02	18,426.7	5.73E-07
						0.00000	0.00E+00		
2026	Phase 2: O1 & O2	O1	DP2_O1_26	0.0364	72.8	0.02120	2.67E-03	17,017.0	1.57E-07
2026	Phase 2: O1 & O2	O2	DP2_O2_26	0.0394	78.8	0.02295	2.89E-03	18,426.7	1.57E-07
2026	Phase 2: Infrastructure O1 & O2	O1	DP2_I_O1_26	0.0065	12.9	0.00376	4.74E-04	17,017.0	2.78E-08
2026	Phase 2: Infrastructure O1 & O2	O2	DP2_I_O2_26	0.0070	14.0	0.00407	5.13E-04	18,426.7	2.78E-08
2026	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_26	0.2543	508.6	0.14820	1.87E-02	29,349.6	6.36E-07
2026	Phase 3: R4 Affordable	R4A	DP3_R4A_26	0.0170	34.1	0.00993	1.25E-03	11,500.8	1.09E-07
2026	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_26	0.2696	539.1	0.15709	1.98E-02	67,575.5	2.93E-07
2027	Phase 2: O1 & O2	O1	DP2_O1_27	0.0145	29.1	0.00847	1.07E-03	17,017.0	6.27E-08
2027	Phase 2: O1 & O2	O2	DP2_O2_27	0.0157	31.5	0.00917	1.16E-03	18,426.7	6.27E-08
2027	Phase 2: Infrastructure O1 & O2	O1	DP2_I_O1_27	0.0104	20.8	0.00606	7.64E-04	17,017.0	4.49E-08
2027	Phase 2: Infrastructure O1 & O2	O2	DP2_I_O2_27	0.0113	22.5	0.00656	8.27E-04	18,426.7	4.49E-08
2027	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_27	0.0727	145.4	0.04237	5.34E-03	29,349.6	1.82E-07
2027	Phase 3: R4 Affordable	R4A	DP3_R4A_27	0.0993	198.5	0.05785	7.29E-03	11,500.8	6.34E-07
2027	Phase 3: Infrastructure R3+R4+R5	R3-R5	DP3I_R3-5_27	0.0172	34.3	0.01000	1.26E-03	29,349.6	4.29E-08
2027	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_27	0.0855	171.0	0.04982	6.28E-03	67,575.5	9.29E-08
2028	Phase 2: O1 & O2	O1	DP2_O1_28	0.0199	39.8	0.01161	1.46E-03	17,017.0	8.59E-08
2028	Phase 2: O1 & O2	O2	DP2_O2_28	0.0216	43.1	0.01257	1.58E-03	18,426.7	8.59E-08
2028	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_28	0.0410	82.1	0.02391	3.01E-03	29,349.6	1.03E-07
2028	Phase 3: R4 Affordable	R4A	DP3_R4A_28	0.0198	39.7	0.01156	1.46E-03	11,500.8	1.27E-07
2028	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_28	0.1201	240.2	0.06999	8.82E-03	67,575.5	1.31E-07
2028	Phase 4: Infrastructure O3-O5+P1+P2	O3-O5&P1-P2	DP4_I_O-P_28	0.0114	22.9	0.00667	8.40E-04	67,575.5	1.24E-08
2029	Phase 2: O1 & O2	O1	DP2_O1_29	0.0076	15.3	0.00445	5.60E-04	17,017.0	3.29E-08
2029	Phase 2: O1 & O2	O2	DP2_O2_29	0.0083	16.5	0.00482	6.07E-04	18,426.7	3.29E-08
2029	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_29	0.0320	64.0	0.01866	2.35E-03	29,349.6	8.01E-08
2029	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_29	0.0322	64.4	0.01876	2.36E-03	67,575.5	3.50E-08
2030	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_30	0.0008	1.6	0.00048	6.03E-05	29,349.6	2.05E-09
2030	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_30	0.0137	27.5	0.00800	1.01E-03	67,575.5	1.49E-08
2031	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_31	0.0041	8.2	0.00239	3.01E-04	67,575.5	4.46E-09
Total				2.16	4311.4	1.2562	0.1583		

Operation Hours

hr/day = 11 (7am - 6pm Mon-Sat)
days/yr = 312
hours/year = 3432

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Phase	Construction Area	Area Source	PM2.5 Emissions				Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
				(ton/year)	(lb/yr)	(lb/hr)	(g/s)		
2023	Phase 1: R1+R2	R1-R2	FP1_R1-R2_23	0.7288	1457.7	0.42473	5.35E-02	24,144	2.22E-06
2023	Phase 1: R6 Affordable	R6	FP1_R6_23	0.3130	626.1	0.18243	2.30E-02	6,896	3.33E-06
2024	Phase 1: R1+R2	R1-R2	FP1_R1-R2_24	0.0076	15.2	0.00443	5.58E-04	24,144	2.31E-08
2024	Phase 1: R6 Affordable	R6	FP1_R6_24	0.0015	3.1	0.00090	1.14E-04	6,896	1.65E-08
2024	Phase 1: Infrastructure R1+R2	R1-R2	FP1I_R1_2_24	0.00005	0.1	0.00003	3.91E-06	24,144	1.62E-10
2024	Phase 1: Infrastructure R6 Aff	R6	FP1I_R6_24	0.00002	0.0	0.00001	1.12E-06	6,896	1.62E-10
2024	Phase 2: O1 & O2	O1	FP2_O1_24	0.00378	7.6	0.00220	2.78E-04	17,017	1.63E-08
2024	Phase 2: O1 & O2	O2	FP2_O2_24	0.00410	8.2	0.00239	3.01E-04	18,427	1.63E-08
2025	Phase 1: R1+R2	R1-R2	FP1_R1-R2_25	0.00249	5.0	0.00145	1.83E-04	24,144	7.58E-09
2025	Phase 1: R6 Affordable	R6	FP1_R6_25	0.00027	0.5	0.00016	1.96E-05	6,896	2.84E-09
2025	Phase 1: Infrastructure R1+R2	R1-R2	FP1I_R1-2_25	0.00008	0.2	0.00005	6.11E-06	24,144	2.53E-10
2025	Phase 1: Infrastructure R6 Aff	R6	FP1I_R6_25	0.00002	0.0	0.00001	1.75E-06	6,896	2.53E-10
2025	Phase 2: O1 & O2	O1	FP2_O1_25	0.47818	956.4	0.27866	3.51E-02	17,017	2.06E-06
2025	Phase 2: O1 & O2	O2	FP2_O2_25	0.51779	1035.6	0.30174	3.80E-02	18,427	2.06E-06
2026	Phase 2: O1 & O2	O1	FP2_O1_26	0.00258	5.2	0.00150	1.89E-04	17,017	1.11E-08
2026	Phase 2: O1 & O2	O2	FP2_O2_26	0.00279	5.6	0.00163	2.05E-04	18,427	1.11E-08
2026	Phase 2: Infrastructure O1 & O2	O1	FP2_I_O1_26	0.00004	0.1	0.00002	3.10E-06	17,017	1.82E-10
2026	Phase 2: Infrastructure O1 & O2	O2	FP2_I_O2_26	0.00005	0.1	0.00003	3.36E-06	18,427	1.82E-10
2026	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_26	0.92516	1850.3	0.53914	6.79E-02	29,350	2.31E-06
2026	Phase 3: R4 Affordable	R4A	FP3_R4A_26	0.00212	4.2	0.00124	1.56E-04	11,501	1.35E-08
2026	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_26	0.83080	1661.6	0.48415	6.10E-02	67,576	9.03E-07
2027	Phase 2: O1 & O2	O1	FP2_O1_27	0.00258	5.2	0.00150	1.89E-04	17,017	1.11E-08
2027	Phase 2: O1 & O2	O2	FP2_O2_27	0.00279	5.6	0.00163	2.05E-04	18,427	1.11E-08
2027	Phase 2: Infrastructure O1 & O2	O1	FP2_I_O1_27	0.00007	0.1	0.00004	4.98E-06	17,017	2.93E-10
2027	Phase 2: Infrastructure O1 & O2	O2	FP2_I_O2_27	0.00007	0.1	0.00004	5.40E-06	18,427	2.93E-10
2027	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_27	0.01036	20.7	0.00604	7.61E-04	29,350	2.59E-08
2027	Phase 3: R4 Affordable	R4A	FP3_R4A_27	0.29508	590.2	0.17196	2.17E-02	11,501	1.88E-06
2027	Phase 3: Infrastructure R3+R4+R5	R3-R5	FP3I_R3_5_27	0.00013	0.3	0.00008	9.66E-06	29,350	3.29E-10
2027	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_27	0.00717	14.3	0.00418	5.26E-04	67,576	7.79E-09
2028	Phase 2: O1 & O2	O1	FP2_O1_28	0.00258	5.2	0.00151	1.90E-04	17,017	1.11E-08
2028	Phase 2: O1 & O2	O2	FP2_O2_28	0.00280	5.6	0.00163	2.05E-04	18,427	1.11E-08
2028	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_28	0.01039	20.8	0.00605	7.63E-04	29,350	2.60E-08
2028	Phase 3: R4 Affordable	R4A	FP3_R4A_28	0.00167	3.3	0.00097	1.23E-04	11,501	1.07E-08
2028	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_28	0.00719	14.4	0.00419	5.28E-04	67,576	7.81E-09
2028	Phase 4: Infrastructure O3-O5+P1+P2	O3-O5&P1-P2	FP4_I_O-P_28	0.00009	0.2	0.00005	6.44E-06	67,576	9.53E-11
2029	Phase 2: O1 & O2	O1	FP2_O1_29	0.00136	2.7	0.00079	9.95E-05	17,017	5.85E-09
2029	Phase 2: O1 & O2	O2	FP2_O2_29	0.00147	2.9	0.00086	1.08E-04	18,427	5.85E-09
2029	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_29	0.01036	20.7	0.00604	7.61E-04	29,350	2.59E-08
2029	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_29	0.00717	14.3	0.00418	5.26E-04	67,576	7.79E-09
2030	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_30	0.00060	1.2	0.00035	4.38E-05	29,350	1.49E-09
2030	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_30	0.00717	14.3	0.00418	5.26E-04	67,576	7.79E-09
2031	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_31	0.00214	4.3	0.00125	1.57E-04	67,576	2.33E-09
Total				4.19	8389.1	2.4444	0.3080		

DPM Emissions and Modeling Emission Rates - Mitigated

Construction Year	Phase	Construction Area	Area Source	DPM (ton/year)	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
					(lb/yr)	(lb/hr)	(g/s)		
2023	Phase 1: R1+R2	R1-R2	DP1_R1-R2_23	0.0290	57.9	0.01688	2.13E-03	24,144.4	8.81E-08
2023	Phase 1: R6 Affordable	R6	DP1_R6_23	0.0088	17.7	0.00516	6.50E-04	6,896.4	9.42E-08
						0.00000			
2024	Phase 1: R1+R2	R1-R2	DP1_R1-R2_24	0.0106	21.1	0.00616	7.76E-04	24,144.4	3.21E-08
2024	Phase 1: R6 Affordable	R6	DP1_R6_24	0.0030	6.0	0.00175	2.20E-04	6,896.4	3.20E-08
2024	Phase 1: Infrastructure R1+R2	R1-R2	DP11_R1-2_24	0.0006	1.2	0.00035	4.43E-05	24,144.4	1.83E-09
2024	Phase 1: Infrastructure R6 Aff	R6	DP11_R6_24	0.0002	0.3	0.00010	1.26E-05	6,896.4	1.83E-09
2024	Phase 2: O1 & O2	O1	DP2_O1_24	0.0014	2.7	0.00079	9.97E-05	17,017.0	5.86E-09
2024	Phase 2: O1 & O2	O2	DP2_O2_24	0.0015	2.9	0.00086	1.08E-04	18,426.7	5.86E-09
2025	Phase 1: R1+R2	R1-R2	DP1_R1-R2_25	0.0029	5.8	0.00168	2.12E-04	24,144.4	8.78E-09
2025	Phase 1: R6 Affordable	R6	DP1_R6_25	0.0003	0.6	0.00016	2.04E-05	6,896.4	2.95E-09
2025	Phase 1: Infrastructure R1+R2	R1-R2	DP11_R1-2_25	0.0009	1.9	0.00055	6.88E-05	24,144.4	2.85E-09
2025	Phase 1: Infrastructure R6 Aff	R6	DP11_R6_25	0.0003	0.5	0.00016	1.97E-05	6,896.4	2.85E-09
2025	Phase 2: O1 & O2	O1	DP2_O1_25	0.0155	31.1	0.00906	1.14E-03	17,017.0	6.70E-08
2025	Phase 2: O1 & O2	O2	DP2_O2_25	0.0168	33.7	0.00981	1.24E-03	18,426.7	6.70E-08
2026	Phase 2: O1 & O2	O1	DP2_O1_26	0.0059	11.8	0.00343	4.32E-04	17,017.0	2.54E-08
2026	Phase 2: O1 & O2	O2	DP2_O2_26	0.0064	12.8	0.00372	4.68E-04	18,426.7	2.54E-08
2026	Phase 2: Infrastructure O1 & O2	O1	DP2_I_O1_26	0.0006	1.1	0.00033	4.10E-05	17,017.0	2.41E-09
2026	Phase 2: Infrastructure O1 & O2	O2	DP2_I_O2_26	0.0006	1.2	0.00035	4.44E-05	18,426.7	2.41E-09
2026	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_26	0.0301	60.2	0.01755	2.21E-03	29,349.6	7.53E-08
2026	Phase 3: R4 Affordable	R4A	DP3_R4A_26	0.0016	3.2	0.00094	1.18E-04	11,500.8	1.03E-08
2026	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_26	0.0276	55.1	0.01606	2.02E-03	67,575.5	3.00E-08
2027	Phase 2: O1 & O2	O1	DP2_O1_27	0.0038	7.7	0.00224	2.82E-04	17,017.0	1.66E-08
2027	Phase 2: O1 & O2	O2	DP2_O2_27	0.0042	8.3	0.00243	3.06E-04	18,426.7	1.66E-08
2027	Phase 2: Infrastructure O1 & O2	O1	DP2_I_O1_27	0.0009	1.8	0.00053	6.62E-05	17,017.0	3.89E-09
2027	Phase 2: Infrastructure O1 & O2	O2	DP2_I_O2_27	0.0010	2.0	0.00057	7.17E-05	18,426.7	3.89E-09
2027	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_27	0.0139	27.7	0.00808	1.02E-03	29,349.6	3.47E-08
2027	Phase 3: R4 Affordable	R4A	DP3_R4A_27	0.0093	18.6	0.00543	6.84E-04	11,500.8	5.95E-08
2027	Phase 3: Infrastructure R3+R4+R5	R3-R5	DP31_R3-5_27	0.0015	3.0	0.00086	1.08E-04	29,349.6	3.69E-09
2027	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_27	0.0136	27.1	0.00791	9.96E-04	67,575.5	1.47E-08
2028	Phase 2: O1 & O2	O1	DP2_O1_28	0.0042	8.4	0.00245	3.09E-04	17,017.0	1.82E-08
2028	Phase 2: O1 & O2	O2	DP2_O2_28	0.0046	9.1	0.00266	3.35E-04	18,426.7	1.82E-08
2028	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_28	0.0104	20.8	0.00605	7.63E-04	29,349.6	2.60E-08
2028	Phase 3: R4 Affordable	R4A	DP3_R4A_28	0.0028	5.6	0.00162	2.04E-04	11,500.8	1.77E-08
2028	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_28	0.0160	32.0	0.00931	1.17E-03	67,575.5	1.74E-08
2028	Phase 4: Infrastructure O3-O5+P1+P2	O3-O5&P1-P2	DP4_I_O-P_28	0.0010	2.0	0.00057	7.22E-05	67,575.5	1.07E-09
2029	Phase 2: O1 & O2	O1	DP2_O1_29	0.0020	4.0	0.00118	1.49E-04	17,017.0	8.73E-09
2029	Phase 2: O1 & O2	O2	DP2_O2_29	0.0022	4.4	0.00128	1.61E-04	18,426.7	8.73E-09
2029	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_29	0.0098	19.5	0.00568	7.16E-04	29,349.6	2.44E-08
2029	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_29	0.0092	18.4	0.00536	6.75E-04	67,575.5	9.99E-09
2030	Phase 3: R3+R4b+R5	R3-R5	DP3_R3-R5_30	0.0006	1.1	0.00033	4.12E-05	29,349.6	1.40E-09
2030	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_30	0.0091	18.3	0.00532	6.70E-04	67,575.5	9.92E-09
2031	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	DP4_O-P_31	0.0027	5.5	0.00159	2.00E-04	67,575.5	2.96E-09
Total				0.29	574.1	0.1673	0.0211		

Operation Hours

hr/day = 11 (7am - 6pm Mon-Sat)
 days/yr = 312
 hours/year = 3432

PM2.5 Fugitive Dust Emissions for Modeling - Mitigated

Construction Year	Phase	Construction Area	Area Source	PM2.5 Emissions				Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
				(ton/year)	(lb/yr)	(lb/hr)	(g/s)		
2023	Phase 1: R1+R2	R1-R2	FP1_R1-R2_23	0.1493	298.6	0.08700	1.10E-02	24,144	4.54E-07
2023	Phase 1: R6 Affordable	R6	FP1_R6_23	0.0622	124.5	0.03627	4.57E-03	6,896	6.63E-07
						0.00000			
2024	Phase 1: R1+R2	R1-R2	FP1_R1-R2_24	0.0076	15.2	0.00443	5.58E-04	24,144	2.31E-08
2024	Phase 1: R6 Affordable	R6	FP1_R6_24	0.0015	3.1	0.00090	1.14E-04	6,896	1.65E-08
2024	Phase 1: Infrastructure R1+R2	R1-R2	FP1I_R1_2_24	0.00005	0.1	0.00003	3.91E-06	24,144	1.62E-10
2024	Phase 1: Infrastructure R6 Aff	R6	FP1I_R6_24	0.00002	0.0	0.00001	1.12E-06	6,896	1.62E-10
2024	Phase 2: O1 & O2	O1	FP2_O1_24	0.0011	2.2	0.00063	7.96E-05	17,017	4.68E-09
2024	Phase 2: O1 & O2	O2	FP2_O2_24	0.0012	2.3	0.00068	8.61E-05	18,427	4.68E-09
2025	Phase 1: R1+R2	R1-R2	FP1_R1-R2_25	0.00249	5.0	0.00145	1.83E-04	24,144	7.58E-09
2025	Phase 1: R6 Affordable	R6	FP1_R6_25	0.00027	0.5	0.00016	1.96E-05	6,896	2.84E-09
2025	Phase 1: Infrastructure R1+R2	R1-R2	FP1I_R1-2_25	0.00008	0.2	0.00005	6.11E-06	24,144	2.53E-10
2025	Phase 1: Infrastructure R6 Aff	R6	FP1I_R6_25	0.00002	0.0	0.00001	1.75E-06	6,896	2.53E-10
2025	Phase 2: O1 & O2	O1	FP2_O1_25	0.0953	190.7	0.05556	7.00E-03	17,017	4.11E-07
2025	Phase 2: O1 & O2	O2	FP2_O2_25	0.1032	206.5	0.06016	7.58E-03	18,427	4.11E-07
2026	Phase 2: O1 & O2	O1	FP2_O1_26	0.00258	5.2	0.00150	1.89E-04	17,017	1.11E-08
2026	Phase 2: O1 & O2	O2	FP2_O2_26	0.00279	5.6	0.00163	2.05E-04	18,427	1.11E-08
2026	Phase 2: Infrastructure O1 & O2	O1	FP2_I_O1_26	0.00004	0.1	0.00002	3.10E-06	17,017	1.82E-10
2026	Phase 2: Infrastructure O1 & O2	O2	FP2_I_O2_26	0.00005	0.1	0.00003	3.36E-06	18,427	1.82E-10
2026	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_26	0.188758	377.5	0.11000	1.39E-02	29,350	4.72E-07
2026	Phase 3: R4 Affordable	R4A	FP3_R4A_26	0.000640	1.3	0.00037	4.70E-05	11,501	4.09E-09
2026	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_26	0.166401	332.8	0.09697	1.22E-02	67,576	1.81E-07
2027	Phase 2: O1 & O2	O1	FP2_O1_27	0.00258	5.2	0.00150	1.89E-04	17,017	1.11E-08
2027	Phase 2: O1 & O2	O2	FP2_O2_27	0.00279	5.6	0.00163	2.05E-04	18,427	1.11E-08
2027	Phase 2: Infrastructure O1 & O2	O1	FP2_I_O1_27	0.00007	0.1	0.00004	4.98E-06	17,017	2.93E-10
2027	Phase 2: Infrastructure O1 & O2	O2	FP2_I_O2_27	0.00007	0.1	0.00004	5.40E-06	18,427	2.93E-10
2027	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_27	0.010358	20.7	0.00604	7.61E-04	29,350	2.59E-08
2027	Phase 3: R4 Affordable	R4A	FP3_R4A_27	0.059278	118.6	0.03454	4.35E-03	11,501	3.78E-07
2027	Phase 3: Infrastructure R3+R4+R5	R3-R5	FP3I_R3_5_27	0.000132	0.3	0.00008	9.66E-06	29,350	3.29E-10
2027	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_27	0.007169	14.3	0.00418	5.26E-04	67,576	7.79E-09
2028	Phase 2: O1 & O2	O1	FP2_O1_28	0.00258	5.2	0.00151	1.90E-04	17,017	1.11E-08
2028	Phase 2: O1 & O2	O2	FP2_O2_28	0.00280	5.6	0.00163	2.05E-04	18,427	1.11E-08
2028	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_28	0.010386	20.8	0.00605	7.63E-04	29,350	2.60E-08
2028	Phase 3: R4 Affordable	R4A	FP3_R4A_28	0.001671	3.3	0.00097	1.23E-04	11,501	1.07E-08
2028	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_28	0.007188	14.4	0.00419	5.28E-04	67,576	7.81E-09
2028	Phase 4: Infrastructure O3-O5+P1+P2	O3-O5&P1-P2	FP4_I_O-P_28	0.000088	0.2	0.00005	6.44E-06	67,576	9.53E-11
2029	Phase 2: O1 & O2	O1	FP2_O1_29	0.00136	2.7	0.00079	9.95E-05	17,017	5.85E-09
2029	Phase 2: O1 & O2	O2	FP2_O2_29	0.00147	2.9	0.00086	1.08E-04	18,427	5.85E-09
2029	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_29	0.010358	20.7	0.00604	7.61E-04	29,350	2.59E-08
2029	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_29	0.007169	14.3	0.00418	5.26E-04	67,576	7.79E-09
2030	Phase 3: R3+R4b+R5	R3-R5	FP3_R3-R5_30	0.000596	1.2	0.00035	4.38E-05	29,350	1.49E-09
2030	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_30	0.007169	14.3	0.00418	5.26E-04	67,576	7.79E-09
2031	Phase 4: O3-O5+P1+P2	O3-O5&P1-P2	FP4_O-P_31	0.002141	4.3	0.00125	1.57E-04	67,576	2.33E-09
Total				0.92	1846.2	0.5379	0.0678		

Google Middlefield - Project Construction
Dewatering Pumps - Emissions and Modeling Information
Unmitigated

Pump	Site Location	Operation Year	Source Name	Base Elevation (m)	Location UTM Coordinates		DPM Emissions		Modeled Emission Rate (g/s)
					X (m)	Y (m)	Annual ^a Emissions (ton/yr)	Average ^b Hourly Emissions (lb/hr)	
W2	R2	2023	W2P1_R2_23	17.7	583862.23	4139359.52	0.0326	7.43E-03	9.36E-04
W3	R6	2023	W3P1_R6_23	17.7	584264.84	4139171.23	0.0283	6.46E-03	8.14E-04
W4	O1	2025	W4_P2_O1_25	17.4	583896.95	4139484.38	0.0129	2.95E-03	3.71E-04
W4	O1	2026	W4_P2_O1_26	17.4	583896.95	4139484.38	0.0171	3.90E-03	4.92E-04
W5a	R3	2026	W5A_P3_R3_26	16.8	584151.34	4139410.93	0.0080	1.83E-03	2.31E-04
W5b	R4	2026	W5B_P3_R4_26	17.4	584217.44	4139356.85	0.0080	1.83E-03	2.31E-04
W5c	R5	2026	W5C_P3_R5_26	16.8	584300.90	4139312.12	0.0080	1.83E-03	2.31E-04
W5a	R3	2027	W5A_P3_R3_27	16.8	584151.34	4139410.93	0.0102	2.33E-03	2.93E-04
W5b	R4	2027	W5B_P3_R4_27	17.4	584217.44	4139356.85	0.0102	2.33E-03	2.93E-04
W5c	R5	2027	W5C_P3_R5_27	16.8	584300.90	4139312.12	0.0102	2.33E-03	2.93E-04
W6	R4Aff	2027	W6_P3_R4A_27	17.1	584183.38	4139314.12	0.0149	3.40E-03	4.29E-04
W7	O5/P1	2026	W7_P4_O5_26	14.6	584424.42	4139531.79	0.0059	1.35E-03	1.70E-04
W7	O5/P1	2027	W7_P4_O5_27	14.6	584424.42	4139531.79	0.0144	3.29E-03	4.14E-04

a Emissions calculated using CalEEMod emission factors and a load factor of 0.74

b Assumes pumps can be operated any day or hour of the year.

