380 N. 1st STREET CONSTRUCTION HEALTH RISK ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address construction air quality and health risk impacts associated with the proposed multi-family development located at 380 North First Street in San José, California. Air quality impacts from this project would be associated with the demolition of the existing land use and the construction of the new apartments. Air pollutants associated with construction of the project were estimated using appropriate computer models. In addition, the potential project health risks and the impacts of existing toxic air contaminant (TAC) sources affecting 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 0.49-acre existing project site includes an office building and surface parking lot. The project proposes to demolish the existing uses and construct a new seven-story, 118-unit apartment building. The project would also include a three-level enclosed parking garage with one level of below-grade parking providing a total of 74 spaces. Construction is proposed to begin in September 2024 and be completed by June 2026.

Setting

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

Air Pollutants of Concern

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

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

[1] Bay Area Air Quality Management District, *2022 CEQA Guidelines*, April 2023

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects from diesel exhaust exposure 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. Health risks from TACs are estimated using the Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines, which were published in February of 2015 and incorporated in BAAQMD's current CEQA guidance.[2]

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, people 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, infants and small children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the multi-family residences to the north, east, and west. There are also single- and multi-family residences surrounding the site at further distances. This project would introduce new sensitive receptors (i.e., residents) to the area.

Bay Area Air Quality Management District (BAAQMD)

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

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[3] 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 has been 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 has been used to develop emission reduction activities 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. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda, San José, Vallejo, Concord, and Pittsburgh/Antioch. The project site is within the San José CARE area.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[4] The BAAQMD has identified several overburdened areas within its boundaries. However, the project site is not within an overburdened area as the Project site is scored at the 64th percentile on CalEnviroScreen.[5]

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act* (*CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD 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 include assessment methodologies for criteria air pollutants and air toxics emissions as shown in Table

[3] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.
[4] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en.
[5] OEHAA, CalEnviroScreen 4.0 Maps https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/CalEnviroScreen-4_0/

1.[6] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds			
	Average Daily Emissions (lbs./day)			
ROG	54			
NO_x	54			
PM_{10}	82 (Exhaust)			
$PM_{2.5}$	54 (Exhaust)			
CO	Not Applicable			
Fugitive Dust ($PM_{10}/PM_{2.5}$)	Best Management Practices (BMPs)*			
Health Risks and Hazards	**Single Sources/ Individual Project**		**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	>10 in a million	OR Compliance with Qualified Community Risk Reduction Plan	>100 in a million	OR Compliance with Qualified Community Risk Reduction Plan
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, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.

Source: Bay Area Air Quality Management District, 2022

The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less than significant if BMPs are implemented. The project would be required to implement the BMPs recommended by BAAQMD, which have been adopted by the City of San José as Standard Permit Conditions, during all phases of construction to reduce dust and other particulate matter emissions.

***Basic Best Management Practices / Standard Permit Conditions:* Include measures to control dust and exhaust during construction.**

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

[6] Bay Area Air Quality Management District, 2023. *2022 CEQA Guidelines*. April.

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

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

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

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

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

6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.

9. Publicly visible signs shall be posted with the telephone number and name of the 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 General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, or other sensitive land uses. Enhanced measures include:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.
- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

San José Envision 2040 General Plan

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

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

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

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

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

MS-10.5 In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.

MS-10.7 Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.

MS-10.11 Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.

MS-10.13 As a part of City of San José Sustainable City efforts, educate the public about air polluting household consumer products and activities that generate air pollution. Increase public awareness about the alternative products and activities that reduce air pollutant emissions.

Applicable Goals – Toxic Air Contaminants

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

Applicable Policies – Toxic Air Contaminants

MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

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

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

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

Actions – Toxic Air Contaminants

MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of TACs and $PM_{2.5}$, emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

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

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

Applicable Goals – Construction Air Emissions

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

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At

minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

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

MS-13.5 Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.

MS-13.6 Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

Construction Health Risk Impacts and Mitigation Measures

Project impacts related to increased health risk can occur either by generating emissions of TACs and air pollutants or by introducing a new sensitive receptor in proximity to an existing source of TACs. Temporary project construction activity would generate emissions of DPM from equipment and trucks and also generate dust on a temporary basis that could affect nearby sensitive receptors. A health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors.

Additionally, there are existing sources of TACs and localized air pollutants in the vicinity of the project. The cumulative impact of these existing TAC sources upon the existing sensitive receptors, including the project's contribution, was assessed.

Health risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions pose health risks for sensitive receptors such as surrounding residents. The primary health risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[7] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

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

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Modeling

Land Use Inputs

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

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Apartments Mid Rise	118	Dwelling Unit	106,160	0.49
Enclosed Parking with Elevator	74	Parking Spaces	12,770	

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 the equipment quantities, average hours per day, total number of workdays, and schedule, were based on information provided by the project applicant (included in *Attachment 1*). The provided construction schedule assumed that the earliest possible start date would be September 2024 and would be built out over a period of approximately 21 months, or 459 construction workdays. The earliest year of full operation was assumed to be 2027.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the amount of demolition material to be exported, soil imported and/or exported to the site, and the amount of concrete and asphalt truck trips to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. Daily haul trips for demolition and grading were developed by CalEEMod using the provided demolition and soil import/export volumes. The number of total concrete/asphalt round haul trips were provided for the project and converted to daily one-way trips, assuming two trips per delivery. These values are shown in the project construction equipment worksheet included in *Attachment 1*.