Point Source Stack Parameters*	
Stack Discharge Height *(ft)	12
Stack Discharge Height *(m)	3.66
Stack Diameter** (ft)	0.60
Stack Diameter** (m)	0.18
Stack Exit Velocity** (ft/sec)	149
Stack Exit Velocity** (m/sec)	45.3
Exhaust Temperature** (F)	872

* BAAQMD default diesel engine parameters

Google Middlefield - Project Construction
Dewatering Pumps - Emissions and Modeling Information
Mitigated

Pump	Site Location	Operation Year	Source Name	Base Elevation (m)	Location UTM Coordinates		DPM Emissions		Modeled Emission Rate (g/s)
					X (m)	Y (m)	Annual ^a Emissions (ton/yr)	Average ^b Hourly Emissions (lb/hr)	
W2	R2	2023	W2P1_R2_23	17.7	583862.23	4139359.52	0.0021	4.79E-04	6.04E-05
W3	R6	2023	W3P1_R6_23	17.7	584264.84	4139171.23	0.0018	4.11E-04	5.18E-05
W4	O1	2025	W4_P2_O1_25	17.4	583896.95	4139484.38	0.0011	2.51E-04	3.16E-05
W4	O1	2026	W4_P2_O1_26	17.4	583896.95	4139484.38	0.0015	3.42E-04	4.32E-05
W5a	R3	2026	W5A_P3_R3_26	16.8	584151.34	4139410.93	0.0008	1.83E-04	2.30E-05
W5b	R4	2026	W5B_P3_R4_26	17.4	584217.44	4139356.85	0.0008	1.83E-04	2.30E-05
W5c	R5	2026	W5C_P3_R5_26	16.8	584300.90	4139312.12	0.0008	1.83E-04	2.30E-05
W5a	R3	2027	W5A_P3_R3_27	16.8	584151.34	4139410.93	0.0010	2.28E-04	2.88E-05
W5b	R4	2027	W5B_P3_R4_27	17.4	584217.44	4139356.85	0.0010	2.28E-04	2.88E-05
W5c	R5	2027	W5C_P3_R5_27	16.8	584300.90	4139312.12	0.0010	2.28E-04	2.88E-05
W6	R4Aff	2027	W6_P3_R4A_27	17.1	584183.38	4139314.12	0.0017	3.88E-04	4.89E-05
W7	O5/P1	2026	W7_P4_O5_26	14.6	584424.42	4139531.79	0.0006	1.37E-04	1.73E-05
W7	O5/P1	2027	W7_P4_O5_27	14.6	584424.42	4139531.79	0.0014	3.20E-04	4.03E-05

a Emissions calculated using CalEEMod emission factors and a load factor of 0.74

b Assumes pumps can be operated any day or hour of the year.

Point Source Stack Parameters*	
Stack Discharge Height *(ft)	12
Stack Discharge Height *(m)	3.66
Stack Diameter** (ft)	0.60
Stack Diameter** (m)	0.18
Stack Exit Velocity** (ft/sec)	149
Stack Exit Velocity** (m/sec)	45.3
Exhaust Temperature** (F)	872

* BAAQMD default diesel engine parameters

**Google Middlefield -Construction DPM/PM2.5 Modeling Information
AERMOD Risk Modeling Parameters and Maximum Concentrations
District Utilities Construction Impacts - Unmitigated Emissions
Off-Site Residential Receptors (1st & 2nd level receptor heights)**

Receptor Information

Number of Receptors 242
Receptor Height = variable
Receptor spacing = variable

Meteorological Conditions

Moffett Field BAAQMD Hourly Data 2013-2017
Land Use Classification Urban
Wind speed = variable
Wind direction = variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu\text{g}/\text{m}^3$)
2023 - Construction	0.0278
2024 - Construction	0.04593
2025 - Construction	0.43184
2026 - Construction	0.21711
2027 - Construction	0.12831
2028 - Construction	0.08451
2029 - Construction	0.03364
2030 - Construction	0.00091
2031 - Construction	0.00021

**Google Middlefield -Construction DPM/PM2.5 Modeling Information
AERMOD Risk Modeling Parameters and Maximum Concentrations
District Utilities Construction Impacts - Mitigated Emissions
Off-Site Residential Receptors (1st & 2nd level receptor heights)**

Receptor Information

Number of Receptors 242
Receptor Height = variable
Receptor spacing = variable

Meteorological Conditions

Moffett Field BAAQMD Hourly Data 2013-2017
Land Use Classification Urban
Wind speed = variable
Wind direction = variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu\text{g}/\text{m}^3$)
2023 - Construction	0.0022
2024 - Construction	0.00513
2025 - Construction	0.05051
2026 - Construction	0.02976
2027 - Construction	0.02173
2028 - Construction	0.01743
2029 - Construction	0.00925
2030 - Construction	0.00061
2031 - Construction	0.00014

Google Middlefield - District Utilities Construction Impacts
Maximum DPM Cancer Risk Calculations From District Utilities Construction - Unmitigated
Off-Site Residential Receptors (1st & 2nd level receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

- Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00

Age -->	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Maximum		
				Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Hazard Index	Total** PM2.5	
0	2023	0	-	-	0.0278	-	0.0056	0.100	
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0459	0.625	0.0092	0.062	
	2025	1	1	10	0.4318	70.928	0.0864	2.385	
1	2026	1	2	10	0.2171	35.660	0.0434	0.537	
2	2027	1	3	3	0.1283	3.318	0.0257	0.208	
3	2028	1	4	3	0.0845	2.185	0.0169	0.098	
4	2029	1	5	3	0.0336	0.870	0.0067	0.042	
5	2030	1	6	3	0.0009	0.024	0.0002	0.002	
6	2031	1	7	3	0.0002	0.005	0.0000	0.000	
7	2032	1	8	3	0.0000	0.000			
8	2033	1	9	3	0.0000	0.000			
9	2034	1	10	3	0.0000	0.000			
10	2035	1	11	3	0.0000	0.000			
11	2036	1	12	3	0.0000	0.000			
12	2037	1	13	3	0.0000	0.000			
13	2038	1	14	3	0.0000	0.000			
14	2039	1	15	3	0.0000	0.000			
15	2040	1	16	3	0.0000	0.000			
16	2041	1	17	1	0.0000	0.000			
17	2042	1	18	1	0.0000	0.000			
18	2043	1	19	1	0.0000	0.000			
19	2044	1	20	1	0.0000	0.000			
20	2045	1	21	1	0.0000	0.000			
21	2046	1	22	1	0.0000	0.000			
22	2047	1	23	1	0.0000	0.000			
23	2048	1	24	1	0.0000	0.000			
24	2049	1	25	1	0.0000	0.000			
25	2050	1	26	1	0.0000	0.000			
26	2051	1	27	1	0.0000	0.000			
27	2052	1	28	1	0.0000	0.000			
28	2053	1	29	1	0.0000	0.000			
29	2054	1	30	1	0.0000	0.000			
Total Increased Cancer Risk							113.61		

* Third trimester of pregnancy

** Maximum cancer risk and maximum PM2.5 concentration occur at different receptor locations.

Google Middlefield - District Utilities Construction Impacts
Maximum DPM Cancer Risk Calculations From District Utilities Construction - Mitigated
Off-Site Residential Receptors (1st & 2nd level receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

- Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00

Age -->	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - 16	16 - 70
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Maximum	
				Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)	Hazard Index	Total** PM2.5
0	2023	0	-	-	0.0022	-	0.0004	0.016
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0051	0.070	0.0010	0.010
	2025	1	1	10	0.0505	8.296	0.0101	0.441
	2026	1	2	10	0.0298	4.888	0.0060	0.103
	2027	1	3	3	0.0217	0.562	0.0043	0.049
	2028	1	4	3	0.0174	0.451	0.0035	0.032
	2029	1	5	3	0.0093	0.239	0.0019	0.018
	2030	1	6	3	0.0006	0.016	0.0001	0.001
	2031	1	7	3	0.0001	0.004	0.0000	0.000
	2032	1	8	3	0.0000	0.000		
	2033	1	9	3	0.0000	0.000		
	2034	1	10	3	0.0000	0.000		
	2035	1	11	3	0.0000	0.000		
	2036	1	12	3	0.0000	0.000		
	2037	1	13	3	0.0000	0.000		
	2038	1	14	3	0.0000	0.000		
	2039	1	15	3	0.0000	0.000		
	2040	1	16	3	0.0000	0.000		
	2041	1	17	1	0.0000	0.000		
	2042	1	18	1	0.0000	0.000		
	2043	1	19	1	0.0000	0.000		
	2044	1	20	1	0.0000	0.000		
	2045	1	21	1	0.0000	0.000		
	2046	1	22	1	0.0000	0.000		
	2047	1	23	1	0.0000	0.000		
	2048	1	24	1	0.0000	0.000		
	2049	1	25	1	0.0000	0.000		
	2050	1	26	1	0.0000	0.000		
	2051	1	27	1	0.0000	0.000		
	2052	1	28	1	0.0000	0.000		
	2053	1	29	1	0.0000	0.000		
2054	1	30	1	0.0000	0.000			
Total Increased Cancer Risk						14.52		

* Third trimester of pregnancy

** Maximum cancer risk and maximum PM2.5 concentration occur at different receptor locations.

**Google Middlefield -Construction DPM/PM2.5 Modeling Information
 AERMOD Risk Modeling Parameters and Maximum Concentrations
 District Utilities Construction Impacts - Unmitigated Emissions
 On-Site Residential Receptors (2nd level receptor heights)**

Receptor Information

Number of Receptors 384
 Receptor Height = 5.2 meters
 Receptor spacing = 9 meter grid spacing in residential areas

Meteorological Conditions

Moffett Field BAAQMD Hourly Data 2013-2017
 Land Use Classification Urban
 Wind speed = variable
 Wind direction = variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu\text{g}/\text{m}^3$)
2023 - Construction	0.00000
2024 - Construction	0.00000
2025 - Construction	0.00000
2026 - Construction	0.50599
2027 - Construction	0.34488
2028 - Construction	0.13850
2029 - Construction	0.05729
2030 - Construction	0.00509
2031 - Construction	0.00116

**Google Middlefield -Construction DPM/PM2.5 Modeling Information
 AERMOD Risk Modeling Parameters and Maximum Concentrations
 District Utilities Construction Impacts - Mitigated Emissions
 On-Site Residential Receptors**

Receptor Information

Number of Receptors 384
 Receptor Height = 5.2 meters
 Receptor spacing = 9 meter grid spacing in residential areas

Meteorological Conditions

Moffett Field BAAQMD Hourly Data 2013-2017
 Land Use Classification Urban
 Wind speed = variable
 Wind direction = variable

MEI Maximum Concentrations

Emission Period	DPM Concentration ($\mu\text{g}/\text{m}^3$)
2023 - Construction	0.00000
2024 - Construction	0.00000
2025 - Construction	0.00000
2026 - Construction	0.05838
2027 - Construction	0.04526
2028 - Construction	0.02637
2029 - Construction	0.01785
2030 - Construction	0.00341
2031 - Construction	0.00077

**Google Middlefield - District Utilities Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated
On-Site Residential Receptors (2nd level receptor heights)
Residential Exposure (30-year)**

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - 16	16 - 70
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	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Maximum Hazard Index	Total PM2.5 w/ MERV-13	Total PM2.5
				Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)			
0	2023	0	-	-	0.0000	-	0.0000	0.000	0.000
0	2024	0	-	-	0.0000	-	0.0000	0.000	0.000
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.000	0.0000	0.000	0.000
1	2026	1	1	10	0.5060	83.107	0.1012	2.254	0.676
2	2027	1	2	10	0.3449	56.645	0.0690	0.895	0.268
3	2028	1	3	3	0.1385	3.581	0.0277	0.181	0.054
4	2029	1	4	3	0.0573	1.481	0.0115	0.077	0.023
5	2030	1	5	3	0.0051	0.132	0.0010	0.008	0.002
6	2031	1	6	3	0.0012	0.030	0.0002	0.002	0.001
7	2032	1	7	3	0.0000	0.000			
8	2033	1	8	3	0.0000	0.000			
9	2034	1	9	3	0.0000	0.000			
10	2035	1	10	3	0.0000	0.000			
11	2036	1	11	3	0.0000	0.000			
12	2037	1	12	3	0.0000	0.000			
13	2038	1	13	3	0.0000	0.000			
14	2039	1	14	3	0.0000	0.000			
15	2040	1	15	3	0.0000	0.000			
16	2041	1	16	3	0.0000	0.000			
17	2042	1	17	1	0.0000	0.000			
18	2043	1	18	1	0.0000	0.000			
19	2044	1	19	1	0.0000	0.000			
20	2045	1	20	1	0.0000	0.000			
21	2046	1	21	1	0.0000	0.000			
22	2047	1	22	1	0.0000	0.000			
23	2048	1	23	1	0.0000	0.000			
24	2049	1	24	1	0.0000	0.000			
25	2050	1	25	1	0.0000	0.000			
26	2051	1	26	1	0.0000	0.000			
27	2052	1	27	1	0.0000	0.000			
28	2053	1	28	1	0.0000	0.000			
29	2054	1	29	1	0.0000	0.000			
30	2055	1	30	1	0.0000	0.000			
Total Increased Cancer Risk							144.98		
Total Increased Cancer Risk With use of MERV-13 Filtration							43.49		

* Third trimester of pregnancy

Google Middlefield - District Utilities Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction - Mitigated
On-Site Residential Receptors
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00

Age -> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - 16	16 - 70
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	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Maximum Hazard Index	Total PM2.5	Total PM2.5 w/ MERV-13
				Age Sensitivity Factor	Annual DPM Conc. (ug/m3)	DPM Cancer Risk (per million)			
0	2023	0	-	-	0.0000	-	0.0000	0.000	0.000
0	2024	0	-	-	0.0000	-	0.0000	0.000	0.000
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.000	0.0000	0.000	0.000
1	2026	1	1	10	0.0584	9.589	0.0117	0.416	0.125
2	2027	1	2	10	0.0453	7.434	0.0091	0.172	0.052
3	2028	1	3	3	0.0264	0.682	0.0053	0.049	0.015
4	2029	1	4	3	0.0179	0.462	0.0036	0.037	0.011
5	2030	1	5	3	0.0034	0.088	0.0007	0.006	0.002
6	2031	1	6	3	0.0008	0.020	0.0002	0.001	0.000
7	2032	1	7	3	0.0000	0.000			
8	2033	1	8	3	0.0000	0.000			
9	2034	1	9	3	0.0000	0.000			
10	2035	1	10	3	0.0000	0.000			
11	2036	1	11	3	0.0000	0.000			
12	2037	1	12	3	0.0000	0.000			
13	2038	1	13	3	0.0000	0.000			
14	2039	1	14	3	0.0000	0.000			
15	2040	1	15	3	0.0000	0.000			
16	2041	1	16	3	0.0000	0.000			
17	2042	1	17	1	0.0000	0.000			
18	2043	1	18	1	0.0000	0.000			
19	2044	1	19	1	0.0000	0.000			
20	2045	1	20	1	0.0000	0.000			
21	2046	1	21	1	0.0000	0.000			
22	2047	1	22	1	0.0000	0.000			
23	2048	1	23	1	0.0000	0.000			
24	2049	1	24	1	0.0000	0.000			
25	2050	1	25	1	0.0000	0.000			
26	2051	1	26	1	0.0000	0.000			
27	2052	1	27	1	0.0000	0.000			
28	2053	1	28	1	0.0000	0.000			
29	2054	1	29	1	0.0000	0.000			
30	2055	1	30	1	0.0000	0.000			
Total Increased Cancer Risk							18.27		
Total Increased Cancer Risk With use of MERV-13 Filtration							5.48		

* Third trimester of pregnancy

Google Middlefield - District Utilities Construction Impacts

DPM Cancer Risk Calculations From District Utilities Construction - Unmitigated
at Off-Site Residential Receptors (1st & 2nd level receptor heights)

Exposure Durations (years) for Maximum Cancer Risk

Exposure Type	2023	2024	2025	2026	2027	2028	2029	2030	2031
3rd Trimester (10)	0	0.25	0	0	0	0	0	0	0
Infant (10)	0	0	1	1	0	0	0	0	0
Child (3)	0	0	0	0	1	1	1	1	1
Adult (1)	0	0	0	0	0	0	0	0	0

Receptor No.	Receptor Coordinates		2023	2024	2025	2026	2027	2028	2029	2030	2031	2023	2024	2025	2026	2027	2028	2029	2030	2031	2023-2031 Total Cancer Risk (per million)
	UTM-X (m)	UTM-Y (m)	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Conc DPM	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	
1	583674.05	4138932.37	0.02117	0.00464	0.00706	0.00484	0.00281	0.00158	0.00057	0.00006	0.00002	0.000	0.063	1.160	0.795	0.073	0.041	0.015	0.002	0.001	2.15
2	583685.82	4138936.00	0.02374	0.00523	0.00768	0.00513	0.00297	0.00169	0.00061	0.00006	0.00002	0.000	0.071	1.261	0.843	0.077	0.044	0.016	0.002	0.001	2.31
3	583705.56	4138942.41	0.02906	0.00643	0.00888	0.00567	0.00328	0.00188	0.00069	0.00006	0.00002	0.000	0.087	1.459	0.931	0.085	0.049	0.018	0.002	0.001	2.63
4	583715.08	4138945.35	0.03218	0.00713	0.00955	0.00597	0.00344	0.00199	0.00073	0.00007	0.00002	0.000	0.097	1.569	0.981	0.089	0.051	0.019	0.002	0.001	2.81
5	583722.18	4138945.87	0.03462	0.00768	0.01006	0.00620	0.00357	0.00208	0.00076	0.00007	0.00002	0.000	0.104	1.652	1.018	0.092	0.054	0.020	0.002	0.001	2.94
6	583727.20	4138939.64	0.03576	0.00793	0.01031	0.00635	0.00366	0.00213	0.00078	0.00007	0.00002	0.000	0.108	1.693	1.043	0.095	0.055	0.020	0.002	0.001	3.02
7	583734.13	4138930.98	0.03727	0.00826	0.01063	0.00657	0.00379	0.00220	0.00080	0.00007	0.00002	0.000	0.112	1.746	1.079	0.098	0.057	0.021	0.002	0.001	3.12
8	583740.36	4138923.02	0.03856	0.00854	0.01091	0.00676	0.00391	0.00227	0.00083	0.00008	0.00002	0.000	0.116	1.792	1.110	0.101	0.059	0.021	0.002	0.001	3.20
9	583745.55	4138915.57	0.03948	0.00874	0.01112	0.00692	0.00401	0.00232	0.00085	0.00008	0.00002	0.000	0.119	1.826	1.137	0.104	0.060	0.022	0.002	0.001	3.27
10	583750.23	4138909.86	0.04043	0.00895	0.01133	0.00707	0.00410	0.00238	0.00087	0.00008	0.00002	0.000	0.122	1.861	1.161	0.106	0.062	0.022	0.002	0.001	3.34
11	583755.59	4138902.41	0.04136	0.00915	0.01154	0.00725	0.00421	0.00243	0.00089	0.00008	0.00002	0.000	0.124	1.895	1.191	0.109	0.063	0.023	0.002	0.001	3.41
12	583747.80	4138895.84	0.03764	0.00831	0.01079	0.00693	0.00403	0.00232	0.00085	0.00008	0.00002	0.000	0.113	1.772	1.138	0.104	0.060	0.022	0.002	0.001	3.21
13	583757.15	4138883.72	0.03919	0.00865	0.01115	0.00723	0.00422	0.00242	0.00088	0.00008	0.00002	0.000	0.118	1.831	1.188	0.109	0.063	0.023	0.002	0.001	3.33
14	583765.46	4138890.29	0.04323	0.00956	0.01197	0.00758	0.00441	0.00255	0.00093	0.00009	0.00002	0.000	0.130	1.966	1.245	0.114	0.066	0.024	0.002	0.001	3.55
15	583771.18	4138882.33	0.04410	0.00975	0.01219	0.00777	0.00453	0.00261	0.00095	0.00009	0.00002	0.000	0.133	2.002	1.276	0.117	0.067	0.025	0.002	0.001	3.62
16	583776.72	4138875.93	0.04511	0.00997	0.01243	0.00796	0.00465	0.00268	0.00098	0.00009	0.00003	0.000	0.136	2.042	1.307	0.120	0.069	0.025	0.002	0.001	3.70
17	583783.64	4138866.92	0.04613	0.01019	0.01269	0.00820	0.00480	0.00276	0.00101	0.00009	0.00003	0.000	0.139	2.084	1.347	0.124	0.071	0.026	0.002	0.001	3.79
18	583788.14	4138861.04	0.04673	0.01032	0.01285	0.00836	0.00490	0.00281	0.00103	0.00010	0.00003	0.000	0.140	2.111	1.373	0.127	0.073	0.027	0.003	0.001	3.85
19	583794.20	4138852.90	0.04743	0.01047	0.01305	0.00856	0.00503	0.00288	0.00105	0.00010	0.00003	0.000	0.142	2.143	1.406	0.130	0.074	0.027	0.003	0.001	3.93
20	583714.91	4138939.46	0.03162	0.00700	0.00944	0.00595	0.00344	0.00198	0.00072	0.00007	0.00002	0.000	0.095	1.550	0.977	0.089	0.051	0.019	0.002	0.001	2.78
21	583719.93	4138932.71	0.03260	0.00722	0.00965	0.00610	0.00352	0.00203	0.00074	0.00007	0.00002	0.000	0.098	1.585	1.002	0.091	0.052	0.019	0.002	0.001	2.85
22	583725.30	4138925.27	0.03360	0.00743	0.00987	0.00625	0.00362	0.00209	0.00076	0.00007	0.00002	0.000	0.101	1.621	1.027	0.094	0.054	0.020	0.002	0.001	2.92
23	583731.88	4138917.30	0.03490	0.00772	0.01016	0.00645	0.00374	0.00216	0.00079	0.00007	0.00002	0.000	0.105	1.669	1.059	0.097	0.056	0.020	0.002	0.001	3.01
24	583737.24	4138909.69	0.03580	0.00791	0.01037	0.00661	0.00383	0.00221	0.00080	0.00007	0.00002	0.000	0.108	1.703	1.086	0.099	0.057	0.021	0.002	0.001	3.08
25	583742.96	4138903.11	0.03692	0.00816	0.01062	0.00679	0.00394	0.00227	0.00083	0.00008	0.00002	0.000	0.111	1.744	1.115	0.102	0.059	0.021	0.002	0.001	3.16
26	583762.52	4138876.96	0.04008	0.00884	0.01136	0.00740	0.00432	0.00248	0.00090	0.00009	0.00002	0.000	0.120	1.866	1.215	0.112	0.064	0.023	0.002	0.001	3.40
27	583768.41	4138869.87	0.04105	0.00905	0.01160	0.00760	0.00444	0.00254	0.00093	0.00009	0.00002	0.000	0.123	1.905	1.248	0.115	0.066	0.024	0.002	0.001	3.48
28	583775.16	4138860.34	0.04189	0.00924	0.01182	0.00782	0.00458	0.00262	0.00095	0.00009	0.00003	0.000	0.126	1.941	1.284	0.118	0.068	0.025	0.002	0.001	3.57
29	583781.04	4138853.42	0.04280	0.00944	0.01205	0.00801	0.00470	0.00268	0.00098	0.00009	0.00003	0.000	0.128	1.979	1.316	0.122	0.069	0.025	0.002	0.001	3.64
30	583694.83	4138938.94	0.02599	0.00574	0.00820	0.00537	0.00311	0.00177	0.00064	0.00006	0.00002	0.000	0.078	1.347	0.882	0.080	0.046	0.017	0.002	0.001	2.45
31	584511.66	4138899.64	0.04143	0.01026	0.01592	0.00890	0.00472	0.00319	0.01050	0.00211	0.00059	0.000	0.140	2.615	14.628	1.218	0.781	0.272	0.055	0.015	19.72
32	584507.85	4138883.72	0.04304	0.01066	0.01611	0.00874	0.00468	0.00293	0.01031	0.00202	0.00057	0.000	0.145	2.646	14.362	1.207	0.761	0.267	0.052	0.015	19.45
33	584503.70	4138868.48	0.04457	0.01103	0.01630	0.00858	0.00462	0.00287	0.01012	0.00195	0.00054	0.000	0.150	2.677	14.102	1.195	0.742	0.262	0.050	0.014	19.19
34	584500.23	4138850.13	0.04575	0.01131	0.01643	0.00835	0.00459	0.00277	0.00985	0.00186	0.00052	0.000	0.154	2.699	13.723	1.174	0.718	0.255	0.048	0.013	18.78
35	584537.28	4138897.91	0.03458	0.00852	0.01444	0.00810	0.00426	0.00280	0.00957	0.00201	0.00057	0.000	0.116	2.372	13.353	1.100	0.726	0.247	0.052	0.014	17.98
36	584533.13	4138879.91	0.03609	0.00890	0.01466	0.00810	0.00423	0.00274	0.00943	0.00194	0.00055	0.000	0.121	2.408	13.156	1.095	0.709	0.244	0.050	0.014	17.80
37	584527.93	4138865.02	0.03781	0.00932	0.01494	0.00795	0.00428	0.00270	0.00936	0.00188	0.00053	0.000	0.127	2.454	13.061	1.096	0.699	0.242	0.049	0.014	17.74
38	583674.05	4138932.37	0.02034	0.00443	0.00681	0.00469	0.00271	0.00153	0.00056	0.00005	0.00002	0.000	0.060	1.119	0.770	0.070	0.040	0.014	0.001	0.001	2.08
39	583685.82	4138936.00	0.02278	0.00498	0.00740	0.00497	0.00287	0.00163	0.00059	0.00006	0.00002	0.000	0.068	1.215	0.816	0.074	0.042	0.015	0.002	0.001	2.23
40	583705.56	4138942.41	0.02782	0.00612	0.00856	0.00549	0.00316	0.00182	0.00066	0.00006	0.00002	0.000	0.083	1.406	0.902	0.082	0.047	0.017	0.002	0.001	2.54
41	583715.08	4138945.35	0.03077	0.00678	0.00919	0.00578	0.00332	0.00193	0.00070	0.00006	0.00002	0.000	0.092	1.509	0.949	0.086	0.050	0.018	0.002	0.001	2.71
42	583722.18	4138945.87	0.03308	0.00730	0.00968	0.00600	0.00345	0.00201	0.00073	0.00007	0.00002	0.000	0.099	1.590	0.985	0.089	0.052	0.019	0.002	0.001	2.84
43	583727.20	4138939.64	0.03416	0.00753	0.00992	0.00615	0.00353	0.00206	0.00075	0.00007	0.00002	0.000	0.102	1.629	1.010	0.091	0.053	0.019	0.002	0.001	2.91
44	583734.13	4138930.98	0.03560	0.00785	0.01023	0.00635	0.00366	0.00213	0.00078	0.00007	0.00002	0.000	0.107	1.680	1.043	0.095	0.055	0.020	0.002	0.001	3.00
45	583740.36	4138923.02	0.03683	0.00812	0.01050	0.00654	0.00377	0.00219	0.00080	0.00007	0.00002	0.000	0.110	1.725	1.074	0.097	0.057	0.021	0.002	0.001	3.09
46	583745.55	4138915.57	0.03771	0.																	