Summary of Computed Construction Period Emissions

Average daily construction emissions were estimated for the total duration of the project (240 days). Table 3 shows the annualized average daily construction emissions and average daily project emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction. As indicated in Table 3, predicted daily project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 3. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2024	0.04	0.34	0.01	0.01
2025	0.44	1.36	0.05	0.04
2026	0.55	0.42	0.01	0.01
Average Daily Construction Emissions Per Year (pounds/day)				
2024 (86 construction workdays)	0.97	7.96	0.30	0.27
2025 (261 construction workdays)	3.35	10.42	0.35	0.32
2026 (112 construction workdays)	9.81	7.46	0.22	0.20
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and considers impacts from dust (i.e., fugitive PM_{10} and $PM_{2.5}$) to be less-than-significant if BMPs are implemented to reduce these emissions. San Jose General Policy MS-10.1 specifies that projects should assess projected air emissions from new developments in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards and identify and implement feasible air emission reduction measures requires construction projects to implement these measures.

The project would be required to implement the BMPs recommended by BAAQMD (listed above), which have been adopted by the City as Standard Permit Conditions (per General Plan policies MS 10.1, MS 13.1, and MS 13.4), during all phases of construction to reduce dust and other particulate matter emissions. The City's required BMPs are consistent with BAAQMD-recommended basic BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis, only the basic set of BMPs are required as the Project emissions and $PM_{2.5}$ impacts were below the BAAQMD thresholds. Enhanced BMPs would be required as mitigation if air quality impacts were found to be significant.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the nearby existing

residences surrounding the project site as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions. While there are additional sensitive receptors within 1,000 feet of the project site, the receptors chosen are adequate to identify maximum impacts from the project.

Health Risk from Project Construction

The primary health risk impact associated with construction projects are cancer risks associated with diesel exhaust (i.e., DPM), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$). DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$. This assessment included dispersion modeling to predict the offsite and onsite concentrations of TACs and $PM_{2.5}$ resulting from project construction, so that increased health risk effects could be predicted.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages being 0.07 tons (138 pounds). The on-road vehicle emissions are a result of haul truck travel on-site during demolition and grading activities, worker travel on-site, and vendor travel on-site during construction. A trip length of a half-mile was used to represent vehicle travel while at or near the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as less than 0.01 tons (7 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) 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.[8] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

Combustion equipment DPM exhaust emissions were modeled as an array of point sources to reflect construction equipment and trucks operating at the site. These sources included nine-foot release heights (construction equipment exhaust stack height) that were placed at 20 feet (6 meter) intervals throughout the construction site. This resulted in 56 individual point sources being used to represent mobile equipment DPM exhaust emissions. The total DPM emissions were divided into each of the point sources that were spread throughout the project construction

[8] BAAQMD, 2023, *Appendix E of the 2022 BAAQMD CEQA Guidelines.* April.

site. In addition, the following stack parameters were used for each point source: stack diameter of 2.5 inches, an exhaust temperature of 918˚F, and an exit velocity of 309 feet per second. Since these are point sources, plume rise is calculated by the AERMOD dispersion model. Emissions from vehicle travel on- and off-site were also distributed among the point sources throughout the site.

For modeling fugitive $PM_{2.5}$ emissions, an area source with a near-ground level release height of 7 feet (2 meters) was used. 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.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from the San José International Airport prepared for use with the AERMOD model by BAAQMD. Construction emissions were modeled as occurring Monday through Friday between 7:00 a.m. to 7:00 p.m., per the project applicant's construction schedule. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2024-2026 period were calculated at nearby sensitive receptors using the model. Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights on the first and second floors of nearby single and multi-family residences.[9]

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

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

Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the BAAQMD CEQA guidance for age sensitivity factors and exposure parameters. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. Third trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

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

The modeled maximum annual DPM and $PM_{2.5}$ concentrations were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction MEI was located on the first floor (5

feet above the ground) at the multi-family home south of the construction site. The maximum cancer risk occurred when exposure begins in 2025. Table 4 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and HI for project related construction activities affecting the construction MEIs. *Attachment 2* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Construction risk impacts are shown in Table 4. The unmitigated maximum cancer risks from construction activities at the construction MEI would exceed the single-source significance threshold. However, with the incorporation of *Mitigation Measure AQ-1*, the mitigated risks would no longer exceed the significance threshold. The annual $PM_{2.5}$ concentration and HI from construction activities would be below the single-source significance thresholds.

Table 4. Construction Risk Impacts at the Off-Site MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impact				
Project Construction	Unmitigated	**20.30 (infant)**	0.10	0.02
	Mitigated*	2.01 (infant)	0.01	<0.01
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated*	*No*	*No*	*No*

* Construction equipment with Tier 4 interim engines and electric cranes, generators, and air compressors as Mitigation Measures.

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

Implement a feasible plan to reduce diesel particulate matter emissions by 55 percent such that increased cancer risk from construction would be reduced below TAC significance levels as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 interim emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

    a. If use of Tier 4 interim equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 55 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).

2. Use electric cranes.

3. Install electric power lines during early construction phases to avoid use of diesel generators and air compressors.

4. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 55 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel portable equipment,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