Receptor No.	Receptor Coordinates		2023 Conc DPM	2024 Conc DPM	2025 Conc DPM	2026 Conc DPM	2027 Conc DPM	2028 Conc DPM	2029 Conc DPM	2030 Conc DPM	2031 Conc DPM	2023 Construct Risk	2024 Construct Risk	2025 Construct Risk	2026 Construct Risk	2027 Construct Risk	2028 Construct Risk	2029 Construct Risk	2030 Construct Risk	2031 Construct Risk	2023-2031 Total Cancer Risk (per million)
	UTM-X (m)	UTM-Y (m)																			
205	584025.32	4139382.79	0.04465	0.02782	0.20169	0.10311	0.05965	0.04031	0.01565	0.00059	0.00015	0.000	0.378	33.127	16.935	1.542	1.042	0.405	0.015	0.004	53.45
206	584033.97	4139380.33	0.04464	0.02792	0.20268	0.10854	0.06268	0.04195	0.01634	0.00067	0.00017	0.000	0.380	33.289	17.827	1.621	1.085	0.423	0.017	0.004	54.65
207	584042.63	4139377.87	0.04467	0.02820	0.20549	0.11605	0.06674	0.04422	0.01731	0.00078	0.00020	0.000	0.384	33.751	19.061	1.726	1.143	0.448	0.020	0.005	56.54
208	584051.29	4139375.41	0.04473	0.02855	0.20904	0.12599	0.07193	0.04712	0.01859	0.00090	0.00023	0.000	0.388	34.334	20.693	1.860	1.218	0.481	0.023	0.006	59.00
209	583984.50	4139403.76	0.04120	0.03340	0.26941	0.11264	0.06483	0.04646	0.01791	0.00037	0.00009	0.000	0.454	44.250	18.501	1.676	1.201	0.463	0.010	0.002	66.56
210	583993.15	4139401.30	0.04127	0.03053	0.23846	0.10458	0.06043	0.04251	0.01642	0.00040	0.00010	0.000	0.415	39.166	17.177	1.563	1.099	0.425	0.010	0.003	59.86
211	584045.09	4139386.52	0.04208	0.02895	0.21917	0.12500	0.07233	0.04745	0.01864	0.00082	0.00021	0.000	0.394	35.998	20.531	1.870	1.227	0.481	0.021	0.005	60.53
212	584053.75	4139384.06	0.04225	0.02949	0.22453	0.13664	0.07849	0.05089	0.02016	0.00095	0.00024	0.000	0.401	36.878	22.443	2.030	1.316	0.521	0.025	0.006	63.62
213	583986.96	4139412.42	0.03805	0.03155	0.25652	0.11012	0.06376	0.04506	0.01741	0.00038	0.00010	0.000	0.429	42.133	18.087	1.649	1.165	0.450	0.010	0.003	63.92
214	583995.62	4139409.96	0.03823	0.02916	0.23044	0.10396	0.06043	0.04189	0.01623	0.00042	0.00011	0.000	0.397	37.849	17.075	1.563	1.083	0.420	0.011	0.003	58.40
215	584047.55	4139395.18	0.03968	0.03006	0.23628	0.13631	0.07922	0.05142	0.02032	0.00086	0.00022	0.000	0.409	38.808	22.388	2.048	1.330	0.525	0.022	0.006	65.54
216	584056.21	4139392.72	0.03992	0.03077	0.24331	0.15020	0.08657	0.05550	0.02214	0.00101	0.00026	0.000	0.418	39.963	24.670	2.238	1.435	0.572	0.026	0.007	69.33
217	583989.42	4139421.08	0.03540	0.02981	0.24364	0.10795	0.06285	0.04371	0.01694	0.00040	0.00010	0.000	0.405	40.017	17.730	1.625	1.130	0.438	0.010	0.003	61.36
218	583998.08	4139418.61	0.03565	0.02801	0.22380	0.10417	0.06087	0.04153	0.01615	0.00044	0.00011	0.000	0.381	36.758	17.110	1.574	1.074	0.418	0.011	0.003	57.33
219	584050.02	4139403.84	0.03745	0.03157	0.25734	0.15032	0.08754	0.05626	0.02240	0.00091	0.00023	0.000	0.429	42.267	24.690	2.264	1.455	0.579	0.024	0.006	71.71
220	584058.67	4139401.38	0.03772	0.03242	0.26581	0.16701	0.09628	0.06105	0.02458	0.00108	0.00027	0.000	0.441	43.658	27.431	2.490	1.579	0.636	0.028	0.007	76.27
221	583991.88	4139429.73	0.03314	0.02821	0.23158	0.10641	0.06226	0.04253	0.01655	0.00042	0.00011	0.000	0.384	38.036	17.477	1.610	1.100	0.428	0.011	0.003	59.05
222	584000.54	4139427.27	0.03342	0.02716	0.21970	0.10558	0.06200	0.04163	0.01625	0.00046	0.00012	0.000	0.369	36.085	17.341	1.603	1.076	0.420	0.012	0.003	56.91
223	584052.48	4139412.49	0.03537	0.03353	0.28286	0.16674	0.09716	0.06196	0.02485	0.00097	0.00024	0.000	0.456	46.459	27.386	2.512	1.602	0.643	0.025	0.006	79.09
224	584061.14	4139410.03	0.03564	0.03449	0.29250	0.18598	0.10719	0.06739	0.02736	0.00116	0.00028	0.000	0.469	48.042	30.547	2.772	1.743	0.707	0.030	0.007	84.32
225	583994.35	4139438.39	0.03117	0.02687	0.22166	0.10588	0.06224	0.04174	0.01631	0.00044	0.00011	0.000	0.365	36.407	17.390	1.609	1.079	0.422	0.011	0.003	57.29
226	584003.00	4139435.93	0.03146	0.02678	0.22001	0.10878	0.06414	0.04245	0.01664	0.00049	0.00012	0.000	0.364	36.136	17.867	1.659	1.098	0.430	0.013	0.003	57.57
227	584054.94	4139421.15	0.03341	0.03602	0.31371	0.18497	0.10788	0.06849	0.02761	0.00103	0.00025	0.000	0.490	51.526	30.381	2.790	1.771	0.714	0.027	0.006	87.70
228	584063.60	4139418.69	0.03367	0.03705	0.32417	0.20578	0.11877	0.07437	0.03033	0.00123	0.00030	0.000	0.504	53.244	33.799	3.071	1.923	0.784	0.032	0.008	93.36
229	583996.81	4139447.05	0.02944	0.02601	0.21636	0.10710	0.06323	0.04170	0.01636	0.00047	0.00012	0.000	0.354	35.536	17.591	1.635	1.078	0.423	0.012	0.003	56.63
230	584005.47	4139444.58	0.02971	0.02717	0.22795	0.11470	0.06787	0.04449	0.01751	0.00051	0.00013	0.000	0.369	37.440	18.839	1.755	1.150	0.453	0.013	0.003	60.02
231	583999.27	4139455.70	0.02789	0.02611	0.22089	0.11164	0.06618	0.04318	0.01700	0.00050	0.00012	0.000	0.355	36.280	18.336	1.711	1.117	0.440	0.013	0.003	58.26
232	584007.93	4139453.24	0.02814	0.02888	0.24964	0.12521	0.07429	0.04864	0.01918	0.00054	0.00013	0.000	0.393	41.003	20.565	1.921	1.258	0.496	0.014	0.003	65.65
233	584016.59	4139450.78	0.02843	0.03205	0.28275	0.14103	0.08366	0.05496	0.02171	0.00060	0.00015	0.000	0.436	46.441	23.164	2.163	1.421	0.561	0.016	0.004	74.21
234	584025.24	4139448.31	0.02873	0.03504	0.31385	0.15724	0.09321	0.06122	0.02424	0.00067	0.00016	0.000	0.477	51.549	25.826	2.410	1.583	0.627	0.017	0.004	82.49
235	584033.90	4139445.85	0.02904	0.03770	0.34139	0.17363	0.10277	0.06728	0.02673	0.00075	0.00018	0.000	0.513	56.072	28.518	2.657	1.740	0.691	0.019	0.005	90.22
236	584042.55	4139443.39	0.02933	0.03997	0.36487	0.19035	0.11241	0.07315	0.02918	0.00085	0.00020	0.000	0.544	59.929	31.264	2.907	1.891	0.755	0.022	0.005	97.32
237	584001.73	4139464.36	0.02648	0.02839	0.24822	0.12361	0.07347	0.04812	0.01896	0.00053	0.00013	0.000	0.386	40.769	20.303	1.900	1.244	0.490	0.014	0.003	65.11
238	584010.39	4139461.90	0.02671	0.03311	0.29785	0.14430	0.08572	0.05679	0.02238	0.00058	0.00014	0.000	0.450	48.921	23.701	2.217	1.468	0.579	0.015	0.004	77.35
239	584019.05	4139459.43	0.02697	0.03723	0.34109	0.16380	0.09723	0.06472	0.02554	0.00064	0.00015	0.000	0.506	56.023	26.904	2.514	1.673	0.660	0.017	0.004	88.30
240	584027.70	4139456.97	0.02724	0.04068	0.37716	0.18205	0.10795	0.07183	0.02840	0.00071	0.00017	0.000	0.553	61.947	29.901	2.791	1.857	0.734	0.018	0.004	97.81
241	584036.36	4139454.51	0.02751	0.04356	0.40719	0.19965	0.11822	0.07837	0.03108	0.00080	0.00019	0.000	0.592	66.880	32.792	3.057	2.026	0.804	0.021	0.005	106.18
242	584045.02	4139452.05	0.02777	0.04593	0.43184	0.21711	0.12831	0.08451	0.03364	0.00091	0.00021	0.000	0.625	70.928	35.660	3.318	2.185	0.870	0.024	0.005	113.61
	Maximum		0.05517	0.04593	0.43184	0.21711	0.12831	0.08451	0.03364	0.00211	0.00059	0.00	0.625	70.928	35.660	3.318	2.185	0.870	0.055	0.015	113.61

Receptor No.	UTM Coordinates (m)		Construction								
			Total PM2.5 (Fugitive + Exhaust) Concentrations (µg/m ³)								
			2023	2024	2025	2026	2027	2028	2029	2030	2031
195	584014.20	4139376.60	0.16216	0.03557	0.96133	0.20022	0.08297	0.04373	0.01806	0.00077	0.0002
196	584022.85	4139374.14	0.16065	0.03480	0.93316	0.21497	0.08636	0.04407	0.01829	0.00087	0.00022
197	584031.51	4139371.67	0.15943	0.03450	0.92383	0.23538	0.0914	0.0453	0.01891	0.00099	0.00025
198	584040.17	4139369.21	0.15850	0.03452	0.92690	0.2629	0.09809	0.04733	0.01991	0.00113	0.00029
199	584048.82	4139366.75	0.15788	0.03471	0.93685	0.30024	0.10663	0.05012	0.02133	0.00131	0.00033
200	583982.03	4139395.11	0.15283	0.04490	1.36719	0.19262	0.0895	0.05452	0.02224	0.00054	0.00014
201	583990.69	4139392.64	0.15187	0.04056	1.19780	0.18913	0.08508	0.04932	0.0202	0.00059	0.00015
202	583999.35	4139390.18	0.15103	0.03769	1.08221	0.1915	0.08359	0.04627	0.01902	0.00065	0.00016
203	584008.00	4139387.72	0.15030	0.03595	1.01106	0.19903	0.08446	0.0449	0.01853	0.00072	0.00018
204	584016.66	4139385.26	0.14969	0.03505	0.97436	0.21154	0.08737	0.04485	0.01859	0.0008	0.0002
205	584025.32	4139382.79	0.14918	0.03476	0.96282	0.22925	0.09207	0.04586	0.0191	0.00091	0.00023
206	584033.97	4139380.33	0.14885	0.03487	0.96800	0.25287	0.09845	0.04773	0.02	0.00103	0.00026
207	584042.63	4139377.87	0.14866	0.03523	0.98292	0.28404	0.10657	0.05035	0.02125	0.00119	0.0003
208	584051.29	4139375.41	0.14866	0.03569	1.00192	0.32572	0.11667	0.0537	0.02291	0.00139	0.00035
209	583984.50	4139403.76	0.13878	0.04249	1.30683	0.19531	0.08968	0.05297	0.02167	0.00056	0.00014
210	583993.15	4139401.30	0.13864	0.03867	1.15695	0.19424	0.08641	0.04847	0.01992	0.00062	0.00016
211	584045.09	4139386.52	0.13962	0.03637	1.05378	0.31068	0.11695	0.05409	0.02294	0.00125	0.00031
212	584053.75	4139384.06	0.14001	0.03708	1.08169	0.35805	0.12897	0.05807	0.02489	0.00147	0.00036
213	583986.96	4139412.42	0.12726	0.04015	1.24308	0.19906	0.09013	0.05138	0.0211	0.00059	0.00015
214	583995.62	4139409.96	0.12762	0.03697	1.11816	0.20101	0.0883	0.04778	0.01973	0.00064	0.00016
215	584047.55	4139395.18	0.13124	0.03798	1.14225	0.34459	0.12955	0.05873	0.02506	0.00133	0.00033
216	584056.21	4139392.72	0.13187	0.03892	1.17835	0.39993	0.14389	0.06345	0.0274	0.00157	0.00038
217	583989.42	4139421.08	0.11762	0.03792	1.17849	0.20426	0.09101	0.04984	0.02057	0.00062	0.00015
218	583998.08	4139418.61	0.11831	0.03555	1.08593	0.20995	0.09098	0.0474	0.01967	0.00068	0.00017
219	584050.02	4139403.84	0.12344	0.04013	1.25086	0.3869	0.14449	0.06438	0.02769	0.00142	0.00034
220	584058.67	4139401.38	0.12419	0.04125	1.29399	0.45232	0.16143	0.06992	0.0305	0.00168	0.0004
221	583991.88	4139429.73	0.10944	0.03587	1.11719	0.21133	0.0925	0.04851	0.02013	0.00065	0.00016
222	584000.54	4139427.27	0.11029	0.03451	1.06585	0.22165	0.09473	0.04753	0.01984	0.00071	0.00017
223	584052.48	4139412.49	0.11615	0.04287	1.38133	0.43575	0.16144	0.07103	0.03079	0.00151	0.00036
224	584061.136	4139410.031	0.11692	0.04414	1.43021	0.51061	0.18088	0.07733	0.03401	0.0018	0.00042
225	583994.347	4139438.388	0.10235	0.03414	1.06513	0.22076	0.0949	0.04762	0.01988	0.00069	0.00017
226	584003.003	4139435.926	0.10327	0.03408	1.06555	0.23668	0.09989	0.0485	0.02036	0.00076	0.00018
227	584054.943	4139421.15	0.10929	0.04628	1.53494	0.4873	0.17991	0.07862	0.03426	0.00161	0.00037
228	584063.599	4139418.688	0.11003	0.04766	1.58791	0.568	0.20128	0.08544	0.03774	0.00193	0.00045
229	583996.809	4139447.045	0.09612	0.03301	1.03137	0.23314	0.09864	0.04756	0.01997	0.00073	0.00018
230	584005.466	4139444.582	0.09703	0.03458	1.09446	0.25585	0.10704	0.05082	0.02143	0.0008	0.00019
231	583999.272	4139455.702	0.09054	0.03301	1.02794	0.24986	0.10465	0.04915	0.02072	0.00078	0.00018
232	584007.929	4139453.239	0.09140	0.03661	1.16217	0.28058	0.1172	0.05539	0.02338	0.00085	0.0002
233	584016.585	4139450.776	0.09235	0.04077	1.31965	0.31689	0.13175	0.06261	0.02648	0.00094	0.00022
234	584025.242	4139448.314	0.09334	0.04473	1.47240	0.35759	0.14717	0.06982	0.02962	0.00105	0.00024
235	584033.898	4139445.851	0.09431	0.04826	1.61010	0.40347	0.16343	0.07683	0.03274	0.00118	0.00027
236	584042.555	4139443.388	0.09522	0.05128	1.72868	0.45578	0.18071	0.08362	0.03584	0.00134	0.00031
237	584001.735	4139464.358	0.08550	0.03537	1.07019	0.27461	0.11525	0.05433	0.02286	0.00083	0.00019
238	584010.391	4139461.895	0.08629	0.04132	1.27485	0.31428	0.13257	0.06406	0.02692	0.00091	0.00021
239	584019.048	4139459.433	0.08715	0.04667	1.47345	0.3561	0.14981	0.07309	0.03075	0.001	0.00023
240	584027.704	4139456.97	0.08803	0.05123	1.65020	0.40063	0.16692	0.08127	0.0343	0.00112	0.00026
241	584036.361	4139454.508	0.08889	0.05508	1.80236	0.44941	0.18438	0.08883	0.03765	0.00126	0.00029
242	584045.017	4139452.045	0.08970	0.05827	1.92976	0.50386	0.20259	0.09596	0.0409	0.00143	0.00033
		Maximum	0.186	0.062	2.385	0.568	0.208	0.098	0.042	0.003	0.001

Receptor No.	UTM Coordinates (m)		Construction									
			Total PM2.5 (Fugitive + Exhaust) Concentrations (µg/m ³)									
			2023	2024	2025	2026	2027	2028	2029	2030	2031	
UTM-X	UTM-Y											
195	584014.20	4139376.60	0.02724	0.00620	0.17547	0.03759	0.01922	0.01309	0.00726	0.0006	0.00015	
196	584022.85	4139374.14	0.02693	0.00605	0.17030	0.04026	0.01979	0.01315	0.00739	0.00068	0.00017	
197	584031.51	4139371.67	0.02668	0.00597	0.16859	0.04	0.02076	0.01348	0.00769	0.00077	0.00019	
198	584040.17	4139369.21	0.02647	0.00594	0.16916	0.04907	0.02211	0.01407	0.00815	0.00089	0.00022	
199	584048.82	4139366.75	0.02633	0.00594	0.17099	0.05597	0.02388	0.0149	0.00881	0.00103	0.00026	
200	583982.03	4139395.11	0.02578	0.00764	0.24979	0.03672	0.02187	0.0166	0.0088	0.00042	0.00011	
201	583990.69	4139392.64	0.02557	0.00696	0.21888	0.03589	0.02043	0.01497	0.00804	0.00046	0.00012	
202	583999.35	4139390.18	0.02539	0.00649	0.19768	0.03618	0.01974	0.01398	0.00761	0.00051	0.00013	
203	584008.00	4139387.72	0.02522	0.00619	0.18461	0.03747	0.01967	0.01351	0.00745	0.00056	0.00014	
204	584016.66	4139385.26	0.02507	0.00603	0.17786	0.03972	0.02011	0.01345	0.0075	0.00063	0.00016	
205	584025.32	4139382.79	0.02495	0.00596	0.17573	0.04296	0.021	0.01372	0.00775	0.00071	0.00018	
206	584033.97	4139380.33	0.02485	0.00595	0.17668	0.04732	0.02228	0.01425	0.00816	0.00081	0.0002	
207	584042.63	4139377.87	0.02478	0.00599	0.17942	0.05308	0.02395	0.01502	0.00873	0.00093	0.00023	
208	584051.29	4139375.41	0.02474	0.00604	0.18291	0.06079	0.02605	0.01602	0.00949	0.00109	0.00027	
209	583984.50	4139403.76	0.02333	0.00717	0.23874	0.03718	0.02169	0.01612	0.00861	0.00044	0.00011	
210	583993.15	4139401.30	0.02327	0.00657	0.21140	0.03681	0.02054	0.01471	0.00796	0.00048	0.00012	
211	584045.09	4139386.52	0.02322	0.00610	0.19240	0.05813	0.02621	0.0162	0.00945	0.00098	0.00024	
212	584053.75	4139384.06	0.02325	0.00620	0.19752	0.0669	0.02872	0.0174	0.01034	0.00115	0.00028	
213	583986.96	4139412.42	0.02132	0.00673	0.22705	0.03781	0.02155	0.01562	0.00841	0.00046	0.00011	
214	583995.62	4139409.96	0.02135	0.00623	0.20429	0.03804	0.02077	0.0145	0.00792	0.00051	0.00012	
215	584047.55	4139395.18	0.02178	0.00630	0.20861	0.06456	0.02898	0.01769	0.01037	0.00104	0.00025	
216	584056.21	4139392.72	0.02186	0.00643	0.21523	0.0748	0.03198	0.01913	0.01143	0.00123	0.0003	
217	583989.42	4139421.08	0.01964	0.00632	0.21520	0.03871	0.02149	0.01514	0.00823	0.00049	0.00012	
218	583998.08	4139418.61	0.01974	0.00595	0.19838	0.03966	0.02117	0.01439	0.00793	0.00053	0.00013	
219	584050.02	4139403.84	0.02044	0.00659	0.22852	0.07258	0.0323	0.01952	0.01151	0.00111	0.00027	
220	584058.67	4139401.38	0.02054	0.00675	0.23642	0.08467	0.03585	0.02122	0.01277	0.00132	0.00031	
221	583991.88	4139429.73	0.01822	0.00594	0.20395	0.03994	0.02156	0.01473	0.00809	0.00051	0.00012	
222	584000.54	4139427.27	0.01834	0.00573	0.19469	0.04182	0.02183	0.01444	0.00804	0.00056	0.00014	
223	584052.48	4139412.49	0.01920	0.00697	0.25242	0.08185	0.03609	0.02167	0.01285	0.00119	0.00028	
224	584061.136	4139410.031	0.01931	0.00716	0.26138	0.09568	0.04017	0.02362	0.01429	0.00142	0.00033	
225	583994.347	4139438.388	0.01699	0.00562	0.19436	0.04162	0.02184	0.01445	0.00803	0.00054	0.00013	
226	584003.003	4139435.926	0.01713	0.00562	0.19458	0.04461	0.02283	0.01475	0.00828	0.00059	0.00014	
227	584054.943	4139421.15	0.01803	0.00746	0.28050	0.09165	0.04027	0.02411	0.01432	0.00127	0.00029	
228	584063.599	4139418.688	0.01813	0.00766	0.29021	0.10655	0.04474	0.02621	0.01588	0.00152	0.00035	
229	583996.809	4139447.045	0.01591	0.00540	0.18804	0.04386	0.02244	0.01442	0.0081	0.00058	0.00014	
230	584005.466	4139444.582	0.01605	0.00564	0.19968	0.04818	0.0243	0.01545	0.00873	0.00063	0.00015	
231	583999.272	4139455.702	0.01495	0.00534	0.18697	0.04689	0.02357	0.01483	0.00839	0.00061	0.00014	
232	584007.929	4139453.239	0.01508	0.00588	0.21138	0.05274	0.02647	0.01674	0.00947	0.00067	0.00016	
233	584016.585	4139450.776	0.01523	0.00651	0.24007	0.05967	0.02985	0.01896	0.01073	0.00074	0.00017	
234	584025.242	4139448.314	0.01538	0.00711	0.26798	0.06741	0.0334	0.0212	0.01204	0.00083	0.00019	
235	584033.898	4139445.851	0.01553	0.00765	0.29318	0.07611	0.03707	0.02339	0.01336	0.00093	0.00021	
236	584042.555	4139443.388	0.01567	0.00811	0.31490	0.08598	0.0409	0.02552	0.0147	0.00106	0.00024	
237	584001.735	4139464.358	0.01408	0.00557	0.19313	0.05126	0.02568	0.0161	0.00911	0.00065	0.00015	
238	584010.391	4139461.895	0.01421	0.00644	0.22987	0.05876	0.02972	0.01897	0.01068	0.00072	0.00017	
239	584019.048	4139459.433	0.01434	0.00724	0.26593	0.06673	0.03375	0.02173	0.01221	0.00079	0.00018	
240	584027.704	4139456.97	0.01448	0.00793	0.29822	0.07522	0.03771	0.02427	0.01368	0.00088	0.0002	
241	584036.361	4139454.508	0.01461	0.00852	0.32609	0.08448	0.04167	0.02664	0.0151	0.00099	0.00022	
242	584045.017	4139452.045	0.01473	0.00902	0.34948	0.09475	0.04571	0.02888	0.01651	0.00113	0.00025	
		Maximum	0.031	0.010	0.441	0.107	0.049	0.032	0.018	0.003	0.001	

Receptor No.	Receptor Coordinates		2023 Conc DPM	2024 Conc DPM	2025 Conc DPM	2026 Conc DPM	2027 Conc DPM	2028 Conc DPM	2029 Conc DPM	2030 Conc DPM	2031 Conc DPM	2023 Construct Risk	2024 Construct Risk	2025 Construct Risk	2026 Construct Risk	2027 Construct Risk	2028 Construct Risk	2029 Construct Risk	2030 Construct Risk	2031 Construct Risk	With MERV-13 Filtration		
	UTM-X (m)	UTM-Y (m)																			2026-2031 Total Cancer Risk (per million)	2026-2031 Total Cancer Risk (per million)	
																					0.0000	0.0000	
349	584235.32	4139263.99	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00174	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.00	0.00
350	584242.30	4139258.30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
351	584249.27	4139252.61	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00177	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
352	584256.24	4139246.92	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00178	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
353	584263.21	4139241.23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
354	584270.18	4139235.53	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
355	584277.15	4139229.84	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
356	584284.12	4139224.15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.00	0.00
357	584234.04	4139276.66	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00190	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.00	0.00
358	584241.02	4139270.97	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
359	584247.99	4139265.27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
360	584254.96	4139259.58	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
361	584261.93	4139253.89	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00194	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
362	584268.90	4139248.20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00194	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
363	584275.87	4139242.51	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00194	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
364	584282.85	4139236.81	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00194	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
365	584289.82	4139231.12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.00	0.00
366	584239.74	4139283.63	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00209	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.00	0.00
367	584246.71	4139277.94	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.00	0.00
368	584253.68	4139272.25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.00	0.00
369	584260.65	4139266.55	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.00	0.00
370	584267.62	4139260.86	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.00	0.00
371	584274.59	4139255.17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.00	0.00
372	584281.57	4139249.48	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.00	0.00
373	584288.54	4139243.79	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.00	0.00
374	584295.51	4139238.09	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00209	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.00	0.00
375	584254.43	4139290.60	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.00	0.00
376	584252.40	4139284.91	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.00	0.00
377	584259.37	4139279.22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.00	0.00
378	584266.34	4139273.53	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.00	0.00
379	584273.31	4139267.83	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.00	0.00
380	584280.29	4139262.14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.00	0.00
381	584287.26	4139256.45	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00229	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.00	0.00
382	584294.23	4139250.76	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.00	0.00
383	584301.20	4139245.07	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.00	0.00
384	584251.12	4139297.57	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00254	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.066	0.00	0.00
	Maximum		0.00000	0.00000	0.00000	0.50599	0.34488	0.13850	0.05729	0.00509	0.00416	0.00	0.0	0.0	83.1	56.6	3.6	1.5	0.1	0.1	144.98	43.493	

Receptor No.	Receptor Coordinates		2023 Conc DPM	2024 Conc DPM	2025 Conc DPM	2026 Conc DPM	2027 Conc DPM	2028 Conc DPM	2029 Conc DPM	2030 Conc DPM	2031 Conc DPM	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total Risk	With MERV-13 Filtration 2026-2031 Total Cancer Risk (per million)
	UTM-X (m)	UTM-Y (m)										Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk	Construct Risk			
												Risk	Risk	Risk	Risk	Risk	Risk	Risk				
349	584235.32	4139263.99	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00116	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
350	584242.30	4139258.30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00117	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
351	584249.27	4139252.61	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00118	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
352	584256.24	4139246.92	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00118	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
353	584263.21	4139241.23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
354	584270.18	4139235.53	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
355	584277.15	4139229.84	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
356	584284.12	4139224.15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
357	584234.04	4139276.66	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00126	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
358	584241.02	4139270.97	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
359	584247.99	4139265.27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00128	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
360	584254.96	4139259.58	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00128	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
361	584261.93	4139253.89	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00129	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
362	584268.90	4139248.20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00129	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
363	584275.87	4139242.51	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00129	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
364	584282.85	4139236.81	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00129	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
365	584289.82	4139231.12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00128	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
366	584239.74	4139283.63	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
367	584246.71	4139277.94	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
368	584253.68	4139272.25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
369	584260.65	4139266.55	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
370	584267.62	4139260.86	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
371	584274.59	4139255.17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
372	584281.57	4139249.48	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
373	584288.54	4139243.79	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
374	584295.51	4139238.09	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
375	584245.43	4139290.60	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
376	584252.40	4139284.91	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
377	584259.37	4139279.22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
378	584266.34	4139273.53	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
379	584273.31	4139267.83	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
380	584280.29	4139262.14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00152	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
381	584287.26	4139256.45	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00152	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
382	584294.23	4139250.76	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00151	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
383	584301.20	4139245.07	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
384	584251.12	4139297.57	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00169	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
		Maximum	0.0000	0.0000	0.0000	0.0584	0.0453	0.0264	0.0179	0.0034	0.0028	0.00	0.0	0.0	9.6	7.4	0.7	0.5	0.1	0.1	18.27	5.482

Project Sources with Project Traffic - Emissions and Health Risk Calculations

Local Roads - Project Traffic Emissions

Google Middlefield - Road Segments Used for Modeling Project ADTs

Road	ADT from Road Segment Used for Modeling	Project Traffic ADT ¹
Ellis Street	north of Middlefield	2,430
Middlefield Road*	west of Ellis	2,600
Logue Ave**	south of Maude	1,750
Maude Ave	west of SR 237	3,280
Clyde Ave	north of Maude	3,530

1) ADT from traffic consultant.

* ADT from west road segment used to represent modeled road segment.

** ADT from west road segment used for represent modeled road segment.

File Name:

EMFAC2021/CT-EMFAC2017:

Run Date: 9/30/2021 11:04

Area: Santa Clara (SF)

Analysis Year: 2026

Season: Annual

Vehicle Category	VMT Fraction	Diesel	Gas VMT
		VMT Fraction Within Category	VMT Fraction Within Category
Truck 1	0.025	0.508	0.492
Truck 2	0.015	0.935	0.049
Non-Truck	0.96	0.015	0.949

Road Type:	CARB	Varies
Silt Loading Factor:	CARB	P = 64 days N = 365 days
Precipitation Correction:	CARB	

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
PM2.5	0.00909	0.00603	0.00416	0.00302	0.00231	0.00186	0.00157	0.00141	0.00134	0.00134	0.00142	0.00156	0.00179
TOG	0.12664	0.08207	0.05515	0.03909	0.02944	0.02333	0.01938	0.01686	0.01539	0.01476	0.01489	0.01582	0.01770
Diesel PM	0.00097	0.00081	0.00065	0.00053	0.00045	0.00041	0.00040	0.00041	0.00043	0.00048	0.00055	0.00063	0.00072
DEOG	0.01174	0.00845	0.00445	0.00217	0.00147	0.00115	0.00094	0.00080	0.00071	0.00066	0.00064	0.00066	0.00069

Fleet Average Running Loss Emission Factors (grams/veh-hour)	
Pollutant Name	Emission Factor
TOG	1.10553

Fleet Average Tire Wear Factors (grams/veh-mile)	
Pollutant Name	Emission Factor
PM2.5	0.00203

Fleet Average Brake Wear 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
PM2.5	0.00375	0.00429	0.00482	0.00535	0.00562	0.00571	0.00574	0.00525	0.00420	0.00317	0.00252	0.00222	0.00192

Fleet Average Road Dust Factors (grams/veh-mile)	
Pollutant Name	Emission Factor
PM2.5	0.01912 (silt loading = 0.0435 grams/sq meter)

=====**END**=====

Pollutant Name	Freeway Emission Factor	Major/Collector Emission Factor	Local Urban
PM2.5	0.007256	0.014459	0.117525

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Project Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	67.7	3.4	40	2,430	15,809	3.437E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00041			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	9.50E-07	9	6.63%	161	8.64E-06	17	5.87%	143	7.65E-06
2	0.44%	11	5.71E-07	10	6.71%	163	8.75E-06	18	6.09%	148	7.94E-06
3	0.35%	9	4.58E-07	11	6.03%	146	7.86E-06	19	5.83%	142	7.61E-06
4	0.48%	12	6.20E-07	12	5.35%	130	6.98E-06	20	5.57%	135	7.26E-06
5	1.28%	31	1.67E-06	13	5.28%	128	6.88E-06	21	4.30%	104	5.60E-06
6	3.20%	78	4.17E-06	14	5.52%	134	7.20E-06	22	3.50%	85	4.57E-06
7	4.97%	121	6.48E-06	15	6.09%	148	7.94E-06	23	2.42%	59	3.15E-06
8	6.11%	149	7.97E-06	16	5.76%	140	7.52E-06	24	1.50%	37	1.96E-06
Total										2,430	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Project Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	2,430	15,809	1.193E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001409			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	3.30E-06	9	6.63%	161	3.00E-05	17	5.87%	143	2.66E-05
2	0.44%	11	1.98E-06	10	6.71%	163	3.04E-05	18	6.09%	148	2.76E-05
3	0.35%	9	1.59E-06	11	6.03%	146	2.73E-05	19	5.83%	142	2.64E-05
4	0.48%	12	2.15E-06	12	5.35%	130	2.42E-05	20	5.57%	135	2.52E-05
5	1.28%	31	5.80E-06	13	5.28%	128	2.39E-05	21	4.30%	104	1.95E-05
6	3.20%	78	1.45E-05	14	5.52%	134	2.50E-05	22	3.50%	85	1.59E-05
7	4.97%	121	2.25E-05	15	6.09%	148	2.76E-05	23	2.42%	59	1.10E-05
8	6.11%	149	2.77E-05	16	5.76%	140	2.61E-05	24	1.50%	37	6.81E-06
Total										2,430	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Project Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z)
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	Initial Vertical Dimension
TEXH_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	2,430	15,809	1.361E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.01686			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00080			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.01606			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	3.76E-05	9	6.63%	161	3.42E-04	17	5.87%	143	3.03E-04
2	0.44%	11	2.26E-05	10	6.71%	163	3.46E-04	18	6.09%	148	3.14E-04
3	0.35%	9	1.81E-05	11	6.03%	146	3.11E-04	19	5.83%	142	3.01E-04
4	0.48%	12	2.45E-05	12	5.35%	130	2.76E-04	20	5.57%	135	2.87E-04
5	1.28%	31	6.62E-05	13	5.28%	128	2.72E-04	21	4.30%	104	2.22E-04
6	3.20%	78	1.65E-04	14	5.52%	134	2.85E-04	22	3.50%	85	1.81E-04
7	4.97%	121	2.56E-04	15	6.09%	148	3.14E-04	23	2.42%	59	1.25E-04
8	6.11%	149	3.16E-04	16	5.76%	140	2.98E-04	24	1.50%	37	7.77E-05
Total										2,430	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Project Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z)
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	Initial Vertical Dimension
TEVAP_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	2,430	15,809	2.341E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.02764			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	6.47E-05	9	6.63%	161	5.89E-04	17	5.87%	143	5.21E-04
2	0.44%	11	3.89E-05	10	6.71%	163	5.96E-04	18	6.09%	148	5.41E-04
3	0.35%	9	3.12E-05	11	6.03%	146	5.35E-04	19	5.83%	142	5.18E-04
4	0.48%	12	4.22E-05	12	5.35%	130	4.76E-04	20	5.57%	135	4.94E-04
5	1.28%	31	1.14E-04	13	5.28%	128	4.69E-04	21	4.30%	104	3.82E-04
6	3.20%	78	2.84E-04	14	5.52%	134	4.90E-04	22	3.50%	85	3.11E-04
7	4.97%	121	4.41E-04	15	6.09%	148	5.41E-04	23	2.42%	59	2.15E-04
8	6.11%	149	5.43E-04	16	5.76%	140	5.12E-04	24	1.50%	37	1.34E-04
Total										2,430	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Project Traffic
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	2,430	15,809	2.236E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40	0		
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203	0.00203		
Brake Wear - Emissions per Vehicle (g/VMT)	0.00525	0.00525		
Road Dust - Emissions per Vehicle (g/VMT)	0.01912	0.01912		
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02639	0.02639		

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	6.18E-05	9	6.63%	161	5.62E-04	17	5.87%	143	4.98E-04
2	0.44%	11	3.72E-05	10	6.71%	163	5.69E-04	18	6.09%	148	5.17E-04
3	0.35%	9	2.98E-05	11	6.03%	146	5.11E-04	19	5.83%	142	4.95E-04
4	0.48%	12	4.03E-05	12	5.35%	130	4.54E-04	20	5.57%	135	4.72E-04
5	1.28%	31	1.09E-04	13	5.28%	128	4.48E-04	21	4.30%	104	3.65E-04
6	3.20%	78	2.71E-04	14	5.52%	134	4.68E-04	22	3.50%	85	2.97E-04
7	4.97%	121	4.21E-04	15	6.09%	148	5.16E-04	23	2.42%	59	2.05E-04
8	6.11%	149	5.18E-04	16	5.76%	140	4.89E-04	24	1.50%	37	1.28E-04
Total										2,430	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	43.7	3.4	25	3,280	8,892	8.033E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	1.25E-06	9	6.63%	217	1.14E-05	17	5.87%	192	1.01E-05
2	0.44%	14	7.51E-07	10	6.71%	220	1.15E-05	18	6.09%	200	1.04E-05
3	0.35%	12	6.03E-07	11	6.03%	198	1.03E-05	19	5.83%	191	1.00E-05
4	0.48%	16	8.15E-07	12	5.35%	176	9.18E-06	20	5.57%	183	9.54E-06
5	1.28%	42	2.20E-06	13	5.28%	173	9.05E-06	21	4.30%	141	7.37E-06
6	3.20%	105	5.48E-06	14	5.52%	181	9.46E-06	22	3.50%	115	6.00E-06
7	4.97%	163	8.51E-06	15	6.09%	200	1.04E-05	23	2.42%	79	4.15E-06
8	6.11%	200	1.05E-05	16	5.76%	189	9.88E-06	24	1.50%	49	2.58E-06
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.086E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	6.35E-06	9	6.63%	217	5.78E-05	17	5.87%	192	5.12E-05
2	0.44%	14	3.82E-06	10	6.71%	220	5.85E-05	18	6.09%	200	5.31E-05
3	0.35%	12	3.07E-06	11	6.03%	198	5.25E-05	19	5.83%	191	5.09E-05
4	0.48%	16	4.15E-06	12	5.35%	176	4.67E-05	20	5.57%	183	4.85E-05
5	1.28%	42	1.12E-05	13	5.28%	173	4.60E-05	21	4.30%	141	3.75E-05
6	3.20%	105	2.79E-05	14	5.52%	181	4.81E-05	22	3.50%	115	3.05E-05
7	4.97%	163	4.33E-05	15	6.09%	200	5.31E-05	23	2.42%	79	2.11E-05
8	6.11%	200	5.33E-05	16	5.76%	189	5.03E-05	24	1.50%	49	1.31E-05
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.955E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	7.71E-05	9	6.63%	217	7.01E-04	17	5.87%	192	6.21E-04
2	0.44%	14	4.63E-05	10	6.71%	220	7.10E-04	18	6.09%	200	6.44E-04
3	0.35%	12	3.72E-05	11	6.03%	198	6.37E-04	19	5.83%	191	6.17E-04
4	0.48%	16	5.03E-05	12	5.35%	176	5.66E-04	20	5.57%	183	5.89E-04
5	1.28%	42	1.36E-04	13	5.28%	173	5.58E-04	21	4.30%	141	4.54E-04
6	3.20%	105	3.38E-04	14	5.52%	181	5.84E-04	22	3.50%	115	3.70E-04
7	4.97%	163	5.25E-04	15	6.09%	200	6.44E-04	23	2.42%	79	2.56E-04
8	6.11%	200	6.46E-04	16	5.76%	189	6.10E-04	24	1.50%	49	1.59E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	7.834E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	1.22E-04	9	6.63%	217	1.11E-03	17	5.87%	192	9.81E-04
2	0.44%	14	7.32E-05	10	6.71%	220	1.12E-03	18	6.09%	200	1.02E-03
3	0.35%	12	5.88E-05	11	6.03%	198	1.01E-03	19	5.83%	191	9.75E-04
4	0.48%	16	7.95E-05	12	5.35%	176	8.95E-04	20	5.57%	183	9.31E-04
5	1.28%	42	2.14E-04	13	5.28%	173	8.82E-04	21	4.30%	141	7.19E-04
6	3.20%	105	5.35E-04	14	5.52%	181	9.23E-04	22	3.50%	115	5.86E-04
7	4.97%	163	8.30E-04	15	6.09%	200	1.02E-03	23	2.42%	79	4.04E-04
8	6.11%	200	1.02E-03	16	5.76%	189	9.64E-04	24	1.50%	49	2.51E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.743E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	7.38E-05	9	6.63%	217	6.71E-04	17	5.87%	192	5.94E-04
2	0.44%	14	4.43E-05	10	6.71%	220	6.79E-04	18	6.09%	200	6.16E-04
3	0.35%	12	3.56E-05	11	6.03%	198	6.10E-04	19	5.83%	191	5.91E-04
4	0.48%	16	4.81E-05	12	5.35%	176	5.42E-04	20	5.57%	183	5.63E-04
5	1.28%	42	1.30E-04	13	5.28%	173	5.34E-04	21	4.30%	141	4.35E-04
6	3.20%	105	3.24E-04	14	5.52%	181	5.59E-04	22	3.50%	115	3.54E-04
7	4.97%	163	5.03E-04	15	6.09%	200	6.16E-04	23	2.42%	79	2.45E-04
8	6.11%	200	6.19E-04	16	5.76%	189	5.83E-04	24	1.50%	49	1.52E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Project Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	43.7	3.4	25	1,750	8,118	4.286E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	13	6.08E-07	9	6.63%	116	5.53E-06	17	5.87%	103	4.90E-06
2	0.44%	8	3.66E-07	10	6.71%	117	5.60E-06	18	6.09%	107	5.08E-06
3	0.35%	6	2.94E-07	11	6.03%	105	5.03E-06	19	5.83%	102	4.87E-06
4	0.48%	8	3.97E-07	12	5.35%	94	4.47E-06	20	5.57%	97	4.65E-06
5	1.28%	22	1.07E-06	13	5.28%	92	4.41E-06	21	4.30%	75	3.59E-06
6	3.20%	56	2.67E-06	14	5.52%	97	4.61E-06	22	3.50%	61	2.92E-06
7	4.97%	87	4.15E-06	15	6.09%	107	5.08E-06	23	2.42%	42	2.02E-06
8	6.11%	107	5.10E-06	16	5.76%	101	4.81E-06	24	1.50%	26	1.26E-06
Total										1,750	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Project Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	1,750	8,118	2.180E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	13	3.09E-06	9	6.63%	116	2.81E-05	17	5.87%	103	2.49E-05
2	0.44%	8	1.86E-06	10	6.71%	117	2.85E-05	18	6.09%	107	2.59E-05
3	0.35%	6	1.49E-06	11	6.03%	105	2.56E-05	19	5.83%	102	2.48E-05
4	0.48%	8	2.02E-06	12	5.35%	94	2.27E-05	20	5.57%	97	2.36E-05
5	1.28%	22	5.45E-06	13	5.28%	92	2.24E-05	21	4.30%	75	1.83E-05
6	3.20%	56	1.36E-05	14	5.52%	97	2.34E-05	22	3.50%	61	1.49E-05
7	4.97%	87	2.11E-05	15	6.09%	107	2.59E-05	23	2.42%	42	1.03E-05
8	6.11%	107	2.60E-05	16	5.76%	101	2.45E-05	24	1.50%	26	6.39E-06
Total										1,750	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Project Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	1,750	8,118	2.644E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	13	3.75E-05	9	6.63%	116	3.41E-04	17	5.87%	103	3.02E-04
2	0.44%	8	2.26E-05	10	6.71%	117	3.46E-04	18	6.09%	107	3.14E-04
3	0.35%	6	1.81E-05	11	6.03%	105	3.10E-04	19	5.83%	102	3.01E-04
4	0.48%	8	2.45E-05	12	5.35%	94	2.76E-04	20	5.57%	97	2.87E-04
5	1.28%	22	6.60E-05	13	5.28%	92	2.72E-04	21	4.30%	75	2.21E-04
6	3.20%	56	1.65E-04	14	5.52%	97	2.84E-04	22	3.50%	61	1.80E-04
7	4.97%	87	2.56E-04	15	6.09%	107	3.14E-04	23	2.42%	42	1.25E-04
8	6.11%	107	3.15E-04	16	5.76%	101	2.97E-04	24	1.50%	26	7.75E-05
Total										1,750	