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

Effectiveness of Mitigation Measure AQ-1

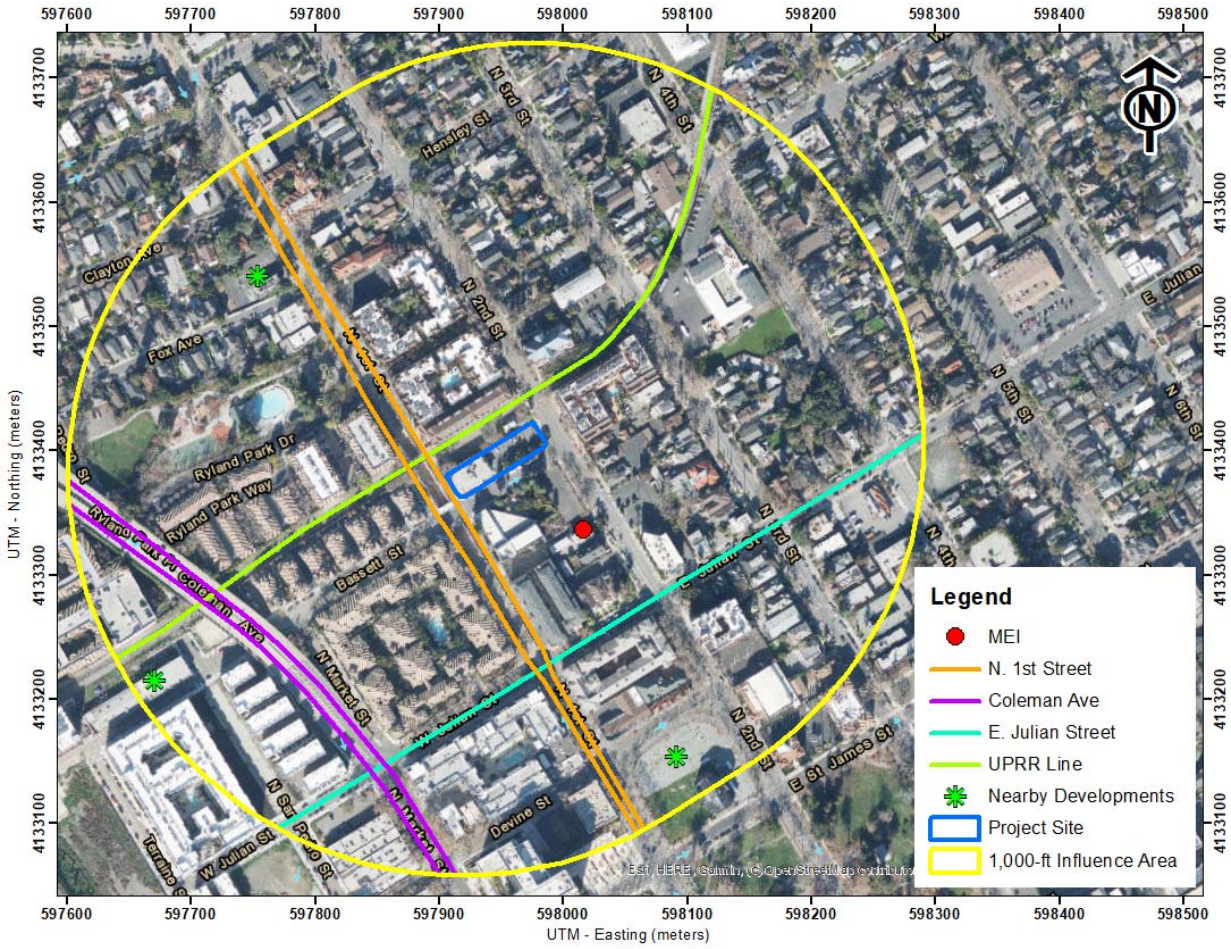
CalEEMod was used to compute emissions associated with this mitigation measure assuming that all construction equipment met U.S. EPA Tier 4 Interim engine standards, used electric cranes, generators, and air compressors, and BAAQMD basic BMPs were included. With these implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 90 percent to 2.01 per million. As a result, the project's construction risks would be reduced below the BAAQMD single-source threshold.

Cumulative Health Risks of all TAC Sources at the Off-Site MEI

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

A review of the project area using BAAQMD's geographic information systems (GIS) screening tools indicated that three roadways (N. 1st Street, Coleman Avenue, and E. Julian Street), the Union Pacific Railroad (UPRR) line, and no stationary sources within the 1,000-foot influence area could have cumulative health risk impacts at the MEI. In addition, there are several development projects whose construction would contribute to the cumulative risk. The risk impacts from these developments are included within the analysis. Figure 2 shows the locations of the sources affecting the MEI within the influence area. Health risk impacts from these sources upon the MEI are reported in Table 5. Details of the cumulative screening and health risk calculations are included in *Attachment 3.*

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



Nearby Roadways – N. 1st Street, Coleman Avenue, and E. Julian Street

A refined analysis of potential health impacts from vehicle traffic on N. 1st Street, Coleman Avenue, and E. Julian Street was conducted since the BAAQMD GIS roadway screening tool indicated that the health risk concentrations were high from these roadways. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on N. 1st Street, Coleman Avenue, and E. Julian Street using the Caltrans version of the CARB EMFAC2021 emissions model, known as CT-EMFAC2021. CT-EMFAC2021 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel

powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2021 emissions data. Inputs to the model include region (Santa Clara County), type of road (major/collector), traffic mix assigned by CT-EMFAC2021 for the county, truck percentage for non-state highways in Santa Clara County (3.51 percent),[10] year of analysis (2024 – construction start year), and season (annual).

To estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI, the CT-EMFAC2021 model was used to develop vehicle emission factors for the year 2024 (construction start year). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CT-EMFAC2021. Year 2024 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions, will decrease in the future.

The average daily traffic (ADT) for each roadway was calculated based on traffic data provided by the City of San Jose's traffic volumes website.[11] Assuming a 1 percent per year increase, the predicted ADT on N. 1st Street was 7,166 vehicles, on Coleman Avenue was 20,654 vehicles, and on E. Julian Street was 10,532 vehicles. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[12] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for each roadway. For all hours of the day an average speed of 25 mph on N. 1st Street and E. Julian Street and 40 mph on Coleman Avenue was assumed for all vehicles based on posted speed limit signs.