Logue Avenue Traffic - Project Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	1,750	8,118	4.180E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	13	5.93E-05	9	6.63%	116	5.40E-04	17	5.87%	103	4.78E-04
2	0.44%	8	3.57E-05	10	6.71%	117	5.46E-04	18	6.09%	107	4.96E-04
3	0.35%	6	2.86E-05	11	6.03%	105	4.91E-04	19	5.83%	102	4.75E-04
4	0.48%	8	3.87E-05	12	5.35%	94	4.36E-04	20	5.57%	97	4.53E-04
5	1.28%	22	1.04E-04	13	5.28%	92	4.30E-04	21	4.30%	75	3.50E-04
6	3.20%	56	2.60E-04	14	5.52%	97	4.50E-04	22	3.50%	61	2.85E-04
7	4.97%	87	4.05E-04	15	6.09%	107	4.96E-04	23	2.42%	42	1.97E-04
8	6.11%	107	4.98E-04	16	5.76%	101	4.69E-04	24	1.50%	26	1.23E-04
Total										1,750	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	43.7	3.4	25	3,280	8,892	8.033E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	1.25E-06	9	6.63%	217	1.14E-05	17	5.87%	192	1.01E-05
2	0.44%	14	7.51E-07	10	6.71%	220	1.15E-05	18	6.09%	200	1.04E-05
3	0.35%	12	6.03E-07	11	6.03%	198	1.03E-05	19	5.83%	191	1.00E-05
4	0.48%	16	8.15E-07	12	5.35%	176	9.18E-06	20	5.57%	183	9.54E-06
5	1.28%	42	2.20E-06	13	5.28%	173	9.05E-06	21	4.30%	141	7.37E-06
6	3.20%	105	5.48E-06	14	5.52%	181	9.46E-06	22	3.50%	115	6.00E-06
7	4.97%	163	8.51E-06	15	6.09%	200	1.04E-05	23	2.42%	79	4.15E-06
8	6.11%	200	1.05E-05	16	5.76%	189	9.88E-06	24	1.50%	49	2.58E-06
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.086E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	6.35E-06	9	6.63%	217	5.78E-05	17	5.87%	192	5.12E-05
2	0.44%	14	3.82E-06	10	6.71%	220	5.85E-05	18	6.09%	200	5.31E-05
3	0.35%	12	3.07E-06	11	6.03%	198	5.25E-05	19	5.83%	191	5.09E-05
4	0.48%	16	4.15E-06	12	5.35%	176	4.67E-05	20	5.57%	183	4.85E-05
5	1.28%	42	1.12E-05	13	5.28%	173	4.60E-05	21	4.30%	141	3.75E-05
6	3.20%	105	2.79E-05	14	5.52%	181	4.81E-05	22	3.50%	115	3.05E-05
7	4.97%	163	4.33E-05	15	6.09%	200	5.31E-05	23	2.42%	79	2.11E-05
8	6.11%	200	5.33E-05	16	5.76%	189	5.03E-05	24	1.50%	49	1.31E-05
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.955E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VTM)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VTM)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VTM)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	7.71E-05	9	6.63%	217	7.01E-04	17	5.87%	192	6.21E-04
2	0.44%	14	4.63E-05	10	6.71%	220	7.10E-04	18	6.09%	200	6.44E-04
3	0.35%	12	3.72E-05	11	6.03%	198	6.37E-04	19	5.83%	191	6.17E-04
4	0.48%	16	5.03E-05	12	5.35%	176	5.66E-04	20	5.57%	183	5.89E-04
5	1.28%	42	1.36E-04	13	5.28%	173	5.58E-04	21	4.30%	141	4.54E-04
6	3.20%	105	3.38E-04	14	5.52%	181	5.84E-04	22	3.50%	115	3.70E-04
7	4.97%	163	5.25E-04	15	6.09%	200	6.44E-04	23	2.42%	79	2.56E-04
8	6.11%	200	6.46E-04	16	5.76%	189	6.10E-04	24	1.50%	49	1.59E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	7.834E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VTM)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	1.22E-04	9	6.63%	217	1.11E-03	17	5.87%	192	9.81E-04
2	0.44%	14	7.32E-05	10	6.71%	220	1.12E-03	18	6.09%	200	1.02E-03
3	0.35%	12	5.88E-05	11	6.03%	198	1.01E-03	19	5.83%	191	9.75E-04
4	0.48%	16	7.95E-05	12	5.35%	176	8.95E-04	20	5.57%	183	9.31E-04
5	1.28%	42	2.14E-04	13	5.28%	173	8.82E-04	21	4.30%	141	7.19E-04
6	3.20%	105	5.35E-04	14	5.52%	181	9.23E-04	22	3.50%	115	5.86E-04
7	4.97%	163	8.30E-04	15	6.09%	200	1.02E-03	23	2.42%	79	4.04E-04
8	6.11%	200	1.02E-03	16	5.76%	189	9.64E-04	24	1.50%	49	2.51E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Project Traffic
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	3,280	8,892	4.743E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	24	7.38E-05	9	6.63%	217	6.71E-04	17	5.87%	192	5.94E-04
2	0.44%	14	4.43E-05	10	6.71%	220	6.79E-04	18	6.09%	200	6.16E-04
3	0.35%	12	3.56E-05	11	6.03%	198	6.10E-04	19	5.83%	191	5.91E-04
4	0.48%	16	4.81E-05	12	5.35%	176	5.42E-04	20	5.57%	183	5.63E-04
5	1.28%	42	1.30E-04	13	5.28%	173	5.34E-04	21	4.30%	141	4.35E-04
6	3.20%	105	3.24E-04	14	5.52%	181	5.59E-04	22	3.50%	115	3.54E-04
7	4.97%	163	5.03E-04	15	6.09%	200	6.16E-04	23	2.42%	79	2.45E-04
8	6.11%	200	6.19E-04	16	5.76%	189	5.83E-04	24	1.50%	49	1.52E-04
Total										3,280	

Google Middlefield Park - Roadway Modeling
 Clyde Avenue Traffic - Project Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	43.7	3.4	25	3,530	11,717	8.645E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	26	1.77E-06	9	6.63%	234	1.61E-05	17	5.87%	207	1.43E-05
2	0.44%	15	1.07E-06	10	6.71%	237	1.63E-05	18	6.09%	215	1.48E-05
3	0.35%	12	8.55E-07	11	6.03%	213	1.46E-05	19	5.83%	206	1.42E-05
4	0.48%	17	1.16E-06	12	5.35%	189	1.30E-05	20	5.57%	196	1.35E-05
5	1.28%	45	3.12E-06	13	5.28%	186	1.28E-05	21	4.30%	152	1.04E-05
6	3.20%	113	7.78E-06	14	5.52%	195	1.34E-05	22	3.50%	124	8.51E-06
7	4.97%	175	1.21E-05	15	6.09%	215	1.48E-05	23	2.42%	85	5.88E-06
8	6.11%	216	1.49E-05	16	5.76%	203	1.40E-05	24	1.50%	53	3.66E-06
Total										3,530	

Google Middlefield Park - Roadway Modeling
 Clyde Avenue Traffic - Project Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	3,530	11,717	4.398E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	26	9.01E-06	9	6.63%	234	8.20E-05	17	5.87%	207	7.26E-05
2	0.44%	15	5.42E-06	10	6.71%	237	8.30E-05	18	6.09%	215	7.53E-05
3	0.35%	12	4.35E-06	11	6.03%	213	7.45E-05	19	5.83%	206	7.22E-05
4	0.48%	17	5.88E-06	12	5.35%	189	6.62E-05	20	5.57%	196	6.88E-05
5	1.28%	45	1.59E-05	13	5.28%	186	6.53E-05	21	4.30%	152	5.31E-05
6	3.20%	113	3.96E-05	14	5.52%	195	6.83E-05	22	3.50%	124	4.33E-05
7	4.97%	175	6.14E-05	15	6.09%	215	7.53E-05	23	2.42%	85	2.99E-05
8	6.11%	216	7.56E-05	16	5.76%	203	7.13E-05	24	1.50%	53	1.86E-05
Total										3,530	

Google Middlefield Park - Roadway Modeling
 Clyde Avenue Traffic - Project Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	3,530	11,717	5.333E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	26	1.09E-04	9	6.63%	234	9.94E-04	17	5.87%	207	8.80E-04
2	0.44%	15	6.57E-05	10	6.71%	237	1.01E-03	18	6.09%	215	9.13E-04
3	0.35%	12	5.27E-05	11	6.03%	213	9.04E-04	19	5.83%	206	8.75E-04
4	0.48%	17	7.13E-05	12	5.35%	189	8.03E-04	20	5.57%	196	8.35E-04
5	1.28%	45	1.92E-04	13	5.28%	186	7.92E-04	21	4.30%	152	6.45E-04
6	3.20%	113	4.80E-04	14	5.52%	195	8.28E-04	22	3.50%	124	5.25E-04
7	4.97%	175	7.45E-04	15	6.09%	215	9.13E-04	23	2.42%	85	3.63E-04
8	6.11%	216	9.17E-04	16	5.76%	203	8.64E-04	24	1.50%	53	2.26E-04
Total										3,530	

Google Middlefield Park - Roadway Modeling
 Clyde Avenue Traffic - Project Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	3,530	11,717	8.431E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	26	1.73E-04	9	6.63%	234	1.57E-03	17	5.87%	207	1.39E-03
2	0.44%	15	1.04E-04	10	6.71%	237	1.59E-03	18	6.09%	215	1.44E-03
3	0.35%	12	8.33E-05	11	6.03%	213	1.43E-03	19	5.83%	206	1.38E-03
4	0.48%	17	1.13E-04	12	5.35%	189	1.27E-03	20	5.57%	196	1.32E-03
5	1.28%	45	3.04E-04	13	5.28%	186	1.25E-03	21	4.30%	152	1.02E-03
6	3.20%	113	7.58E-04	14	5.52%	195	1.31E-03	22	3.50%	124	8.30E-04
7	4.97%	175	1.18E-03	15	6.09%	215	1.44E-03	23	2.42%	85	5.73E-04
8	6.11%	216	1.45E-03	16	5.76%	203	1.37E-03	24	1.50%	53	3.57E-04
Total										3,530	

Google Middlefield Park - Roadway Modeling
 Clyde Avenue Traffic - Project Traffic
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	3,530	11,717	5.105E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	26	1.05E-04	9	6.63%	234	9.51E-04	17	5.87%	207	8.42E-04
2	0.44%	15	6.29E-05	10	6.71%	237	9.63E-04	18	6.09%	215	8.74E-04
3	0.35%	12	5.05E-05	11	6.03%	213	8.65E-04	19	5.83%	206	8.38E-04
4	0.48%	17	6.82E-05	12	5.35%	189	7.69E-04	20	5.57%	196	7.99E-04
5	1.28%	45	1.84E-04	13	5.28%	186	7.58E-04	21	4.30%	152	6.17E-04
6	3.20%	113	4.59E-04	14	5.52%	195	7.92E-04	22	3.50%	124	5.03E-04
7	4.97%	175	7.13E-04	15	6.09%	215	8.74E-04	23	2.42%	85	3.47E-04
8	6.11%	216	8.77E-04	16	5.76%	203	8.27E-04	24	1.50%	53	2.16E-04
Total										3,530	

Project Generators, Restaurant, and Cooling Tower Emissions and Modeling Information

Google Middlefield

Project Emergency Generators - Emissions and Modeling Information

Generator	Building Location	Base Elevation (m)	Building Height		Generator Rating		Annual ^a Operation (hr/yr)	DPM ^b Emission Factor (g/hp-hr)	DPM Emissions		
			(ft)	(m)	(kW)	(hp)			Annual ^b Emissions (lb/yr)	Average ^c Daily Emissions (lb/day)	Average ^c Hourly Emissions (lb/hr)
G1a	R2	18.3	123	47.33	500	670	50	0.15	8.1	0.02	9.23E-04
G2	O1	17.4	130	50.02	900	1206	50	0.02	1.9	0.01	2.22E-04
G3	O2	15.5	95	36.56	900	1206	50	0.02	1.9	0.01	2.22E-04
G4	O3	15.8	95	36.56	900	1206	50	0.02	1.9	0.01	2.22E-04
G5	O4	15.5	95	36.56	900	1206	50	0.02	1.9	0.01	2.22E-04
G6	O5	14.9	65	25.01	900	1206	50	0.02	1.9	0.01	2.22E-04
G7	R3	16.8	95	36.56	500	670	50	0.15	8.1	0.02	9.23E-04
G8	R4	17.4	95	36.56	500	670	50	0.15	8.1	0.02	9.23E-04
G9	R4Aff	17.4	95	36.56	500	670	50	0.15	8.1	0.02	9.23E-04
G10	R5	17.1	95	36.56	500	670	50	0.15	8.1	0.02	9.23E-04
G11	R6	17.7	95	36.56	500	670	50	0.15	8.1	0.02	9.23E-04

^a Annual hours for testing and maintenance purposes.

^b Emissions calculated using CalEEMod emission factors and a load factor of 0.73

^c Assumes generators can be operated any day or hour of the year.

Point Source Stack Parameters	
Generator engine size (hp)	670 & 1,206
Stack Discharge Height *(ft)	12
Stack Discharge Height *(m)	3.66
Stack Diameter** (ft)	0.60
Stack Diameter** (m)	0.18
Stack Exit Velocity** (ft/sec)	149
Stack Exit Velocity** (m/sec)	45.3
Exhaust Temperature** (F)	872

* Horizontal discharge (18 inches) from building facade

** BAAQMD default generator parameters

Google - Middlefield

Restaurant Under-Fire Charbroiler TAC Emissions

Restaurant Under-Fire Charbroiler TAC Emissions - Per Restaurant

Source ¹	Quantity ² (lb/day)	Emission Factors ³ (lb/ton)		Emission ⁴ Controls (percent reduction)	Emissions (lb/day)		Emissions ⁵ (lb/year)		Emissions ⁶ (g/s)	
		PAH	Naphthalene		PAH wo/ Naphthalene	Naphthalene	PAH wo/ Naphthalene	Naphthalene	PAH wo/ Naphthalene	Naphthalene
		wo/Naphthalene	Naphthalene							
Charbroiler										
Hamburger	58.26	0.000702	0.038	83%	3.48E-06	1.88E-04	1.08E-03	5.87E-02	1.56E-08	8.44E-07
Chicken	58.26	0.00046	0.018	83%	2.28E-06	8.91E-05	7.11E-04	2.78E-02	1.02E-08	4.00E-07
Salmon	58.26	-	-	-	-	-	-	-	-	-
Steak	58.26	0.000702	0.038	83%	3.48E-06	1.88E-04	1.08E-03	5.87E-02	1.56E-08	8.44E-07
Total	233				9.23E-06	4.65E-04	2.88E-03	1.45E-01	4.14E-08	2.09E-06

¹ Source type is based on the beef, chicken, and fish for under-fired charbroilers.

² Average quantities provided by applicant.

³ SJVAPCD *Guidance for Air Dispersion Modeling, Draft 01/07 Rev 2.0*, Section 2.3.4 Restaurant and Fast Food Cooking Emissions

⁴ South Coast Air Quality Management District Rule 1138 (Control of Emissions from Restaurant Operations) regulates PM10 and VOC emissions from fast-food restaurants with charbroilers. Catalytic oxidizers reduce VOC emissions by approximately 86 percent and PM emissions by approximately 83 percent.

⁵ Restaurants assumed to operate 6 days/week, 312 days/year

⁶ Emission rates used for modeling

Google Middlefield - Cooling Tower PM Emissions

Evaporative Cooling Tower PM Emissions

No. Cooling Tower Cells	3		
Operating Hours per Year	2,100		
Total Water Flow Rate (gpm)	6,765		
Influent Water Total Dissolved Solids (TDS) Conc. (ppm)*	830		
Circulating Water Cycles of Concentration*	3		
Cooling Tower Circulating Water TDS (ppm)*	2,490		
Mist Eliminator Efficiency (%)	0.005		
Total Cooling Tower Drift (gpm)	0.34		
Particulate Matter Emissions			
	PM	PM10	PM2.5
Fraction of PM**	1.0	0.7	0.42
Hourly (lb/hr)	0.42	0.30	0.18
Average Daily (lb/day)	2.4	1.7	1.0
Annual lb/yr	885	619.5	371.7
Annual (ton/yr)	0.44	0.3	0.2

* TDS and cycles of concentration values provided by applicant.

** South Coast AQMD, Final-Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds, Appendix A.

Cooling Tower Modeling Parameters & PM2.5 Emissions

Modeled as three 14 ft x 14 ft volume sources on roof of Building O-1

Cooling tower height = 20 ft

Building height = 130 ft

Release height = 150 ft = 45.72 meters

For each volume source:

Initial lateral dimension = 0.99 meters

Initial vertical dimension = 18.43 meters

PM2.5 emissions per tower cell g/s) = 0.0018

Health Risk Impacts from Project Operation at Off-Site and On-Site Receptors – Unmitigated and Mitigated Project Construction Emissions

**Google Middlefield - District Utilities Construction & Operation Sources - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Project Construction and Operation- Unmitigated
Off-Site Residential Receptors**

Receptor Information

Number of Receptors 242
Receptor Height = 1st and 2nd floor levels
Receptor distances = at sensitive residential receptor locations

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
Land Use Classification urban
Wind speed = variable
Wind direction = variable

Off-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.02777	0.0000	0.0000
2024 - Construction	0.04593	0.0000	0.0000
2025 - Construction	0.43184	0.0000	0.0000
2026 - Construction	0.21711	0.0000	0.0000
2027 - Construction	0.12831	0.0000	0.0000
2028 - Construction	0.08451	0.0000	0.0000
2029 - Construction	0.03364	0.0000	0.0000
2030 - Construction	0.00091	0.0000	0.0000
2031 - Construction	0.00021	0.0000	0.0000
2026-2054 - Roads	0.00028	0.0162	0.0262
2026-2054 - Generators	0.00499	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)*
2025	2.38

* Maximum PM2.5 concentration from construction activities

**Google Middlefield - District Utilities Construction & Operation Sources - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Project Construction and Operation- Mitigated
Off-Site Residential Receptors (1st & 2nd level receptor heights)**

Receptor Information

Number of Receptors 242
Receptor Height = 1st and 2nd floor levels
Receptor distances = at sensitive residential receptor locations

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
Land Use Classification urban
Wind speed = variable
Wind direction = variable

Off-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00223	0.0000	0.0000
2024 - Construction	0.00513	0.0000	0.0000
2025 - Construction	0.05051	0.0000	0.0000
2026 - Construction	0.02976	0.0000	0.0000
2027 - Construction	0.02173	0.0000	0.0000
2028 - Construction	0.01743	0.0000	0.0000
2029 - Construction	0.00925	0.0000	0.0000
2030 - Construction	0.00061	0.0000	0.0000
2031 - Construction	0.00014	0.0000	0.0000
2026-2054 - Roads	0.00028	0.0162	0.0262
2026-2054 - Generators	0.00499	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)*
2025	0.44

* Maximum PM2.5 concentration from construction activities

Google Middlefield - Project Impacts at Locations of Off-Site District Utilities MEIs
Maximum Cancer Risk Calculations for Project Construction and Operation- Unmitigated
Off-Site Residential Receptors
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

- Where: C_{air} = concentration in air (µg/m³)
- DBR = daily breathing rate (L/kg body weight-day)
- A = Inhalation absorption factor
- EF = Exposure frequency (days/year)
- 10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Cancer Risk (per million)							
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	PAH**	Naphthalene**	Total	
					DPM	TOG	TOG							
0	2023	0	-	-	0.0278	0.0000	0.0000	-	-	-	-	-	-	-
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0459	0.0000	0.0000	0.625	0.0000	0.0000	0.0000	0.0000	0.0000	0.62
1	2025	1	1	10	0.4318	0.0000	0.0000	70.93	0.0000	0.0000	0.0000	0.0000	0.0000	70.928
2	2026	1	2	10	0.2224	0.0162	0.0262	36.525	0.0152	0.0014	0.00146	0.00226	0.00226	36.546
3	2027	1	3	3	0.1336	0.0162	0.0262	3.45	0.0024	0.0002	0.00023	0.00036	0.00036	3.457
4	2028	1	4	3	0.0898	0.0162	0.0262	2.32	0.0024	0.0002	0.00023	0.00036	0.00036	2.325
5	2029	1	5	3	0.0389	0.0162	0.0262	1.01	0.0024	0.0002	0.00023	0.00036	0.00036	1.009
6	2030	1	6	3	0.0062	0.0162	0.0262	0.16	0.0024	0.0002	0.00023	0.00036	0.00036	0.163
7	2031	1	7	3	0.0055	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.145
8	2032	1	8	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
9	2033	1	9	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
10	2034	1	10	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
11	2035	1	11	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
12	2036	1	12	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
13	2037	1	13	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
14	2038	1	14	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
15	2039	1	15	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
16	2040	1	16	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
17	2041	1	17	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
18	2042	1	18	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
19	2043	1	19	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
20	2044	1	20	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
21	2045	1	21	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
22	2046	1	22	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
23	2047	1	23	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
24	2048	1	24	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
25	2049	1	25	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
26	2050	1	26	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
27	2051	1	27	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
28	2052	1	28	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
29	2053	1	29	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
30	2054	1	30	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
Total Increased Cancer Risk								116.5994	0.0525	0.0050	0.0050	0.0078	0.0078	116.67

* Third trimester of pregnancy

** PAH and naphthalene cancer risks calculated separately

Google Middlefield - Project Impacts at Locations of Off-Site District Utilities MEIs
Maximum Cancer Risk Calculations for Project Construction and Operation- Mitigated
Off-Site Residential Receptors (1st & 2nd level receptor heights)
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

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

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

Where: C_{air} = concentration in air (µg/m³)
 DBR = daily breathing rate (L/kg body weight-day)
 A = Inhalation absorption factor
 EF = Exposure frequency (days/year)
 10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information				Cancer Risk (per million)						
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	PAH**	Naphthalene**	Total	
					DPM	TOG	TOG							
0	2023	0	-	-	0.0022	0.0000	0.0000	-	-	-	-	-	-	-
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0051	0.0000	0.0000	0.070	0.0000	0.0000	0.0000	0.0000	0.0000	0.07
1	2025	1	1	10	0.0505	0.0000	0.0000	8.30	0.0000	0.0000	0.0000	0.0000	0.0000	8.296
2	2026	1	2	10	0.0350	0.0162	0.0262	5.754	0.0152	0.0014	0.00146	0.00226	0.00226	5.774
3	2027	1	3	3	0.0270	0.0162	0.0262	0.70	0.0024	0.0002	0.00023	0.00036	0.00036	0.701
4	2028	1	4	3	0.0227	0.0162	0.0262	0.59	0.0024	0.0002	0.00023	0.00036	0.00036	0.590
5	2029	1	5	3	0.0145	0.0162	0.0262	0.38	0.0024	0.0002	0.00023	0.00036	0.00036	0.379
6	2030	1	6	3	0.0059	0.0162	0.0262	0.15	0.0024	0.0002	0.00023	0.00036	0.00036	0.155
7	2031	1	7	3	0.0054	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.143
8	2032	1	8	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
9	2033	1	9	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
10	2034	1	10	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
11	2035	1	11	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
12	2036	1	12	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
13	2037	1	13	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
14	2038	1	14	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
15	2039	1	15	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
16	2040	1	16	3	0.0053	0.0162	0.0262	0.14	0.0024	0.0002	0.00023	0.00036	0.00036	0.139
17	2041	1	17	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
18	2042	1	18	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
19	2043	1	19	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
20	2044	1	20	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
21	2045	1	21	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
22	2046	1	22	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
23	2047	1	23	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
24	2048	1	24	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
25	2049	1	25	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
26	2050	1	26	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
27	2051	1	27	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
28	2052	1	28	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
29	2053	1	29	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
30	2054	1	30	1	0.0053	0.0162	0.0262	0.015	0.0003	0.0000	0.00003	0.00004	0.00004	0.015
Total Increased Cancer Risk								17.5102	0.0525	0.0050	0.0050	0.0078	17.58	

* Third trimester of pregnancy

** PAH and naphthalene cancer risks calculated separately

**Google Middlefield - Project Operation. - Restaurant Charbroilers
 AERMOD Risk Modeling Parameters and Maximum TAC Concentrations
 Off-Site Residential Receptors - 1st and 2nd Floor Levels
 Receptor at Off-Site Location of Maximum Cancer Risk from Project Operation**

Receptor Information

Number of Receptors 242
 Receptor Height = 1st & 2nd floor levels
 Receptor distances = variable - at nearby residences

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
 Land Use Classification urban
 Wind speed = variable
 Wind direction = variable

Cancer Risk Off-Site Project MEI Max Concentrations

	On-Site Project MEI Max Period Average TAC Concentration ($\mu\text{g}/\text{m}^3$)
TAC	
PAHs	2.50E-06
Naphthalene	1.26E-04

Non-Cancer Health Effects

	On-Site MEI Hazard Index
TAC	Chronic
PAHs	-
Naphthalene	1.40E-05
Total	0.00001

**Google Middlefield - Project Operation. - Restaurant Charbroilers
Maximum Cancer & Non-Cancer Health Impacts
at Off-Site Location of Maximum Cancer Risk from Project Operation
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)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - <16	16 - 70
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Cancer Potency Factors and Reference Exposure Levels (REL)

TAC	CPF (mg/kg-day) ⁻¹	REL (µg/m ³)	
		Acute (1-hour)	Chronic (ann ave)
PAHs	3.90E+00	-	-
Naphthalene	1.20E-01	-	9

Project Operation Cancer Risk - Maximum Project Operation Impact Receptor Location

Exposure Year Age	Initial Exposure Year	Exposure Information				Cancer Risk (per million)		
		Exposure Duration (years)	Age Sensitivity Factor	Annual Conc (ug/m3)		PAHs	Naph- thalene	Total
				PAHs	Naph- thalene			
0	2023							
3rd Trimester	2024	0.25	10	0.000000	0.00000	0.00000	0.00000	0.00000
1	2025	1	10	0.000000	0.00000	0.00000	0.00000	0.00000
2	2026	1	10	0.000002	0.00013	0.00146	0.00226	0.00371
3	2027	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
4	2028	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
5	2029	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
6	2030	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
7	2031	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
8	2032	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
9	2033	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
10	2034	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
11	2035	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
12	2036	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
13	2037	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
14	2038	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
15	2039	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
16	2040	1	3	0.000002	0.00013	0.00023	0.00036	0.00058
17	2041	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
18	2042	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
19	2043	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
20	2044	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
21	2045	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
22	2046	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
23	2047	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
24	2048	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
25	2049	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
26	2050	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
27	2051	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
28	2052	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
29	2053	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
30	2054	1	1	0.000002	0.00013	0.00003	0.00004	0.00006
Total Increased Cancer Risk						0.0050	0.0078	0.013

* Third trimester of pregnancy

**Google Middlefield - Construction & Operation Sources - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Project Construction and Operation- Unmitigated
On-Site Residential Receptors**

Receptor Information

Number of Receptors 384
Receptor Height = 2nd floor level
Receptor distances = 9 meter grid spacing in residential areas

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
Land Use Classification urban
Wind speed = variable
Wind direction = variable