Hourly emissions rates were developed for DPM, organic TACs, and $PM_{2.5}$ along the applicable segments of both roadways within 1,000 feet of the project site. AERMOD was used to estimate the TAC and $PM_{2.5}$ concentrations at the MEI locations. Maximum increased lifetime cancer risks and maximum annual $PM_{2.5}$ concentrations for the construction MEIs receptor were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[13]

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[10] 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

[11] City of San Jose, *Traffic Volume GIS Map*, Web: https://csj.maps.arcgis.com/apps/webappviewer/index.html?id=067fbd3db8dd44f8a60f48148331b3d7

[12] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.

[13] Bay Area Air Quality Management District, 2023, Appendix E of the *BAAQMD CEQA Guidance.* April

TAC and $PM_{2.5}$ emissions from traffic on N. 1st Street, Coleman Avenue, and E. Julian Street within 1,000 feet of the project site was evaluated. Vehicle traffic on the roadways were modeled using a series of area sources along a line (line area sources); with line segments used for travel on the roadways. The same meteorological data and off-site sensitive receptors used in the previous construction site dispersion modeling scenario were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations using 2024 emissions from traffic on the roadways were calculated using the model. Concentrations were calculated at the construction MEI with receptor heights of 5 feet (1.5 meters) to represent the breathing heights of residents on the first floor of the residence.

Computed Cancer and Non-Cancer Health Impacts

The cancer risk, $PM_{2.5}$ concentration, and HI impacts from the roadways at the construction MEI are shown in Table 5. Figure 2 shows the roadway links modeled and receptor locations where concentrations were calculated. Details of the emission calculations, dispersion modeling, and cancer risk calculations for the roadways are provided in *Attachment 3.*

UPRR Line

The MEI is located near the UPRR line (see Figure 2). Screening-level cancer risks, $PM_{2.5}$ concentrations, and HI associated with rail activity from UPRR were estimated using BAAQMD's GIS data files (i.e., raster files). BAAQMD raster files were produced using AERMOD and 20x20-meter emissions grid, 2021 train schedules and 2020 fuel consumption rates for rail activities, and applies risk assessment assumptions provided in Appendix E of the Air District's CEQA Air Quality Guidance. Note that BAAQMD's screening values are considered higher than values that would be obtained with refined modeling methods. Screening-level cancer risk, $PM_{2.5}$ concentration, and HI at the MEI from UPRR are listed in Table 5.

BAAQMD Permitted Stationary Sources

BAAQMD's *Permitted Stationary Sources 2021* geographic information system (GIS) website[14] is a mapping tool that identifies the location of nearby stationary sources and their estimated risk and hazard impacts. There were no identified sources within the project's 1,000-foot influence area found using this tool.

Construction Risk Impacts from Nearby Developments

From the City's website,[15] three planned or approved projects[16] are located within 1,000 feet of the proposed project. The development that is under construction includes the Kelsey Ayer

[14] BAAQMD, *Stationary Source Screening Map*, 2023. Web: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3
[15] City of San Jose, Private / Key Economic Development Projects Map, Web: https://gis.sanjoseca.gov/maps/devprojects/
[16] Developments under planning review are not included within the cumulative analysis since it is speculative to include construction emissions from projects that may or may not be approved.

Station at 447 N. 1st Street (File Number H19-019, H20-005). The developments that have been approved include the Aviato/Starcity Co-Living at 199 Bassett Street (File Number SP17-023, SPA17-023) and the Park View Towers at 252 N. 1st Street (File Number HA14-009-02). The Kelsey Ayer Station project is currently under construction and is expected to be completed by the time this project begins construction, so it was not included in the cumulative projects.

If available for certain developments, the mitigated construction risks and hazard impact values were used from the air quality technical reports either conducted by *Illingworth & Rodin, Inc.* or on the City of San José Environmental Review Documents website.[17] For developments that did not have available construction impact results at the time of this study, it was assumed the construction risks would be less than the BAAQMD single-source thresholds for community risks and hazards. If the nearby developments were more than 500 feet from the project site, the construction risks were assumed to be half of the BAAQMD single-source thresholds due to the distance and dispersion between the source and receptors. For the purpose of this analysis, it was conservatively assumed the entire construction period from the proposed project would overlap with the nearby developments' construction schedule. This approach likely provides an overestimate of the community risk and hazard levels because it assumes that maximum impacts from the nearby development occurs concurrently with the proposed project at the proposed project's MEI. The mitigated construction risks reported in that air quality assessment were included in the cumulative risks Table 5.

Summary of Cumulative Health Risk Impacts

Table 5 reports both the project and cumulative health risk impacts. The cumulative annual cancer risk, maximum $PM_{2.5}$ concentration and HI values would not exceed the BAAQMD's cumulative source health risk thresholds. However, without mitigation, the project would have a *significant* impact with respect to health risk caused by project construction activities, since the maximum cancer risk exceeds the single-source threshold. With the implementation of *Mitigation Measure AQ-1*, the project's cancer risk would be lowered to a level below the single-source threshold.

[17] City of San José, *Environmental Review Documents,* Web: https://www.sanjoseca.gov/your-government/departments-offices/planning-building-code-enforcement/planning-division/environmental-review/environmental-review-documents

Table 5. Impacts from Combined Sources at Construction MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction	Unmitigated	**20.30 (infant)**	0.10	0.02
	Mitigated	2.01 (infant)	0.01	<0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated	*No*	*No*	*No*
Cumulative Impacts				
N. 1st Street, ADT 7,166		0.54	0.03	<0.01
Coleman Avenue, ADT 20,654		0.12	0.01	<0.01
E. Julian Street, ADT 10,532		0.70	0.03	<0.01
UPRR Line, BAAQMD Raster Screen Tool		3.94	<0.01	<0.01
Aviato Mitigated Construction Impacts		<5.0	<0.15	<0.5
Park View Towers Mitigated Construction Impacts		<5.0	<0.15	<0.5
Cumulative Total	Unmitigated	<35.60	<0.48	<1.06
	Mitigated	<17.31	<0.39	<1.05
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
	Mitigated	*No*	*No*	*No*

Non-CEQA: On-site Health Risk Assessment of TAC Sources - New Sensitive Receptors

The City's General Plan Policy MS-11.1 requires new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs to avoid significant risks to health and safety. BAAQMD's recommended thresholds for health risks and hazards, shown in Table 1, are used to evaluate on-site exposure.