On-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.50599	0.0000	0.0000
2027 - Construction	0.34488	0.0000	0.0000
2028 - Construction	0.13850	0.0000	0.0000
2029 - Construction	0.05729	0.0000	0.0000
2030 - Construction	0.00509	0.0000	0.0000
2031 - Construction	0.00116	0.0000	0.0000
2026-2055 - Roads	0.00068	0.0407	0.0647
2026-2055 - Generators	0.01348	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m ³)*
2025	0.695

* Maximum PM2.5 concentration from construction & operation activities and use of MERV-13 for on-site receptors

**Google Middlefield - Construction & Operation Sources - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Project Construction and Operation- Mitigated
On-Site Residential Receptors (2nd floor level receptors)**

Receptor Information

Number of Receptors 384
Receptor Height = 2nd floor level
Receptor distances = 9 meter grid spacing in residential areas

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
Land Use Classification urban
Wind speed = variable
Wind direction = variable

On-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.05838	0.0000	0.0000
2027 - Construction	0.04526	0.0000	0.0000
2028 - Construction	0.02637	0.0000	0.0000
2029 - Construction	0.01785	0.0000	0.0000
2030 - Construction	0.00341	0.0000	0.0000
2031 - Construction	0.00077	0.0000	0.0000
2026-2055 - Roads	0.00068	0.0407	0.0647
2026-2055 - Generators	0.01348	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m ³)*
2025	0.144

* Maximum PM2.5 concentration from construction & operation activities and use of MERV-13 for on-site receptors

Google Middlefield - Project Impacts at Location of On-Site MEI
Maximum Cancer Risk Calculations for Project Construction and Operation- Unmitigated
On-Site Residential Receptors
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Project Construction & Operation Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Cancer Risk (per million)							
				Age Sensitivity Factor	Annual TAC Conc (µg/m ³)			DPM	Exhaust TOG	Evaporative TOG	PAH**	Naphthalene**	Total	
					DPM	TOG	Evaporative TOG							
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	-	-	-
0	2024	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	-	-	-
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.00000	0.00000	0.000	
	1	2026	1	2	10	0.5202	0.0407	0.0647	85.433	0.0382	0.0036	0.00187	0.00290	85.479
	2	2027	1	3	10	0.3590	0.0407	0.0647	58.971	0.0382	0.0036	0.00029	0.00046	59.014
	3	2028	1	4	3	0.1527	0.0407	0.0647	3.95	0.0060	0.0006	0.00029	0.00046	3.955
	4	2029	1	5	3	0.0715	0.0407	0.0647	1.85	0.0060	0.0006	0.00029	0.00046	1.855
	5	2030	1	6	3	0.0193	0.0407	0.0647	0.50	0.0060	0.0006	0.00029	0.00046	0.505
	6	2031	1	7	3	0.0153	0.0407	0.0647	0.40	0.0060	0.0006	0.00029	0.00046	0.403
	7	2032	1	8	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	8	2033	1	9	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	9	2034	1	10	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	10	2035	1	11	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	11	2036	1	12	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	12	2037	1	13	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	13	2038	1	14	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	14	2039	1	15	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	15	2040	1	16	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00029	0.00046	0.373
	16	2041	1	17	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.00003	0.00005	0.373
	17	2042	1	18	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	18	2043	1	19	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	19	2044	1	20	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	20	2045	1	21	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	21	2046	1	22	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	22	2047	1	23	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	23	2048	1	24	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	24	2049	1	25	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	25	2050	1	26	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	26	2051	1	27	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	27	2052	1	28	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	28	2053	1	29	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
	29	2054	1	30	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041
30	2055	1	30	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.00003	0.00005	0.041	
Total Increased Cancer Risk								155.32	0.1699	0.0159	0.0065	0.0101	155.53	
Total Increased Cancer Risk With use of MERV-13 Filtration								46.60	0.1699	0.0159	0.0065	0.0101	46.80	

* Third trimester of pregnancy

** PAH and naphthalene cancer risks calculated separately

**Google Middlefield - Project Impacts at Location of On-Site MEI
Maximum Cancer Risk Calculations for Project Construction and Operation- Mitigated
On-Site Residential Receptors (2nd floor level receptors)
Residential Exposure (30-year)**

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Project Construction & Operation Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information					Cancer Risk (per million)							
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	PAH**	Naphthalene**	Total
					DPM	TOG	Evaporative									
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	-	-	-		
0	2024	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	-	-	-		
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
	1	2026	1	2	10	0.0725	0.0407	0.0647	11.914	0.0382	0.0036	0.0019	0.0029	11.961		
	2	2027	1	3	10	0.0594	0.0407	0.0647	9.760	0.0382	0.0036	0.0003	0.0005	9.802		
	3	2028	1	4	3	0.0405	0.0407	0.0647	1.05	0.0060	0.0006	0.0003	0.0005	1.055		
	4	2029	1	5	3	0.0320	0.0407	0.0647	0.83	0.0060	0.0006	0.0003	0.0005	0.835		
	5	2030	1	6	3	0.0176	0.0407	0.0647	0.45	0.0060	0.0006	0.0003	0.0005	0.462		
	6	2031	1	7	3	0.0149	0.0407	0.0647	0.39	0.0060	0.0006	0.0003	0.0005	0.393		
	7	2032	1	8	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	8	2033	1	9	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	9	2034	1	10	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	10	2035	1	11	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	11	2036	1	12	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	12	2037	1	13	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	13	2038	1	14	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	14	2039	1	15	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	15	2040	1	16	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0003	0.0005	0.373		
	16	2041	1	17	3	0.0142	0.0407	0.0647	0.37	0.0060	0.0006	0.0000	0.0001	0.373		
	17	2042	1	18	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	18	2043	1	19	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	19	2044	1	20	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	20	2045	1	21	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	21	2046	1	22	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	22	2047	1	23	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	23	2048	1	24	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	24	2049	1	25	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	25	2050	1	26	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	26	2051	1	27	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	27	2052	1	28	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	28	2053	1	29	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
	29	2054	1	30	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041		
30	2055	1	30	1	0.0142	0.0407	0.0647	0.041	0.0007	0.0001	0.0000	0.0001	0.041			
Total Increased Cancer Risk								28.62	0.1699	0.0159	0.0064	0.0100	28.82			
Total Increased Cancer Risk With use of MERV-13 Filtration								8.59	0.1699	0.0159	0.0064	0.0100	8.79			

* Third trimester of pregnancy

** PAH and naphthalene cancer risks calculated separately

**Google Middlefield - Project Operation. - Restaurant Charbroilers
 AERMOD Risk Modeling Parameters and Maximum TAC Concentrations
 On-Site Residential Receptors - 2nd Floor Level
 Receptor at On-Site Location of Maximum Cancer Risk from Project Operation**

Receptor Information

Number of Receptors 384
 Receptor Height = 2nd floor level
 Receptor distances = grids with 9 meter spacing within residential areas

Meteorological Conditions

CARB Moffett Field Met Data 2009-2013
 Land Use Classification urban
 Wind speed = variable
 Wind direction = variable

Cancer Risk On-Site Project MEI Max Concentrations

	On-Site Project MEI Max Period Average TAC Concentration ($\mu\text{g}/\text{m}^3$)
TAC	
PAHs	3.21E-06
Naphthalene	1.62E-04

Non-Cancer Health Effects

	Off-Site MEI Hazard Index
	Chronic
TAC	
PAHs	-
Naphthalene	1.80E-05
Total	0.00002

**Google Middlefield - Project Operation. - Restaurant Charbroilers
Maximum Cancer & Non-Cancer Health Impacts
at On-Site Location of Maximum Cancer Risk from Project Operation
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)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Age --> Parameter	Infant/Child			Adult
	3rd Trimester	0 - <2	2 - <16	16 - 70
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Cancer Potency Factors and Reference Exposure Levels (REL)

TAC	CPF (mg/kg-day) ⁻¹	REL (µg/m ³)	
		Acute (1-hour)	Chronic (ann ave)
PAHs	3.90E+00	-	-
Naphthalene	1.20E-01	-	9

Project Operation Cancer Risk - Maximum Project Operation Impact Receptor Location

Exposure Year Age	Initial Exposure Year	Exposure Information				Cancer Risk (per million)		
		Exposure Duration (years)	Age Sensitivity Factor	Annual Conc (ug/m3)		PAHs	Naph- thalene	Total
				PAHs	Naph- thalene			
0	2023							
3rd Trimester	2024	0.25	10	0.000000	0.00000	0.00000	0.00000	0.00000
1	2025	1	10	0.000000	0.00000	0.00000	0.00000	0.00000
2	2026	1	10	0.000003	0.00016	0.00187	0.00290	0.00477
3	2027	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
4	2028	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
5	2029	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
6	2030	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
7	2031	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
8	2032	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
9	2033	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
10	2034	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
11	2035	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
12	2036	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
13	2037	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
14	2038	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
15	2039	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
16	2040	1	3	0.000003	0.00016	0.00029	0.00046	0.00075
17	2041	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
18	2042	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
19	2043	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
20	2044	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
21	2045	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
22	2046	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
23	2047	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
24	2048	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
25	2049	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
26	2050	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
27	2051	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
28	2052	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
29	2053	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
30	2054	1	1	0.000003	0.00016	0.00003	0.00005	0.00008
Total Increased Cancer Risk						0.0064	0.0100	0.016

* Third trimester of pregnancy

Genex Middlefield - Project Impact
Genex Risk Calculations for Project Construction and Operation - Updated
by the Genex Risk Management Team

Project Name		Location		Type		Status		Risk Level		Impact		Mitigation		Monitoring		Reporting		Review		
Region	TRM	TRM	County	County	County	County	County	County	County	County	County	County	County	County	County	County	County	County	County	County
1	TRM001	TRM001	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex	Genex

Company Bid Schedule - Project Information
Company Bid Calculation for Project Construction and Operation with Migration
of the Andromeda Regulator

Company Bid Calculation for Project Construction and Operation with Migration of the Andromeda Regulator

Table with 10 columns: Period, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025. Sub-totals for 2016-2025 and a Grand Total for 2016-2025.

Main data table with columns: Equipment, TRM, TRM, Year, and a grid of values for 2016-2025. The table is divided into sections for different equipment types, including 'Pumps', 'Electricity', 'Water', 'Air', 'Fuel', 'Oil', 'Gas', 'Steam', 'Cold Water', 'Hot Water', 'HVAC', 'Mechanical', 'Electrical', 'IT', 'Security', 'Safety', 'Miscellaneous', and 'Total'.

Google Middlefield - District Utilities Construction and Project Impacts
Total PM2.5 Concentrations - Project Impacts - Unmitigated
Off-Site Residential Receptors - 1st & 2nd Residential Level receptor heights

Receptor No.	UTM Coordinates (m)	UTM-X	UTM-Y	Construction PM2.5 (Fugitive + Exhaust) Concentrations (µg/m³)											Project Operation		Cooling	Char-broilers	Total Construction & Operation																																
				2023		2024		2025		2026		2027		2028		2029			2030		2031		2023	2024	2025	2026	2027	2028	2029	2030	2031																				
				2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023			2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024																
1	58374.05	4138923.7	0.06165	0.06251	0.02557	0.01163	0.04421	0.01775	0.00969	0.00008	0.00002	0.00504	0.00068	0.00378	0.00003	0.06165	0.06251	0.02557	0.01163	0.04421	0.01775	0.00969	0.00008	0.00504	0.00068	0.00378	0.00003	0.06165	0.06251	0.02557	0.01163	0.04421	0.01775	0.00969	0.00008	0.00504	0.00068	0.00378	0.00003	0.06165	0.06251	0.02557	0.01163	0.04421	0.01775	0.00969	0.00008	0.00504	0.00068	0.00378	0.00003

**Google Middlefield - Background (Existing) Traffic - TACs & PM2.5
Local Roads and State Route 237
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
Off-Site Residential Receptors**

Receptor Information

Number of Receptors = 242
 Receptor Height = 1st and 2nd floor levels
 Receptor distances = at sensitive residential receptor locations

Meteorological Conditions

CARB Moffett Field Met Data = 2009-2013
 Land Use Classification = urban
 Wind speed = variable
 Wind direction = variable

Off-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.00000	0.0000	0.0000
2027 - Construction	0.00000	0.0000	0.0000
2028 - Construction	0.00000	0.0000	0.0000
2029 - Construction	0.00000	0.0000	0.0000
2030 - Construction	0.00000	0.0000	0.0000
2031 - Construction	0.00000	0.0000	0.0000
2026-2054 - Roads	0.00155	0.0495	0.0722
2026-2054 - Generators	0.00000	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)
2025	0.070

**Google Middlefield - Background (Existing) Traffic - TACs & PM2.5
Local Roads and State Route 237
AERMOD Risk Modeling Parameters and Maximum Concentrations
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
On-Site Residential Receptors**

Receptor Information

Number of Receptors = 384
 Receptor Height = 2nd floor level
 Receptor distances = 9 meter grid spacing in residential areas

Meteorological Conditions

CARB Moffett Field Met Data = 2009-2013
 Land Use Classification = urban
 Wind speed = variable
 Wind direction = variable

On-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.00000	0.0000	0.0000
2027 - Construction	0.00000	0.0000	0.0000
2028 - Construction	0.00000	0.0000	0.0000
2029 - Construction	0.00000	0.0000	0.0000
2030 - Construction	0.00000	0.0000	0.0000
2031 - Construction	0.00000	0.0000	0.0000
2026-2055 - Roads	0.00405	0.1235	0.1717
2026-2055 - Generators	0.00000	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)
2026	0.040

Google Middlefield - Local Roads & SR-237 with Background (Existing) Traffic at Location of Off-Site MEIs
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
Off-Site Residential Receptors
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Cancer Risk (per million)				
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	Total
					DPM	Exhaust TOG	Evaporative TOG				
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	0.00
	2025	1	1	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.000
	2026	1	2	10	0.0016	0.0495	0.0722	0.255	0.0464	0.0040	0.305
	2027	1	3	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2028	1	4	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2029	1	5	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2030	1	6	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2031	1	7	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2032	1	8	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2033	1	9	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2034	1	10	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2035	1	11	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2036	1	12	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2037	1	13	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2038	1	14	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2039	1	15	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2040	1	16	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2041	1	17	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2042	1	18	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2043	1	19	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2044	1	20	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2045	1	21	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2046	1	22	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2047	1	23	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2048	1	24	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2049	1	25	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2050	1	26	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2051	1	27	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2052	1	28	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2053	1	29	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
2054	1	30	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005	
Total Increased Cancer Risk								0.8780	0.1600	0.0138	1.05

* Third trimester of pregnancy

**Google Middlefield - Local Roads & SR-237 with Background (Existing) Traffic at Location of On-Site MEIs
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
On-Site Residential Receptors
Residential Exposure (30-year)**

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Project Construction & Operation Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information								
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			Cancer Risk (per million)				
					DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total	
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	
0	2024	0	-	-	0.0000	0.0000	0.0000	-	-	-	-	
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.000	
	1	2026	1	2	10	0.0041	0.1235	0.1717	0.665	0.1158	0.0095	0.791
	2	2027	1	3	10	0.0041	0.1235	0.1717	0.665	0.1158	0.0095	0.791
	3	2028	1	4	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	4	2029	1	5	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	5	2030	1	6	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	6	2031	1	7	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	7	2032	1	8	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	8	2033	1	9	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	9	2034	1	10	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	10	2035	1	11	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	11	2036	1	12	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	12	2037	1	13	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	13	2038	1	14	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	14	2039	1	15	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	15	2040	1	16	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	16	2041	1	17	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
	17	2042	1	18	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	18	2043	1	19	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	19	2044	1	20	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	20	2045	1	21	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	21	2046	1	22	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	22	2047	1	23	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	23	2048	1	24	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	24	2049	1	25	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	25	2050	1	26	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	26	2051	1	27	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	27	2052	1	28	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	28	2053	1	29	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
	29	2054	1	30	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
30	2055	1	30	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014	
Total Increased Cancer Risk								2.96	0.5154	0.0423	3.52	
Total Increased Cancer Risk With use of MERV-13 Filtration								0.89	0.5154	0.0423	1.45	

* Third trimester of pregnancy

Project Sources with Baseline (Existing) Traffic - Emissions and Health Risk Calculations

Local Roads - Existing Traffic Emissions

Google Middlefield - Road Segments Used for Modeling Existing Traffic ADTs

Road	ADT from Road Segment Used for Modeling	Existing Traffic ADT ¹
Ellis Street	north of Middlefield	9,110
Middlefield Road*	west of Ellis	15,700
Logue Ave**	south of Maude	2,900
Maude Ave	west of SR 237	6,580
Clyde Ave	north of Maude	2,480
SR-237	SR-237 before Hwy 101	62,540

1) ADT from traffic consultant except for SR-237.

SR-237 ADT from 2020 Caltrans AADT Truck Traffic data.

* ADT from west road segment used to represent modeled road segment.

** ADT from west road segment used for represent modeled road segment.

Emission Factors for Local Roads

File Name:

EMFAC2021/CT-EMFAC2017:

Run Date: 9/30/2021 11:04

Area: Santa Clara (SF)

Analysis Year: 2026

Season: Annual

Vehicle Category	VMT Fraction	Diesel	
		VMT Fraction	Gas VMT Fraction
	Across Category	Within Category	Within Category
Truck 1	0.025	0.508	0.492
Truck 2	0.015	0.935	0.049
Non-Truck	0.96	0.015	0.949

Road Type:	CARB	Varies
Silt Loading Factor:	CARB	P = 64 days N = 365 days
Precipitation Correction:	CARB	

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
PM2.5	0.00909	0.00603	0.00416	0.00302	0.00231	0.00186	0.00157	0.00141	0.00134	0.00134	0.00142	0.00156	0.00179
TOG	0.12664	0.08207	0.05515	0.03909	0.02944	0.02333	0.01938	0.01686	0.01539	0.01476	0.01489	0.01582	0.01770
Diesel PM	0.00097	0.00081	0.00065	0.00053	0.00045	0.00041	0.00040	0.00041	0.00043	0.00048	0.00055	0.00063	0.00072
DEOG	0.01174	0.00845	0.00445	0.00217	0.00147	0.00115	0.00094	0.00080	0.00071	0.00066	0.00064	0.00066	0.00069

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

Pollutant Name	Emission Factor
TOG	1.10553

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

Pollutant Name	Emission Factor
PM2.5	0.00203

Fleet Average Brake Wear 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
PM2.5	0.00375	0.00429	0.00482	0.00535	0.00562	0.00571	0.00574	0.00525	0.00420	0.00317	0.00252	0.00222	0.00192

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

Pollutant Name	Emission Factor
PM2.5	0.01912 (silt loading = 0.0435 grams/sq meter)

=====**END**=====

Pollutant Name	Freeway Emission Factor	Major/Collector Emission Factor	Local Urban
PM2.5	0.007256	0.014459	0.117525

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Existing Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	67.7	3.4	40	9,110	15,809	1.289E-09	6.8	3.16

Emission Factors - DPM

Speed Category Travel Speed (mph) Emissions per Vehicle (g/VMT)	1	2	3	4
	40	0.00041		

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	66	3.56E-06	9	6.63%	604	3.24E-05	17	5.87%	535	2.87E-05
2	0.44%	40	2.14E-06	10	6.71%	611	3.28E-05	18	6.09%	555	2.98E-05
3	0.35%	32	1.72E-06	11	6.03%	549	2.95E-05	19	5.83%	531	2.85E-05
4	0.48%	43	2.32E-06	12	5.35%	488	2.62E-05	20	5.57%	507	2.72E-05
5	1.28%	117	6.27E-06	13	5.28%	481	2.58E-05	21	4.30%	392	2.10E-05
6	3.20%	291	1.56E-05	14	5.52%	503	2.70E-05	22	3.50%	319	1.71E-05
7	4.97%	453	2.43E-05	15	6.09%	555	2.98E-05	23	2.42%	220	1.18E-05
8	6.11%	557	2.99E-05	16	5.76%	525	2.82E-05	24	1.50%	137	7.35E-06
Total										9,110	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Existing Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	9,110	15,809	4.474E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category Travel Speed (mph) Emissions per Vehicle (g/VMT)	1	2	3	4
	40	0.001409		

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	66	1.24E-05	9	6.63%	604	1.12E-04	17	5.87%	535	9.96E-05
2	0.44%	40	7.44E-06	10	6.71%	611	1.14E-04	18	6.09%	555	1.03E-04
3	0.35%	32	5.97E-06	11	6.03%	549	1.02E-04	19	5.83%	531	9.90E-05
4	0.48%	43	8.07E-06	12	5.35%	488	9.09E-05	20	5.57%	507	9.45E-05
5	1.28%	117	2.18E-05	13	5.28%	481	8.96E-05	21	4.30%	392	7.30E-05
6	3.20%	291	5.43E-05	14	5.52%	503	9.37E-05	22	3.50%	319	5.94E-05
7	4.97%	453	8.43E-05	15	6.09%	555	1.03E-04	23	2.42%	220	4.11E-05
8	6.11%	557	1.04E-04	16	5.76%	525	9.78E-05	24	1.50%	137	2.55E-05
Total										9,110	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Existing Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	9,110	15,809	5.101E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.01686			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00080			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.01606			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	66	1.41E-04	9	6.63%	604	1.28E-03	17	5.87%	535	1.14E-03
2	0.44%	40	8.48E-05	10	6.71%	611	1.30E-03	18	6.09%	555	1.18E-03
3	0.35%	32	6.80E-05	11	6.03%	549	1.17E-03	19	5.83%	531	1.13E-03
4	0.48%	43	9.20E-05	12	5.35%	488	1.04E-03	20	5.57%	507	1.08E-03
5	1.28%	117	2.48E-04	13	5.28%	481	1.02E-03	21	4.30%	392	8.32E-04
6	3.20%	291	6.19E-04	14	5.52%	503	1.07E-03	22	3.50%	319	6.78E-04
7	4.97%	453	9.61E-04	15	6.09%	555	1.18E-03	23	2.42%	220	4.68E-04
8	6.11%	557	1.18E-03	16	5.76%	525	1.12E-03	24	1.50%	137	2.91E-04
Total										9,110	

Google Middlefield Park - Roadway Modeling
 Ellis Street Traffic - Existing Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	9,110	15,809	8.777E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.02764			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	66	2.43E-04	9	6.63%	604	2.21E-03	17	5.87%	535	1.95E-03
2	0.44%	40	1.46E-04	10	6.71%	611	2.23E-03	18	6.09%	555	2.03E-03
3	0.35%	32	1.17E-04	11	6.03%	549	2.01E-03	19	5.83%	531	1.94E-03
4	0.48%	43	1.58E-04	12	5.35%	488	1.78E-03	20	5.57%	507	1.85E-03
5	1.28%	117	4.27E-04	13	5.28%	481	1.76E-03	21	4.30%	392	1.43E-03
6	3.20%	291	1.07E-03	14	5.52%	503	1.84E-03	22	3.50%	319	1.17E-03
7	4.97%	453	1.65E-03	15	6.09%	555	2.03E-03	23	2.42%	220	8.05E-04
8	6.11%	557	2.04E-03	16	5.76%	525	1.92E-03	24	1.50%	137	5.01E-04
Total										9,110	

Google Middlefield Park - Roadway Modeling

Ellis Street Traffic - Existing Traffic

Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_ELL	Ellis Street	N-S	4	766.3	0.48	20.6	68	1.3	40	9,110	15,809	8.382E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40	0		
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203	0.00203		
Brake Wear - Emissions per Vehicle (g/VMT)	0.00525	0.00525		
Road Dust - Emissions per Vehicle (g/VMT)	0.01912	0.01912		
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02639	0.02639		

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_ELL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	66	2.32E-04	9	6.63%	604	2.11E-03	17	5.87%	535	1.87E-03
2	0.44%	40	1.39E-04	10	6.71%	611	2.13E-03	18	6.09%	555	1.94E-03
3	0.35%	32	1.12E-04	11	6.03%	549	1.92E-03	19	5.83%	531	1.86E-03
4	0.48%	43	1.51E-04	12	5.35%	488	1.70E-03	20	5.57%	507	1.77E-03
5	1.28%	117	4.08E-04	13	5.28%	481	1.68E-03	21	4.30%	392	1.37E-03
6	3.20%	291	1.02E-03	14	5.52%	503	1.76E-03	22	3.50%	319	1.11E-03
7	4.97%	453	1.58E-03	15	6.09%	555	1.94E-03	23	2.42%	220	7.69E-04
8	6.11%	557	1.94E-03	16	5.76%	525	1.83E-03	24	1.50%	137	4.78E-04
Total										9,110	

Google Middlefield Park - Roadway Modeling
 Middlefield Road Traffic - Existing Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_MDL	Middlefield Road	E-W	4	799.2	0.50	20.6	67.7	3.4	35	15,700	16,488	2.188E-09	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00040			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_MDL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	114	6.31E-06	9	6.63%	1040	5.74E-05	17	5.87%	921	5.08E-05
2	0.44%	69	3.79E-06	10	6.71%	1054	5.81E-05	18	6.09%	956	5.27E-05
3	0.35%	55	3.04E-06	11	6.03%	946	5.22E-05	19	5.83%	916	5.05E-05
4	0.48%	75	4.12E-06	12	5.35%	841	4.64E-05	20	5.57%	874	4.82E-05
5	1.28%	201	1.11E-05	13	5.28%	829	4.57E-05	21	4.30%	675	3.72E-05
6	3.20%	502	2.77E-05	14	5.52%	867	4.78E-05	22	3.50%	550	3.03E-05
7	4.97%	780	4.30E-05	15	6.09%	956	5.27E-05	23	2.42%	380	2.09E-05
8	6.11%	959	5.29E-05	16	5.76%	905	4.99E-05	24	1.50%	236	1.30E-05
Total										15,700	

Google Middlefield Park - Roadway Modeling
 Middlefield Road Traffic - Existing Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_MDL	Middlefield Road	E-W	4	799.2	0.50	20.6	68	1.3	35	15,700	16,488	8.613E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001574			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_MDL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	114	2.48E-05	9	6.63%	1040	2.26E-04	17	5.87%	921	2.00E-04
2	0.44%	69	1.49E-05	10	6.71%	1054	2.29E-04	18	6.09%	956	2.08E-04
3	0.35%	55	1.20E-05	11	6.03%	946	2.05E-04	19	5.83%	916	1.99E-04
4	0.48%	75	1.62E-05	12	5.35%	841	1.82E-04	20	5.57%	874	1.90E-04
5	1.28%	201	4.37E-05	13	5.28%	829	1.80E-04	21	4.30%	675	1.46E-04
6	3.20%	502	1.09E-04	14	5.52%	867	1.88E-04	22	3.50%	550	1.19E-04
7	4.97%	780	1.69E-04	15	6.09%	956	2.08E-04	23	2.42%	380	8.24E-05
8	6.11%	959	2.08E-04	16	5.76%	905	1.96E-04	24	1.50%	236	5.13E-05
Total										15,700	

Google Middlefield Park - Roadway Modeling
 Middlefield Road Traffic - Existing Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_MDL	Middlefield Road	E-W	4	799.2	0.50	20.6	68	1.3	35	15,700	16,488	1.009E-07	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.01938			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00094			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.01843			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MDL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	114	2.91E-04	9	6.63%	1040	2.65E-03	17	5.87%	921	2.34E-03
2	0.44%	69	1.75E-04	10	6.71%	1054	2.68E-03	18	6.09%	956	2.43E-03
3	0.35%	55	1.40E-04	11	6.03%	946	2.41E-03	19	5.83%	916	2.33E-03
4	0.48%	75	1.90E-04	12	5.35%	841	2.14E-03	20	5.57%	874	2.22E-03
5	1.28%	201	5.12E-04	13	5.28%	829	2.11E-03	21	4.30%	675	1.72E-03
6	3.20%	502	1.28E-03	14	5.52%	867	2.20E-03	22	3.50%	550	1.40E-03
7	4.97%	780	1.98E-03	15	6.09%	956	2.43E-03	23	2.42%	380	9.66E-04
8	6.11%	959	2.44E-03	16	5.76%	905	2.30E-03	24	1.50%	236	6.01E-04
Total										15,700	

Google Middlefield Park - Roadway Modeling
 Middlefield Road Traffic - Existing Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_MDL	Middlefield Road	E-W	4	799.2	0.50	20.6	68	1.3	35	15,700	16,488	1.729E-07	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.03159			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MDL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	114	4.98E-04	9	6.63%	1040	4.53E-03	17	5.87%	921	4.01E-03
2	0.44%	69	3.00E-04	10	6.71%	1054	4.59E-03	18	6.09%	956	4.17E-03
3	0.35%	55	2.40E-04	11	6.03%	946	4.12E-03	19	5.83%	916	3.99E-03
4	0.48%	75	3.25E-04	12	5.35%	841	3.66E-03	20	5.57%	874	3.81E-03
5	1.28%	201	8.77E-04	13	5.28%	829	3.61E-03	21	4.30%	675	2.94E-03
6	3.20%	502	2.19E-03	14	5.52%	867	3.78E-03	22	3.50%	550	2.40E-03
7	4.97%	780	3.40E-03	15	6.09%	956	4.16E-03	23	2.42%	380	1.65E-03
8	6.11%	959	4.18E-03	16	5.76%	905	3.94E-03	24	1.50%	236	1.03E-03
Total										15,700	

Google Middlefield Park - Roadway Modeling
 Middlefield Road Traffic - Existing Traffic
 Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_MDL	Middlefield Road	E-W	4	799.2	0.50	20.6	68	1.3	35	15,700	16,488	1.472E-07	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00574			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02689			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MDL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	114	4.24E-04	9	6.63%	1040	3.86E-03	17	5.87%	921	3.42E-03
2	0.44%	69	2.55E-04	10	6.71%	1054	3.91E-03	18	6.09%	956	3.55E-03
3	0.35%	55	2.05E-04	11	6.03%	946	3.51E-03	19	5.83%	916	3.40E-03
4	0.48%	75	2.77E-04	12	5.35%	841	3.12E-03	20	5.57%	874	3.24E-03
5	1.28%	201	7.47E-04	13	5.28%	829	3.07E-03	21	4.30%	675	2.50E-03
6	3.20%	502	1.86E-03	14	5.52%	867	3.21E-03	22	3.50%	550	2.04E-03
7	4.97%	780	2.89E-03	15	6.09%	956	3.55E-03	23	2.42%	380	1.41E-03
8	6.11%	959	3.56E-03	16	5.76%	905	3.36E-03	24	1.50%	236	8.76E-04
Total										15,700	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Existing Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	43.7	3.4	25	2,900	8,118	7.102E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	21	1.01E-06	9	6.63%	192	9.17E-06	17	5.87%	170	8.12E-06
2	0.44%	13	6.06E-07	10	6.71%	195	9.29E-06	18	6.09%	177	8.43E-06
3	0.35%	10	4.86E-07	11	6.03%	175	8.34E-06	19	5.83%	169	8.07E-06
4	0.48%	14	6.58E-07	12	5.35%	155	7.41E-06	20	5.57%	161	7.70E-06
5	1.28%	37	1.77E-06	13	5.28%	153	7.30E-06	21	4.30%	125	5.95E-06
6	3.20%	93	4.43E-06	14	5.52%	160	7.64E-06	22	3.50%	102	4.85E-06
7	4.97%	144	6.87E-06	15	6.09%	177	8.42E-06	23	2.42%	70	3.35E-06
8	6.11%	177	8.46E-06	16	5.76%	167	7.98E-06	24	1.50%	44	2.08E-06
Total										2,900	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Existing Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	2,900	8,118	3.613E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	21	5.13E-06	9	6.63%	192	4.66E-05	17	5.87%	170	4.13E-05
2	0.44%	13	3.08E-06	10	6.71%	195	4.72E-05	18	6.09%	177	4.29E-05
3	0.35%	10	2.47E-06	11	6.03%	175	4.24E-05	19	5.83%	169	4.11E-05
4	0.48%	14	3.35E-06	12	5.35%	155	3.77E-05	20	5.57%	161	3.92E-05
5	1.28%	37	9.02E-06	13	5.28%	153	3.72E-05	21	4.30%	125	3.03E-05
6	3.20%	93	2.25E-05	14	5.52%	160	3.89E-05	22	3.50%	102	2.47E-05
7	4.97%	144	3.50E-05	15	6.09%	177	4.29E-05	23	2.42%	70	1.70E-05
8	6.11%	177	4.30E-05	16	5.76%	167	4.06E-05	24	1.50%	44	1.06E-05
Total										2,900	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Existing Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	2,900	8,118	4.381E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	21	6.22E-05	9	6.63%	192	5.66E-04	17	5.87%	170	5.01E-04
2	0.44%	13	3.74E-05	10	6.71%	195	5.73E-04	18	6.09%	177	5.20E-04
3	0.35%	10	3.00E-05	11	6.03%	175	5.14E-04	19	5.83%	169	4.98E-04
4	0.48%	14	4.06E-05	12	5.35%	155	4.57E-04	20	5.57%	161	4.75E-04
5	1.28%	37	1.09E-04	13	5.28%	153	4.51E-04	21	4.30%	125	3.67E-04
6	3.20%	93	2.73E-04	14	5.52%	160	4.71E-04	22	3.50%	102	2.99E-04
7	4.97%	144	4.24E-04	15	6.09%	177	5.20E-04	23	2.42%	70	2.06E-04
8	6.11%	177	5.22E-04	16	5.76%	167	4.92E-04	24	1.50%	44	1.28E-04
Total										2,900	

Google Middlefield Park - Roadway Modeling
 Logue Avenue Traffic - Existing Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	2,900	8,118	6.927E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	21	9.83E-05	9	6.63%	192	8.94E-04	17	5.87%	170	7.92E-04
2	0.44%	13	5.91E-05	10	6.71%	195	9.06E-04	18	6.09%	177	8.22E-04
3	0.35%	10	4.74E-05	11	6.03%	175	8.13E-04	19	5.83%	169	7.87E-04
4	0.48%	14	6.42E-05	12	5.35%	155	7.23E-04	20	5.57%	161	7.51E-04
5	1.28%	37	1.73E-04	13	5.28%	153	7.12E-04	21	4.30%	125	5.80E-04
6	3.20%	93	4.32E-04	14	5.52%	160	7.45E-04	22	3.50%	102	4.73E-04
7	4.97%	144	6.70E-04	15	6.09%	177	8.22E-04	23	2.42%	70	3.26E-04
8	6.11%	177	8.25E-04	16	5.76%	167	7.78E-04	24	1.50%	44	2.03E-04
Total										2,900	

Google Middlefield Park - Roadway Modeling

Logue Avenue Traffic - Existing Traffic

Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_LOG	Logue Avenue	N-S	2	609.7	0.38	13.3	44	1.3	25	2,900	8,118	4.194E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_LOG

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	21	5.95E-05	9	6.63%	192	5.41E-04	17	5.87%	170	4.79E-04
2	0.44%	13	3.58E-05	10	6.71%	195	5.48E-04	18	6.09%	177	4.98E-04
3	0.35%	10	2.87E-05	11	6.03%	175	4.92E-04	19	5.83%	169	4.77E-04
4	0.48%	14	3.88E-05	12	5.35%	155	4.37E-04	20	5.57%	161	4.55E-04
5	1.28%	37	1.05E-04	13	5.28%	153	4.31E-04	21	4.30%	125	3.51E-04
6	3.20%	93	2.61E-04	14	5.52%	160	4.51E-04	22	3.50%	102	2.86E-04
7	4.97%	144	4.06E-04	15	6.09%	177	4.97E-04	23	2.42%	70	1.98E-04
8	6.11%	177	4.99E-04	16	5.76%	167	4.71E-04	24	1.50%	44	1.23E-04
Total										2,900	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	43.7	3.4	25	6,580	8,892	1.611E-09	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	48	2.51E-06	9	6.63%	436	2.28E-05	17	5.87%	386	2.02E-05
2	0.44%	29	1.51E-06	10	6.71%	442	2.31E-05	18	6.09%	401	2.09E-05
3	0.35%	23	1.21E-06	11	6.03%	396	2.07E-05	19	5.83%	384	2.01E-05
4	0.48%	31	1.63E-06	12	5.35%	352	1.84E-05	20	5.57%	366	1.91E-05
5	1.28%	84	4.41E-06	13	5.28%	347	1.82E-05	21	4.30%	283	1.48E-05
6	3.20%	210	1.10E-05	14	5.52%	363	1.90E-05	22	3.50%	230	1.20E-05
7	4.97%	327	1.71E-05	15	6.09%	401	2.09E-05	23	2.42%	159	8.32E-06
8	6.11%	402	2.10E-05	16	5.76%	379	1.98E-05	24	1.50%	99	5.17E-06
Total										6,580	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	6,580	8,892	8.197E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	48	1.27E-05	9	6.63%	436	1.16E-04	17	5.87%	386	1.03E-04
2	0.44%	29	7.66E-06	10	6.71%	442	1.17E-04	18	6.09%	401	1.07E-04
3	0.35%	23	6.15E-06	11	6.03%	396	1.05E-04	19	5.83%	384	1.02E-04
4	0.48%	31	8.32E-06	12	5.35%	352	9.37E-05	20	5.57%	366	9.74E-05
5	1.28%	84	2.24E-05	13	5.28%	347	9.23E-05	21	4.30%	283	7.52E-05
6	3.20%	210	5.60E-05	14	5.52%	363	9.66E-05	22	3.50%	230	6.13E-05
7	4.97%	327	8.69E-05	15	6.09%	401	1.07E-04	23	2.42%	159	4.23E-05
8	6.11%	402	1.07E-04	16	5.76%	379	1.01E-04	24	1.50%	99	2.63E-05
Total										6,580	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	6,580	8,892	9.941E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	48	1.55E-04	9	6.63%	436	1.41E-03	17	5.87%	386	1.24E-03
2	0.44%	29	9.29E-05	10	6.71%	442	1.42E-03	18	6.09%	401	1.29E-03
3	0.35%	23	7.46E-05	11	6.03%	396	1.28E-03	19	5.83%	384	1.24E-03
4	0.48%	31	1.01E-04	12	5.35%	352	1.14E-03	20	5.57%	366	1.18E-03
5	1.28%	84	2.72E-04	13	5.28%	347	1.12E-03	21	4.30%	283	9.12E-04
6	3.20%	210	6.79E-04	14	5.52%	363	1.17E-03	22	3.50%	230	7.43E-04
7	4.97%	327	1.05E-03	15	6.09%	401	1.29E-03	23	2.42%	159	5.13E-04
8	6.11%	402	1.30E-03	16	5.76%	379	1.22E-03	24	1.50%	99	3.19E-04
Total										6,580	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	6,580	8,892	1.572E-07	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	48	2.44E-04	9	6.63%	436	2.22E-03	17	5.87%	386	1.97E-03
2	0.44%	29	1.47E-04	10	6.71%	442	2.25E-03	18	6.09%	401	2.04E-03
3	0.35%	23	1.18E-04	11	6.03%	396	2.02E-03	19	5.83%	384	1.96E-03
4	0.48%	31	1.59E-04	12	5.35%	352	1.80E-03	20	5.57%	366	1.87E-03
5	1.28%	84	4.30E-04	13	5.28%	347	1.77E-03	21	4.30%	283	1.44E-03
6	3.20%	210	1.07E-03	14	5.52%	363	1.85E-03	22	3.50%	230	1.17E-03
7	4.97%	327	1.67E-03	15	6.09%	401	2.04E-03	23	2.42%	159	8.11E-04
8	6.11%	402	2.05E-03	16	5.76%	379	1.93E-03	24	1.50%	99	5.04E-04
Total										6,580	

Google Middlefield Park - Roadway Modeling

Maude Avenue Traffic - Existing Traffic

Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_MAD	Maude Avenue	E-W	2	667.8	0.41	13.3	44	1.3	25	6,580	8,892	9.515E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MAD

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	48	1.48E-04	9	6.63%	436	1.35E-03	17	5.87%	386	1.19E-03
2	0.44%	29	8.90E-05	10	6.71%	442	1.36E-03	18	6.09%	401	1.24E-03
3	0.35%	23	7.14E-05	11	6.03%	396	1.22E-03	19	5.83%	384	1.18E-03
4	0.48%	31	9.65E-05	12	5.35%	352	1.09E-03	20	5.57%	366	1.13E-03
5	1.28%	84	2.60E-04	13	5.28%	347	1.07E-03	21	4.30%	283	8.73E-04
6	3.20%	210	6.49E-04	14	5.52%	363	1.12E-03	22	3.50%	230	7.11E-04
7	4.97%	327	1.01E-03	15	6.09%	401	1.24E-03	23	2.42%	159	4.91E-04
8	6.11%	402	1.24E-03	16	5.76%	379	1.17E-03	24	1.50%	99	3.05E-04
Total										6,580	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	43.7	3.4	25	2,480	11,717	6.073E-10	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00045			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	1.24E-06	9	6.63%	164	1.13E-05	17	5.87%	146	1.00E-05
2	0.44%	11	7.48E-07	10	6.71%	166	1.15E-05	18	6.09%	151	1.04E-05
3	0.35%	9	6.00E-07	11	6.03%	149	1.03E-05	19	5.83%	145	9.96E-06
4	0.48%	12	8.12E-07	12	5.35%	133	9.14E-06	20	5.57%	138	9.51E-06
5	1.28%	32	2.19E-06	13	5.28%	131	9.01E-06	21	4.30%	107	7.34E-06
6	3.20%	79	5.46E-06	14	5.52%	137	9.43E-06	22	3.50%	87	5.98E-06
7	4.97%	123	8.48E-06	15	6.09%	151	1.04E-05	23	2.42%	60	4.13E-06
8	6.11%	152	1.04E-05	16	5.76%	143	9.84E-06	24	1.50%	37	2.57E-06
Total										2,480	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	2,480	11,717	3.090E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002307			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	6.33E-06	9	6.63%	164	5.76E-05	17	5.87%	146	5.10E-05
2	0.44%	11	3.81E-06	10	6.71%	166	5.83E-05	18	6.09%	151	5.29E-05
3	0.35%	9	3.05E-06	11	6.03%	149	5.23E-05	19	5.83%	145	5.07E-05
4	0.48%	12	4.13E-06	12	5.35%	133	4.65E-05	20	5.57%	138	4.84E-05
5	1.28%	32	1.11E-05	13	5.28%	131	4.59E-05	21	4.30%	107	3.73E-05
6	3.20%	79	2.78E-05	14	5.52%	137	4.80E-05	22	3.50%	87	3.04E-05
7	4.97%	123	4.32E-05	15	6.09%	151	5.29E-05	23	2.42%	60	2.10E-05
8	6.11%	152	5.31E-05	16	5.76%	143	5.01E-05	24	1.50%	37	1.31E-05
Total										2,480	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	2,480	11,717	3.747E-08	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.02944			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00147			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.02797			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	7.68E-05	9	6.63%	164	6.98E-04	17	5.87%	146	6.18E-04
2	0.44%	11	4.62E-05	10	6.71%	166	7.07E-04	18	6.09%	151	6.42E-04
3	0.35%	9	3.70E-05	11	6.03%	149	6.35E-04	19	5.83%	145	6.15E-04
4	0.48%	12	5.01E-05	12	5.35%	133	5.64E-04	20	5.57%	138	5.86E-04
5	1.28%	32	1.35E-04	13	5.28%	131	5.56E-04	21	4.30%	107	4.53E-04
6	3.20%	79	3.37E-04	14	5.52%	137	5.82E-04	22	3.50%	87	3.69E-04
7	4.97%	123	5.23E-04	15	6.09%	151	6.41E-04	23	2.42%	60	2.55E-04
8	6.11%	152	6.44E-04	16	5.76%	143	6.07E-04	24	1.50%	37	1.58E-04
Total										2,480	

Google Middlefield Park - Roadway Modeling
 Maude Avenue Traffic - Existing Traffic
 TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimensio
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	2,480	11,717	5.923E-08	2.6	1.21

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.10553			
Emissions per Vehicle per Mile (g/VMT)	0.04422			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	1.21E-04	9	6.63%	164	1.10E-03	17	5.87%	146	9.78E-04
2	0.44%	11	7.30E-05	10	6.71%	166	1.12E-03	18	6.09%	151	1.01E-03
3	0.35%	9	5.86E-05	11	6.03%	149	1.00E-03	19	5.83%	145	9.72E-04
4	0.48%	12	7.92E-05	12	5.35%	133	8.92E-04	20	5.57%	138	9.27E-04
5	1.28%	32	2.14E-04	13	5.28%	131	8.79E-04	21	4.30%	107	7.16E-04
6	3.20%	79	5.33E-04	14	5.52%	137	9.20E-04	22	3.50%	87	5.83E-04
7	4.97%	123	8.27E-04	15	6.09%	151	1.01E-03	23	2.42%	60	4.03E-04
8	6.11%	152	1.02E-03	16	5.76%	143	9.60E-04	24	1.50%	37	2.51E-04
Total										2,480	

Google Middlefield Park - Roadway Modeling

Maude Avenue Traffic - Existing Traffic

Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_CLY	Clyde Avenue	N-S	2	880.0	0.55	13.3	44	1.3	25	2,480	11,717	3.586E-08	2.6	1.21

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00203			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00562			
Road Dust - Emissions per Vehicle (g/VMT)	0.01912			
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02677			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_CLY

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	18	7.35E-05	9	6.63%	164	0.00E+00	17	5.87%	146	0.00E+00
2	0.44%	11	4.42E-05	10	6.71%	166	6.77E-04	18	6.09%	151	0.00E+00
3	0.35%	9	3.54E-05	11	6.03%	149	6.08E-04	19	5.83%	145	5.88E-04
4	0.48%	12	4.79E-05	12	5.35%	133	5.40E-04	20	5.57%	138	5.61E-04
5	1.28%	32	1.29E-04	13	5.28%	131	5.32E-04	21	4.30%	107	4.33E-04
6	3.20%	79	3.23E-04	14	5.52%	137	5.57E-04	22	3.50%	87	3.53E-04
7	4.97%	123	5.01E-04	15	6.09%	151	6.14E-04	23	2.42%	60	2.44E-04
8	6.11%	152	0.00E+00	16	5.76%	143	5.81E-04	24	1.50%	37	1.52E-04
Total										2,480	

State Route 237 - Existing Traffic Emissions

Emission Factors for State Route 237 Traffic

File Name:
 EMFAC2021/CT-EMFAC2017:
 Run Date: 9/30/2021 11:04
 Area: Santa Clara (SF)
 Analysis Year: 2026
 Season: Annual

Vehicle Category	VMT Fraction	Diesel		Gas VMT
		Across Category	Category	Category
Truck 1	0.015	0.508	0.492	
Truck 2	0.03	0.935	0.049	
Non-Truck	0.955	0.015	0.949	

Road Type:
 Silt Loading Factor: CARB 0.015
 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	0.00898	0.00595	0.00407	0.00293	0.00224	0.00181	0.00155	0.00142	0.00139	0.00144	0.00157	0.00178	0.00206	0.00217	
TOG	0.12624	0.08141	0.05419	0.03811	0.02859	0.02260	0.01875	0.01632	0.01493	0.01436	0.01454	0.01550	0.01740	0.01876	
Diesel PM	0.00092	0.00078	0.00062	0.00050	0.00044	0.00042	0.00043	0.00047	0.00053	0.00062	0.00075	0.00090	0.00106	0.00107	
DEOG	0.00986	0.00692	0.00363	0.00185	0.00129	0.00102	0.00083	0.00070	0.00063	0.00059	0.00060	0.00064	0.00070	0.00077	

Fleet Average Running Loss Emission Factors (grams/veh-hour)	
Pollutant Name	Emission Factor
TOG	1.109224107

Fleet Average Tire Wear Factors (grams/veh-mile)	
Pollutant Name	Emission Factor
PM2.5	0.00210

Fleet Average Brake Wear 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	0.00403	0.00457	0.00509	0.00560	0.00585	0.00592	0.00588	0.00534	0.00425	0.00319	0.00254	0.00224	0.00194	0.00194	

Fleet Average Road Dust Factors (grams/veh-mile)	
Pollutant Name	Emission Factor
PM2.5	0.00799

====END=====

Google Middlefield Park - Roadway Modeling
 State Route 237 Traffic
 DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
DPM_E237	Eastbound SR-237	NE	2	840.2	0.52	13.3	43.7	3.4	60	31,270	11,187	1.798E-08	6.8	3.16
DPM_W237	Westbound SR-237	SW	2	840.2	0.52	13.3	43.7	3.4	60	31,270	11,187	1.798E-08	6.8	3.16
Total										62,540				

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle (g/VMT)	0.00106			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and DPM Emissions - DPM_E237

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	228	3.52E-05	9	6.63%	2072	3.20E-04	17	5.87%	1835	2.83E-04
2	0.44%	137	2.11E-05	10	6.71%	2098	3.24E-04	18	6.09%	1904	2.94E-04
3	0.35%	110	1.70E-05	11	6.03%	1884	2.91E-04	19	5.83%	1824	2.82E-04
4	0.48%	149	2.29E-05	12	5.35%	1674	2.58E-04	20	5.57%	1741	2.69E-04
5	1.28%	401	6.19E-05	13	5.28%	1650	2.55E-04	21	4.30%	1344	2.07E-04
6	3.20%	1000	1.54E-04	14	5.52%	1726	2.66E-04	22	3.50%	1095	1.69E-04
7	4.97%	1553	2.40E-04	15	6.09%	1904	2.94E-04	23	2.42%	756	1.17E-04
8	6.11%	1911	2.95E-04	16	5.76%	1802	2.78E-04	24	1.50%	470	7.26E-05
Total										31,270	