In addition to evaluating health impacts from project construction, a health risk assessment was completed to assess the impact that the existing TAC sources would have on the new proposed sensitive receptors (residents) that the project would introduce. The same TAC sources identified above were used in this health risk assessment.[18] On-site health risk results are listed in Table 6. *Attachment 3* includes the screening information used for TAC source impacts upon the proposed on-site sensitive receptors.

Nearby Roadways – N. 1st Street, Coleman Avenue, and E. Julian Street

The roadway analysis for the new project residents was conducted in the same manner as described above for the off-site MEI. However, the year 2027 (operational year) emission factors were conservatively assumed as being representative of future conditions, instead of 2024 (construction year). An analysis based on 2027 resulted in an increased ADT on N. 1st Street of

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

7,365 vehicles, on Coleman Avenue of 21,228 vehicles, and on E. Julian Street of 10,825 vehicles.

The project set of receptors were placed throughout the project area and were spaced every 20 feet (6 meters). Roadway impacts were modeled at receptor heights of 22 feet (6.7 meters) and 34 feet (10.4 meters) representing sensitive receptors on the second and third floors (first and second residential floors) of the building. The portions of N. 1st Street, Coleman Avenue, and E. Julian Street included in the modeling are shown in Figure 3 along with the project site and receptor locations where impacts were modeled.

Maximum increased cancer risks were calculated for the residents at the project site using the maximum modeled TAC concentrations. A 30-year exposure period was used in calculating cancer risks assuming the residents would include third trimester pregnancy and infants/children and were assumed to be in the new housing area for 24 hours per day for 350 days per year. The highest impacts from N. 1st Street, Coleman Avenue, and E. Julian Street occurred at a receptor on the second floor at the southwest corner of the project site. Cancer risks associated with the roadways are greatest closest to the roadways and decrease with distance from the roads. The roadway health risk impacts at the project site are shown in Table 6. Details of the roadway emission calculations, dispersion modeling, and cancer risk calculations are contained in *Attachment 3.*

UPRR Line

The railway analysis for the new project residents was conducted in the same manner as described above for the off-site MEI.

Stationary Sources

As mentioned above, there are no nearby stationary sources within 1,000 feet of the project site.

Construction Risk Impacts from Nearby Developments

Since the entirety of the nearby developments construction periods is assumed to overlap with the construction period of this project, it is not possible for those construction impacts to affect the new on-site receptors (residents). Therefore, the construction risk impacts from nearby developments were not included in the on-site analysis for this project.

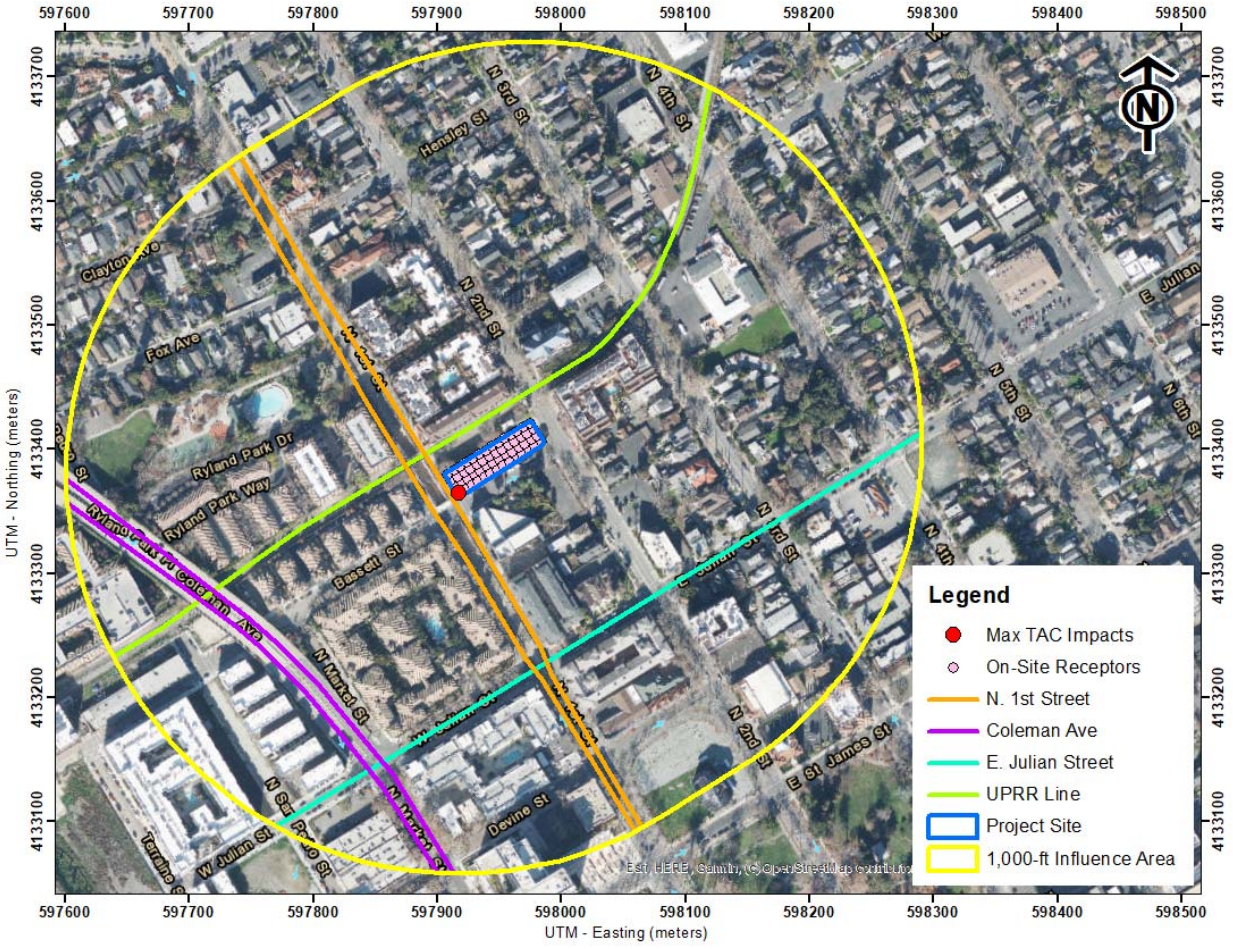
Summary of Cumulative Health Risks at the Project Site