2026 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_W237

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	228	3.52E-05	9	6.63%	2072	3.20E-04	17	5.87%	1835	2.83E-04
2	0.44%	137	2.11E-05	10	6.71%	2098	3.24E-04	18	6.09%	1904	2.94E-04
3	0.35%	110	1.70E-05	11	6.03%	1884	2.91E-04	19	5.83%	1824	2.82E-04
4	0.48%	149	2.29E-05	12	5.35%	1674	2.58E-04	20	5.57%	1741	2.69E-04
5	1.28%	401	6.19E-05	13	5.28%	1650	2.55E-04	21	4.30%	1344	2.07E-04
6	3.20%	1000	1.54E-04	14	5.52%	1726	2.66E-04	22	3.50%	1095	1.69E-04
7	4.97%	1553	2.40E-04	15	6.09%	1904	2.94E-04	23	2.42%	756	1.17E-04
8	6.11%	1911	2.95E-04	16	5.76%	1802	2.78E-04	24	1.50%	470	7.26E-05
Total										31,270	

Analysis Year = 2026

Vehicle Type	2020 Caltrans Vehicles (veh/day)	2026 Vehicles (veh/day)
Truck 1 (MDT)	781	828
Truck 2 (HDT)	1,797	1,905
Non-Truck	56,422	59,807
Total	59,000	62,540

Increase From 2020 1.06
 Vehicles/Direction 31,270
 Avg Vehicles/Hour/Direction 1,303

Traffic Data Year = 2020

Caltrans 2020 Average Daily Truck ADT	AADT Total	Total Truck	Trucks by Axle			
			2	3	4	5
Rte 237 B Sunnyvale, Jct Rte 101	59,000	2,578	781	375	67	1,355
			30.31%	14.55%	2.60%	52.55%

Percent of Total Vehicles 4.37% 1.32% 0.64% 0.11% 2.30%
 Traffic Increase per Year (%) = 1.00%

Google Middlefield Park - Roadway Modeling

State Route 237 Traffic

PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
PM25_E237	Eastbound SR-237	NE	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	3.482E-08	2.6	1.21
PM25_W237	Westbound SR-237	SW	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	3.482E-08	2.6	1.21
Total										62,540				

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle (g/VMT)	0.002062			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and PM2.5 Emissions - PM25_E237

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	228	6.81E-05	9	6.63%	2072	6.20E-04	17	5.87%	1835	5.49E-04
2	0.44%	137	4.10E-05	10	6.71%	2098	6.27E-04	18	6.09%	1904	5.69E-04
3	0.35%	110	3.29E-05	11	6.03%	1884	5.63E-04	19	5.83%	1824	5.45E-04
4	0.48%	149	4.44E-05	12	5.35%	1674	5.01E-04	20	5.57%	1741	5.20E-04
5	1.28%	401	1.20E-04	13	5.28%	1650	4.93E-04	21	4.30%	1344	4.02E-04
6	3.20%	1000	2.99E-04	14	5.52%	1726	5.16E-04	22	3.50%	1095	3.27E-04
7	4.97%	1553	4.64E-04	15	6.09%	1904	5.69E-04	23	2.42%	756	2.26E-04
8	6.11%	1911	5.71E-04	16	5.76%	1802	5.39E-04	24	1.50%	470	1.41E-04
Total										31,270	

2026 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_W237

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	228	6.81E-05	9	6.63%	2072	6.20E-04	17	5.87%	1835	5.49E-04
2	0.44%	137	4.10E-05	10	6.71%	2098	6.27E-04	18	6.09%	1904	5.69E-04
3	0.35%	110	3.29E-05	11	6.03%	1884	5.63E-04	19	5.83%	1824	5.45E-04
4	0.48%	149	4.44E-05	12	5.35%	1674	5.01E-04	20	5.57%	1741	5.20E-04
5	1.28%	401	1.20E-04	13	5.28%	1650	4.93E-04	21	4.30%	1344	4.02E-04
6	3.20%	1000	2.99E-04	14	5.52%	1726	5.16E-04	22	3.50%	1095	3.27E-04
7	4.97%	1553	4.64E-04	15	6.09%	1904	5.69E-04	23	2.42%	756	2.26E-04
8	6.11%	1911	5.71E-04	16	5.76%	1802	5.39E-04	24	1.50%	470	1.41E-04
Total										31,270	

Google Middlefield Park - Roadway Modeling
 State Route 237 Traffic
 TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
 Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEXH_E237	Eastbound SR-237	NE	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.820E-07	2.6	1.21
TEXH_W237	Westbound SR-237	SW	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.820E-07	2.6	1.21
Total										62,540				

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	65			
All Vehicles TOG Emissions per Vehicle (g/VMT)	0.01740			
Diesel Vehicles TOG Emissions per Vehicle (g/VMT)	0.00070			
Gasoline Vehicles Emissions per Vehicle (g/VMT)	0.01670			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_E237

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	228	5.52E-04	9	6.63%	2072	5.02E-03	17	5.87%	1835	4.44E-03
2	0.44%	137	3.32E-04	10	6.71%	2098	5.08E-03	18	6.09%	1904	4.61E-03
3	0.35%	110	2.66E-04	11	6.03%	1884	4.56E-03	19	5.83%	1824	4.42E-03
4	0.48%	149	3.60E-04	12	5.35%	1674	4.05E-03	20	5.57%	1741	4.21E-03
5	1.28%	401	9.71E-04	13	5.28%	1650	4.00E-03	21	4.30%	1344	3.25E-03
6	3.20%	1000	2.42E-03	14	5.52%	1726	4.18E-03	22	3.50%	1095	2.65E-03
7	4.97%	1553	3.76E-03	15	6.09%	1904	4.61E-03	23	2.42%	756	1.83E-03
8	6.11%	1911	4.63E-03	16	5.76%	1802	4.36E-03	24	1.50%	470	1.14E-03
Total										31,270	

2026 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_W237

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	228	5.52E-04	9	6.63%	2072	5.02E-03	17	5.87%	1835	4.44E-03
2	0.44%	137	3.32E-04	10	6.71%	2098	5.08E-03	18	6.09%	1904	4.61E-03
3	0.35%	110	2.66E-04	11	6.03%	1884	4.56E-03	19	5.83%	1824	4.42E-03
4	0.48%	149	3.60E-04	12	5.35%	1674	4.05E-03	20	5.57%	1741	4.21E-03
5	1.28%	401	9.71E-04	13	5.28%	1650	4.00E-03	21	4.30%	1344	3.25E-03
6	3.20%	1000	2.42E-03	14	5.52%	1726	4.18E-03	22	3.50%	1095	2.65E-03
7	4.97%	1553	3.76E-03	15	6.09%	1904	4.61E-03	23	2.42%	756	1.83E-03
8	6.11%	1911	4.63E-03	16	5.76%	1802	4.36E-03	24	1.50%	470	1.14E-03
Total										31,270	

Google Middlefield Park - Roadway Modeling

State Route 237 Traffic

TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
TEVAP_E237	Eastbound SR-237	NE	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.882E-07	2.6	1.21
TEVAP_W237	Westbound SR-237	SW	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.882E-07	2.6	1.21
Total										62,540				

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	65			
Emissions per Vehicle per Hour (g/hour)	1.10922			
Emissions per Vehicle per Mile (g/VMT)	0.01706			

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_E237

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	228	5.64E-04	9	6.63%	2072	5.13E-03	17	5.87%	1835	4.54E-03
2	0.44%	137	3.39E-04	10	6.71%	2098	5.19E-03	18	6.09%	1904	4.71E-03
3	0.35%	110	2.72E-04	11	6.03%	1884	4.66E-03	19	5.83%	1824	4.51E-03
4	0.48%	149	3.68E-04	12	5.35%	1674	4.14E-03	20	5.57%	1741	4.31E-03
5	1.28%	401	9.92E-04	13	5.28%	1650	4.08E-03	21	4.30%	1344	3.33E-03
6	3.20%	1000	2.48E-03	14	5.52%	1726	4.27E-03	22	3.50%	1095	2.71E-03
7	4.97%	1553	3.84E-03	15	6.09%	1904	4.71E-03	23	2.42%	756	1.87E-03
8	6.11%	1911	4.73E-03	16	5.76%	1802	4.46E-03	24	1.50%	470	1.16E-03
Total										31,270	

2026 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_W237

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	228	5.64E-04	9	6.63%	2072	5.13E-03	17	5.87%	1835	4.54E-03
2	0.44%	137	3.39E-04	10	6.71%	2098	5.19E-03	18	6.09%	1904	4.71E-03
3	0.35%	110	2.72E-04	11	6.03%	1884	4.66E-03	19	5.83%	1824	4.51E-03
4	0.48%	149	3.68E-04	12	5.35%	1674	4.14E-03	20	5.57%	1741	4.31E-03
5	1.28%	401	9.92E-04	13	5.28%	1650	4.08E-03	21	4.30%	1344	3.33E-03
6	3.20%	1000	2.48E-03	14	5.52%	1726	4.27E-03	22	3.50%	1095	2.71E-03
7	4.97%	1553	3.84E-03	15	6.09%	1904	4.71E-03	23	2.42%	756	1.87E-03
8	6.11%	1911	4.73E-03	16	5.76%	1802	4.46E-03	24	1.50%	470	1.16E-03
Total										31,270	

Google Middlefield Park - Roadway Modeling

State Route 237 Traffic

Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions

Year = 2026

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area			(Sigma z) Initial Vertical Dimension
											Area (sq m)	Emission (g/s/m2)	Initial Vertical height (m)	
FUG_E237	Eastbound SR-237	NE	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.032E-07	2.6	1.21
FUG_W237	Westbound SR-237	SW	2	840.2	0.52	13.3	44	1.3	60	31,270	11,187	2.032E-07	2.6	1.21
Total										62,540				

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	65	0		
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210	0.00210		
Brake Wear - Emissions per Vehicle (g/VMT)	0.00194	0.00194		
Road Dust - Emissions per Vehicle (g/VMT)	0.00799	0.00799		
Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.01203	0.01203		

Emission Factors from CT-EMFAC2021

2026 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_E237

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.73%	228	3.97E-04	9	6.63%	2072	3.61E-03	17	5.87%	1835	3.20E-03
2	0.44%	137	2.39E-04	10	6.71%	2098	3.66E-03	18	6.09%	1904	3.32E-03
3	0.35%	110	1.92E-04	11	6.03%	1884	3.29E-03	19	5.83%	1824	3.18E-03
4	0.48%	149	2.59E-04	12	5.35%	1674	2.92E-03	20	5.57%	1741	3.04E-03
5	1.28%	401	6.99E-04	13	5.28%	1650	2.88E-03	21	4.30%	1344	2.34E-03
6	3.20%	1000	1.74E-03	14	5.52%	1726	3.01E-03	22	3.50%	1095	1.91E-03
7	4.97%	1553	2.71E-03	15	6.09%	1904	3.32E-03	23	2.42%	756	1.32E-03
8	6.11%	1911	3.33E-03	16	5.76%	1802	3.14E-03	24	1.50%	470	8.20E-04
Total										31,270	

2026 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_W237

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.73%	228	3.97E-04	9	6.63%	2072	3.61E-03	17	5.87%	1835	3.20E-03
2	0.44%	137	2.39E-04	10	6.71%	2098	3.66E-03	18	6.09%	1904	3.32E-03
3	0.35%	110	1.92E-04	11	6.03%	1884	3.29E-03	19	5.83%	1824	3.18E-03
4	0.48%	149	2.59E-04	12	5.35%	1674	2.92E-03	20	5.57%	1741	3.04E-03
5	1.28%	401	6.99E-04	13	5.28%	1650	2.88E-03	21	4.30%	1344	2.34E-03
6	3.20%	1000	1.74E-03	14	5.52%	1726	3.01E-03	22	3.50%	1095	1.91E-03
7	4.97%	1553	2.71E-03	15	6.09%	1904	3.32E-03	23	2.42%	756	1.32E-03
8	6.11%	1911	3.33E-03	16	5.76%	1802	3.14E-03	24	1.50%	470	8.20E-04
Total										31,270	

Health Risk Impacts from Existing Traffic on Local Roads and State Route 237

Google Middlefield - Background (Existing) Traffic - TACs & PM2.5

Local Roads and State Route 237

AERMOD Risk Modeling Parameters and Maximum Concentrations

Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated

Off-Site Residential Receptors

Receptor Information

Number of Receptors = 242
 Receptor Height = 1st and 2nd floor levels
 Receptor distances = at sensitive residential receptor locations

Meteorological Conditions

CARB Moffett Field Met Data = 2009-2013
 Land Use Classification = urban
 Wind speed = variable
 Wind direction = variable

Off-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.00000	0.0000	0.0000
2027 - Construction	0.00000	0.0000	0.0000
2028 - Construction	0.00000	0.0000	0.0000
2029 - Construction	0.00000	0.0000	0.0000
2030 - Construction	0.00000	0.0000	0.0000
2031 - Construction	0.00000	0.0000	0.0000
2026-2054 - Roads	0.00155	0.0495	0.0722
2026-2054 - Generators	0.00000	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)
2025	0.070

Google Middlefield - Local Roads & SR-237 with Background (Existing) Traffic at Location of Off-Site MEIs
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
Off-Site Residential Receptors
Residential Exposure (30-year)

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Road Traffic Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information			Cancer Risk (per million)				
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			DPM	Exhaust TOG	Evaporative TOG	Total
					DPM	Exhaust TOG	Evaporative TOG				
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-
3rd Trimester	2024	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	0.00
	2025	1	1	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.000
	2026	1	2	10	0.0016	0.0495	0.0722	0.255	0.0464	0.0040	0.305
	2027	1	3	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2028	1	4	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2029	1	5	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2030	1	6	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2031	1	7	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2032	1	8	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2033	1	9	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2034	1	10	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2035	1	11	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2036	1	12	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2037	1	13	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2038	1	14	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2039	1	15	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2040	1	16	3	0.0016	0.0495	0.0722	0.04	0.0073	0.0006	0.048
	2041	1	17	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2042	1	18	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2043	1	19	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2044	1	20	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2045	1	21	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2046	1	22	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2047	1	23	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2048	1	24	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2049	1	25	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2050	1	26	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2051	1	27	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2052	1	28	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
	2053	1	29	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005
2054	1	30	1	0.0016	0.0495	0.0722	0.004	0.0008	0.0001	0.005	
Total Increased Cancer Risk								0.8780	0.1600	0.0138	1.05

* Third trimester of pregnancy

Google Middlefield - Background (Existing) Traffic - TACs & PM2.5

Local Roads and State Route 237

AERMOD Risk Modeling Parameters and Maximum Concentrations

Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated

On-Site Residential Receptors

Receptor Information

Number of Receptors = 384
 Receptor Height = 2nd floor level
 Receptor distances = 9 meter grid spacing in residential areas

Meteorological Conditions

CARB Moffett Field Met Data = 2009-2013
 Land Use Classification = urban
 Wind speed = variable
 Wind direction = variable

On-Site MEIs Maximum Concentrations

Emission Years	Concentration (µg/m ³)		
	DPM	Exhaust TOG	Evaporative TOG
2023 - Construction	0.00000	0.0000	0.0000
2024 - Construction	0.00000	0.0000	0.0000
2025 - Construction	0.00000	0.0000	0.0000
2026 - Construction	0.00000	0.0000	0.0000
2027 - Construction	0.00000	0.0000	0.0000
2028 - Construction	0.00000	0.0000	0.0000
2029 - Construction	0.00000	0.0000	0.0000
2030 - Construction	0.00000	0.0000	0.0000
2031 - Construction	0.00000	0.0000	0.0000
2026-2055 - Roads	0.00405	0.1235	0.1717
2026-2055 - Generators	0.00000	0.0000	0.0000

Emission Year	Maximum Total PM2.5 Concentration (µg/m3)
2026	0.040

**Google Middlefield - Local Roads & SR-237 with Background (Existing) Traffic at Location of On-Site MEIs
Maximum Cancer Risk Calculations for Existing Roadway Traffic- Unmitigated
On-Site Residential Receptors
Residential Exposure (30-year)**

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Cancer Potency Factors (mg/kg-day)⁻¹

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

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
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Project Construction & Operation Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Year	Exposure Duration (years)	Age	Maximum - Exposure Information							
				Age Sensitivity Factor	Annual TAC Conc (ug/m3)			Cancer Risk (per million)			
					DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	Total
0	2023	0	-	-	0.0000	0.0000	0.0000	-	-	-	-
0	2024	0	-	-	0.0000	0.0000	0.0000	-	-	-	-
3rd Trimester	2025	0.25	-0.25 - 0*	10	0.0000	0.0000	0.0000	0.00	0.0000	0.0000	0.000
1	2026	1	2	10	0.0041	0.1235	0.1717	0.665	0.1158	0.0095	0.791
2	2027	1	3	10	0.0041	0.1235	0.1717	0.665	0.1158	0.0095	0.791
3	2028	1	4	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
4	2029	1	5	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
5	2030	1	6	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
6	2031	1	7	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
7	2032	1	8	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
8	2033	1	9	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
9	2034	1	10	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
10	2035	1	11	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
11	2036	1	12	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
12	2037	1	13	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
13	2038	1	14	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
14	2039	1	15	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
15	2040	1	16	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
16	2041	1	17	3	0.0041	0.1235	0.1717	0.10	0.0182	0.0015	0.124
17	2042	1	18	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
18	2043	1	19	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
19	2044	1	20	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
20	2045	1	21	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
21	2046	1	22	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
22	2047	1	23	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
23	2048	1	24	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
24	2049	1	25	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
25	2050	1	26	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
26	2051	1	27	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
27	2052	1	28	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
28	2053	1	29	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
29	2054	1	30	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
30	2055	1	30	1	0.0041	0.1235	0.1717	0.012	0.0020	0.0002	0.014
Total Increased Cancer Risk								2.96	0.5154	0.0423	3.52
Total Increased Cancer Risk With use of MERV-13 Filtration								0.89	0.5154	0.0423	1.45

* Third trimester of pregnancy



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	10/14/2021
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x113
Email	cidvine@illingworthrodkin.com
Project Name	Middlefield Master Plan
Address	Logue Ave & Maude Ave
City	Mountain View
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Residential & Office
Project Size (# of units or building square feet)	1,900du, 1.3mil-sf Office
Comments:	

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

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.
2. Download and install the free program Google Earth, <http://www.google.com/earth/download/ge/>, and then download the county specific Google Earth stationary source application files from the District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.
3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.
4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.
5. List the stationary source information in **Table B** blue section only.
6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.
7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

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

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Project MEI

Distance from Receptor (feet) or MEI ¹	Plant No.	Facility Name	Address	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Project MEI			
											Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM _{2.5}
+1000	909	Raytheon Company	350 Ellis Street	-	-	-		Ozone Water Treatment System		2018 Dataset	0.04	#VALUE!	#VALUE!	#VALUE!
950	8392	Hitachi Chemical Diagnostics, Inc	630 Clyde Court	2.51	0.01	0.003		(1) Generator, (2) Solvent Cleaning Operations, (1) Misc Bench Scale Lab Fume Hoods		2018 Dataset	0.04	0.10	0.0002	0.0001
+1000	19428	Renault & Handley c/o Middlefield Road JV Inv Co	401 E Middlefield Road	3.57	0.01	0.005		Generators		2018 Dataset	0.04	0.14	0.0002	0.0002
+1000	21100	Siemens Medical Solutions USA, Inc	685 E Middlefield Road	2.91	0.002	0.004		(1) Generator		2018 Dataset	0.04	0.12	0.0001	0.0002
+1000	21411	Cushman & Wakefield at Symantec	455 E Middlefield Road	14.44	0.03	0.02		Generators		2018 Dataset	0.04	0.58	0.001	0.001
980	21492	Cushman & Wakefield at Symantec	350 Ellis Street	1.30	0.001	0.002		Generators		2018 Dataset	0.04	0.05	0.00005	0.0001
+1000	21845	Kilroy Realty Corporation	690 E Middlefield Road	7.19	0.01	0.02		Generators		2018 Dataset	0.04	0.29	0.001	0.001
+1000	22297	Mozart Development Company	605 E Fairchild Drive	1.24	0.001	0.002		Generators		2018 Dataset	0.04	0.05	0.00004	0.0001
550	22751	Google LLC	475 Ellis Street	35.07	0.03	0.05		(4) Generators, (1) Industrial Surface Coating Operations		2018 Dataset	0.10	3.51	0.003	0.005
+1000	23847	Samsung Research America	665 Clyde Avenue	0.17	0.0004	0.0002		Generators		2018 Dataset	0.04	0.01	0.00001	0.00001
+1000	200396	Linkedin Corporation	700 E MIDDLEFIELD RD	3.85	0.001	0.005		Generators		2018 Dataset	0.04	0.15	0.00004	0.0002
Sum												4.99	0.01	0.01

Footnotes:

1. Maximally exposed individual

2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.

3. Each plant may have multiple permits and sources.

4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.

5. Fuel codes: 98 = diesel, 189 = Natural Gas.

6. If a Health Risk Screening Assessment (HRSAs) was completed for the source, the application number will be listed here.

7. The date that the HRSAs was completed.

8. Engineer who completed the HRSAs. For District purposes only.

9. All HRSAs completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.

10. The HRSAs "Chronic Health" number represents the Hazard Index.

11. Further information about common sources:

a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.

b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or less. To be c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.

Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.

d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect the number of

e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Multiplier worksheet.

f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.

g. This spray booth is considered to be insignificant.

Date last updated:

03/13/2018

Project Site

Distance from Receptor (feet) or MEI ¹	FACID (Plant No.)	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM _{2.5}
350	909	0.47	#VALUE!	#VALUE!	#VALUE!
250	8392	0.28	0.70	0.002	0.001
930	19428	0.04	0.14	0.0002	0.0002
875	21100	0.05	0.15	0.0001	0.0002
510	21411	0.10	1.44	0.003	0.002
260	21492	0.28	0.36	0.0003	0.0005
530	21845	0.10	0.72	0.001	0.002
980	22297	0.04	0.05	0.00004	0.0001
700	22751	0.07	2.45	0.002	0.003
650	23847	0.08	0.01	0.00003	0.00002
600	200396	0.09	0.35	0.0001	0.0004
Sum			6.38	0.01	0.01



Stationary Source Risk & Hazards Screening Report

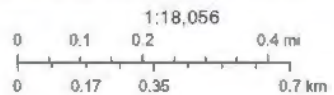
Area of Interest (AOI) Information

Area : 13,446,054.63 ft²

Sep 28 2021 10:29:18 Pacific Daylight Time



● Permitted Facilities 2018



County of Santa Clara, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METANASA, EPA, USDA

Summary

Name	Count	Area(ft ²)	Length(ft)
Permitted Facilities 2018	16	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	909	Raytheon Company	350 Ellis Street	Mountain View	CA
2	8392	Hitachi Chemical Diagnostics, Inc	630 Clyde Court	Mountain View	CA
3	19428	Renault & Handley c/o Middlefield Road JV Inv Co	401 E Middlefield Road	Mountain View	CA
4	20408	Open TV	485 Clyde Avenue	Mountain View	CA
5	21091	Quotient Technology, Inc	510 Logue Avenue	Mountain View	CA
6	21100	Siemens Medical Solutions USA, Inc	685 E Middlefield Road	Mountain View	CA
7	21320	Veritas Technologies LLC c/o Cushaman Wakefield	500 E Middlefield Road	Mountain View	CA
8	21411	Cushman & Wakefield at Symantec	455 E Middlefield Road	Mountain View	CA
9	21492	Cushman & Wakefield at Symantec	350 Ellis Street	Mountain View	CA
10	21845	Kilroy Realty Corporation	690 E Middlefield Road	Mountain View	CA
11	22297	Mozart Development Company	605 E Fairchild Drive	Mountain View	CA
12	22751	Google LLC	475 Ellis Street	Mountain View	CA
13	23750	LinkedIn Corp	950 W Maude Avenue	Sunnyvale	CA
14	23847	Samsung Research America	665 Clyde Avenue	Mountain View	CA
15	24440	Google LLC	500 E Middlefield Road	Mountain View	CA
16	200396	LinkedIn Corporation	700 E MIDDLEFIELD RD	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	94043	Santa Clara	2.510	0.010	0.000	Contact BAAQMD	1
3	94043	Santa Clara	3.570	0.010	0.000	Generators	1
4	94043	Santa Clara	5.050	0.010	0.010	Generators	1
5	94043	Santa Clara	18.070	0.010	0.020	Generators	1
6	94043	Santa Clara	2.910	0.000	0.000	Contact BAAQMD	1
7	94043	Santa Clara	0.270	0.000	0.000	Generators	1
8	94043	Santa Clara	14.440	0.030	0.020	Generators	1
9	94043	Santa Clara	1.300	0.000	0.000	Generators	1
10	94043	Santa Clara	7.190	0.010	0.020	Generators	1
11	94043	Santa Clara	1.240	0.000	0.000	Generators	1
12	94043	Santa Clara	35.070	0.030	0.050	Contact BAAQMD	1
13	94085	Santa Clara	5.490	0.010	0.000	Generators	1
14	94043	Santa Clara	0.170	0.000	0.000	Generators	1
15	94043	Santa Clara	0.270	0.000	0.000	Generators	1
16	94043	Santa Clara	3.850	0.000	0.000	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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