Health risk impacts from the existing TAC sources upon the project site are reported in Table 6. 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, existing sources of TAC emissions do not exceed the BAAQMD single-source or cumulative-source thresholds for cancer risk, annual $PM_{2.5}$ concentration, or HI.

Table 6. Impacts from Cumulative Sources to Project Site Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
N. 1st Street, ADT 7,365	1.02	0.05	<0.01
Coleman Avenue, ADT 21,228	0.12	0.01	<0.01
E. Julian Street, ADT 10,825	0.29	0.01	<0.01
UPRR Line, BAAQMD Raster Screen Tool	7.09	0.01	<0.01
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*
Cumulative Total	0.89	<0.04	<0.06
BAAQMD Cumulative Source Threshold	***100***	***0.8***	***10.0***
Exceed Threshold?	*No*	*No*	*No*

Figure 3. Project Site, Nearby Cumulative Sources, and On-Site MEI



Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction emissions. Also included are any modeling assumptions.

Attachment 2 is the construction health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative health screening and modeling results from sources affecting the construction MEI and project site receptors.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2024	0.04	0.34	0.01	0.01	0.01	101.11	
2025	0.44	1.36	0.05	0.04	0.03	432.48	
2026	0.55	0.42	0.01	0.01	0.01	107.66	
	Total Construction Emissions						
Tons	1.03	2.12	0.07	0.06		641.25	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2024	0.97	7.96	0.30	0.27			**86**
2025	3.35	10.42	0.35	0.32			**261**
2026	9.81	7.46	0.22	0.20			**112**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	2056.25	4240.31	140.74	129.32		0.00	
Average	4.48	9.24	0.31	0.28		0.00	459.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Number of Days Per Year					
2024	9/3/2024	12/31/24	120	86	
2025	1/1/25	12/31/25	365	261	
2026	1/1/26	6/5/26	156	112	
			641	**459**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	9/3/2024	9/20/2024	5	14
Site Preparation/Gradi	9/23/2024	10/4/2024	5	10
Excavation/UG Utilities	10/7/2024	11/18/2024	5	31
Building Construction	8/4/2025	1/30/2026	5	130
Superstructure	11/21/2024	9/26/2025	5	222
Landscaping/Paving	3/2/2026	5/29/2026	5	65
Architectural Coating	10/13/2025	6/5/2026	5	170

Air Quality/Noise Construction Information Data Request

Project Name: 380 N 1st St DEFAULTS

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size

118 Dwelling Units
0.49 acres total project acres disturbed
82,762 s.f. residential
0 s.f. retail
s.f. office/commercial
23,398 s.f. other, specify: Common Area
12,770 s.f. parking garage 74 spaces
s.f. parking lot spaces

Construction Days (i.e, M-F) Monday to Friday

Construction Hours 7:00 am to 7:00 pm

Pile Driving? N

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Yes

IF YES (if BOTH separate values) --> Fire Pump

Kilowatts/Horsepower: _60 H.P._

Fuel Type: Electric

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:**	**9/3/2024**	**Total phase:**	**12**			**Overall Import/Export Volumes**
		End Date:	**9/20/2024**					
1	Concrete/Industrial Saws	81	0.73	8	7	4.67	3311	**Demolition Volume**
1	Excavators	158	0.38	8	12	8.00	5764	Square footage of buildings to be demolished
2	Skid Steer Loaders	65	0.37	8	10	6.67	3848	(*or* total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	8	10	6.67	2871	**15,000** square feet *or*
1	Off-Highway Trucks - Water Truck	172	0.42	8	10	6.67	5779	**_?_** Hauling volume (tons)
1	Sweepers/Scrubbers	64	0.46	8	2	1.33	471	Any pavement demolished and hauled? **150 tons**
	Site Preparation / Grading	**Start Date:**	**9/23/2024**	**Total phase:**	**8**			
		End Date:	**10/4/2024**					
1	Off-Highway Trucks - Water Truck	172	0.42	2	8	2.00	1156	
1	Skid Steer Loaders	65	0.37	8	8	8.00	1539	
1	Tractors/Loaders/Backhoes	97	0.37	8	8	8.00	2297	
1	Sweepers/Scrubbers	64	0.46	8	2	2.00	471	
	Excavation / UG Utilities	**Start Date:**	**10/7/2024**	**Total phase:**	**30**			
		End Date:	**11/18/2024**					**Soil Hauling Volume**
1	Excavators	158	0.38	8	15	4.00	7205	Export volume = **_2500_** cubic yards
1	Skid Steer Loaders	65	0.37	8	15	4.00	2886	Import volume = **_150_** cubic yards
1	Off-Highway Trucks - Water Truck	172	0.42	2	30	2.00	4334	
1	Other General Industrial Equipment	88	0.34	8	15	4.00	3590	
2	Tractors/Loaders/Backhoes	97	0.37	8	15	4.00	8614	
1	Rollers	80	0.38	8	5	1.33	1216	
1	Sweepers/Scrubbers	64	0.46	8	8	2.13	1884	
	Superstructure	**Start Date:**	**11/21/2024**	**Total phase:**	**221**			
		End Date:	**9/26/2025**					
1	Tower Crane (Electric)	0	0	8	201	7.28	0	Electric? (Y) ___ Otherwise assumed diesel
1	Rough Terrain Forklifts	100	0.4	8	221	8.00	70720	
2	Generator Sets	84	0.74	8	100	3.62	99456	
3	Air Compressors	78	0.48	8	150	5.43	134784	
	Building - Exterior	**Start Date:**	**8/4/2025**	**Total phase:**	**128**			**Cement Trucks? 250 Total Round-Trips**
		End Date:	**1/30/2026**					
1	Tower Crane (Electric)	0	0	8	40	2.50	0	Electric? (Y) ___ Otherwise assumed diesel
1	Rough Terrain Forklifts	100	0.4	8	60	3.75	19200	Liquid Propane (LPG)? (N) ___ Otherwise Assumed diesel
1	Air Compressors	78	0.48	8	40	2.50	11981	
1	Cement and Mortar Mixers	9	0.56	8	20	2.54	806	
	Other Equipment?							
	Building - Interior	**Start Date:**	**10/13/2025**	**Total phase:**	**168**			
		End Date:	**6/5/2026**					
3	Air Compressors	78	0.48	8	168	8.00	150958	
	Other Equipment?							
	Landscaping / Paving	**Start Date:**	**3/2/2026**	**Total phase:**	**63**			
		Start Date:	**5/29/2026**					
1	Trenchers	78	0.5	8	25	3.17	7800	
1	Pavers	130	0.42	8	2	0.25	874	**Asphalt? 0 cubic yards or ____ round trips?**
1	Skid Steer Loaders	65	0.37	8	15	1.90	2886	
1	Rollers	80	0.38	8	10	1.27	2432	
1	Rough Terrain Forklifts	100	0.4	8	63	8.00	20160	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						

Equipment types listed in "Equipment Types" worksheet tab.

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

Complete one sheet for each project component

23-011 380 N 1st St, San Jose T4i Enhanced BMPs Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-011 380 N 1st St, San Jose T4i Enhanced BMPs
Construction Start Date	9/3/2024
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	1.60
Location	380 N First St, San Jose, CA 95112, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1858
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments Mid Rise	118	Dwelling Unit	0.49	106,160	0.00	0.00	353	—
Enclosed Parking with Elevator	74.0	Space	0.00	12,770	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-1-A	Use Electric or Hybrid Powered Equipment
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	9.91	16.7	0.57	1.77	2.34	0.53	0.43	0.95	6,281
Mit.	9.27	10.1	0.20	1.77	1.82	0.18	0.43	0.47	4,059
% Reduced	6%	40%	64%	—	22%	65%	—	51%	35%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	10.5	12.1	0.41	1.22	1.63	0.38	0.29	0.67	4,124
Mit.	9.38	7.61	0.11	1.22	1.26	0.10	0.29	0.33	2,729
% Reduced	10%	37%	74%	—	23%	75%	—	52%	34%
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.01	7.45	0.25	0.76	1.01	0.23	0.18	0.41	2,612
Mit.	2.80	2.73	0.02	0.76	0.78	0.02	0.18	0.20	1,562
% Reduced	7%	63%	92%	—	23%	92%	—	52%	40%

Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.55	1.36	0.05	0.14	0.18	0.04	0.03	0.08	432
Mit.	0.51	0.50	< 0.005	0.14	0.14	< 0.005	0.03	0.04	259
% Reduced	7%	63%	92%	—	23%	92%	—	52%	40%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2024	1.07	9.78	0.33	1.52	1.85	0.30	0.28	0.58	3,570
2025	2.24	16.7	0.57	1.77	2.34	0.53	0.43	0.95	6,281
2026	9.91	7.69	0.23	0.51	0.73	0.21	0.12	0.33	2,015
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2024	1.22	8.91	0.35	0.85	1.15	0.32	0.20	0.48	2,885
2025	10.5	12.1	0.41	1.22	1.63	0.38	0.29	0.67	4,124
2026	10.4	11.5	0.36	1.22	1.58	0.33	0.29	0.63	4,092
Average Daily	—	—	—	—	—	—	—	—	—
2024	0.23	1.87	0.07	0.18	0.25	0.06	0.04	0.10	611
2025	2.39	7.45	0.25	0.76	1.01	0.23	0.18	0.41	2,612
2026	3.01	2.29	0.07	0.18	0.25	0.06	0.04	0.11	650
Annual	—	—	—	—	—	—	—	—	—
2024	0.04	0.34	0.01	0.03	0.05	0.01	0.01	0.02	101
2025	0.44	1.36	0.05	0.14	0.18	0.04	0.03	0.08	432
2026	0.55	0.42	0.01	0.03	0.05	0.01	0.01	0.02	108

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2024	0.39	10.1	0.20	1.52	1.73	0.18	0.28	0.46	3,579
2025	0.85	7.37	0.05	1.77	1.82	0.04	0.43	0.47	4,059
2026	9.27	5.01	0.10	0.51	0.60	0.09	0.12	0.21	1,483
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2024	0.37	7.61	0.11	0.85	0.86	0.10	0.20	0.22	2,534
2025	9.38	5.40	0.03	1.22	1.26	0.03	0.29	0.33	2,729
2026	9.33	5.32	0.10	1.22	1.25	0.09	0.29	0.33	2,697
Average Daily	—	—	—	—	—	—	—	—	—
2024	0.08	1.32	0.02	0.18	0.20	0.02	0.04	0.06	503
2025	1.72	2.73	0.02	0.76	0.78	0.02	0.18	0.20	1,562
2026	2.80	1.21	0.02	0.18	0.20	0.02	0.04	0.06	438
Annual	—	—	—	—	—	—	—	—	—
2024	0.01	0.24	< 0.005	0.03	0.04	< 0.005	0.01	0.01	83.3
2025	0.31	0.50	< 0.005	0.14	0.14	< 0.005	0.03	0.04	259
2026	0.51	0.22	< 0.005	0.03	0.04	< 0.005	0.01	0.01	72.5

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	5.20	1.10	0.02	2.42	2.44	0.02	0.61	0.63	3,244

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	4.43	1.21	0.02	2.42	2.44	0.02	0.61	0.63	3,067
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	4.66	1.11	0.02	2.30	2.32	0.02	0.58	0.60	2,975
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.85	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	493

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Area	3.36	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165
Refrig.	—	—	—	—	—	—	—	—	0.76
Total	5.20	1.10	0.02	2.42	2.44	0.02	0.61	0.63	3,244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Area	2.68	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165
Refrig.	—	—	—	—	—	—	—	—	0.76
Total	4.43	1.21	0.02	2.42	2.44	0.02	0.61	0.63	3,067

Average Daily	—	—	—	—	—	—	—	—	—
Mobile	1.64	1.08	0.02	2.30	2.32	0.01	0.58	0.60	2,398
Area	3.02	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.99
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165
Refrig.	—	—	—	—	—	—	—	—	0.76
Total	4.66	1.11	0.02	2.30	2.32	0.02	0.58	0.60	2,975
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397
Area	0.55	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	61.6
Water	—	—	—	—	—	—	—	—	4.89
Waste	—	—	—	—	—	—	—	—	27.3
Refrig.	—	—	—	—	—	—	—	—	0.13
Total	0.85	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	493

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Mobile	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Area	3.36	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165

Refrig.	—	—	—	—	—	—	—	—	0.76
Total	5.20	1.10	0.02	2.42	2.44	0.02	0.61	0.63	3,244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Area	2.68	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165
Refrig.	—	—	—	—	—	—	—	—	0.76
Total	4.43	1.21	0.02	2.42	2.44	0.02	0.61	0.63	3,067
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	1.64	1.08	0.02	2.30	2.32	0.01	0.58	0.60	2,398
Area	3.02	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.99
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	372
Water	—	—	—	—	—	—	—	—	29.6
Waste	—	—	—	—	—	—	—	—	165
Refrig.	—	—	—	—	—	—	—	—	0.76
Total	4.66	1.11	0.02	2.30	2.32	0.02	0.58	0.60	2,975
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397
Area	0.55	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65
Energy	0.00	0.00	0.00	—	0.00	0.00	—	0.00	61.6
Water	—	—	—	—	—	—	—	—	4.89
Waste	—	—	—	—	—	—	—	—	27.3
Refrig.	—	—	—	—	—	—	—	—	0.13
Total	0.85	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	493

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	8.35	0.31	—	0.31	0.29	—	0.29	2,252
Demolition	—	—	—	1.08	1.08	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.01	—	0.01	0.01	—	0.01	86.4
Demolition	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.3
Demolition	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.00	0.17	0.17	0.00	0.04	0.04	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.38	0.02	0.28	0.30	0.01	0.08	0.09	1,141

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	43.7
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.24

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	8.67	0.18	—	0.18	0.17	—	0.17	2,252
Demolition	—	—	—	1.08	1.08	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.33	0.01	—	0.01	0.01	—	0.01	86.4
Demolition	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.3

Demolition	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.00	0.17	0.17	0.00	0.04	0.04	178
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.38	0.02	0.28	0.30	0.01	0.08	0.09	1,141
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	43.7
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.24

3.3. Site Preparation/Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	3.17	0.13	—	0.13	0.12	—	0.12	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	3.17	0.13	—	0.13	0.12	—	0.12	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.14
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	88.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	82.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.28

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation/Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.59	0.07	—	0.07	0.07	—	0.07	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.59	0.07	—	0.07	0.07	—	0.07	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.14
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	88.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	82.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Excavation/UG Utilities (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	7.12	0.34	—	0.34	0.31	—	0.31	1,520
Dust From Material Movement	—	—	—	0.21	0.21	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.60	0.03	—	0.03	0.03	—	0.03	129
Dust From Material Movement	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.01	—	0.01	< 0.005	—	< 0.005	21.4
Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.00	0.19	0.19	0.00	0.04	0.04	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.05	0.01	0.20	0.21	0.01	0.05	0.06	821
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	15.9

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	69.8
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.6

3.6. Excavation/UG Utilities (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.49	0.09	—	0.09	0.09	—	0.09	1,520
Dust From Material Movement	—	—	—	0.21	0.21	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.55	0.01	—	0.01	0.01	—	0.01	129
Dust From Material Movement	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.4
Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.00	0.19	0.19	0.00	0.04	0.04	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.05	0.01	0.20	0.21	0.01	0.05	0.06	821
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	15.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	69.8
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.63
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.6

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.32	0.29	—	0.29	0.27	—	0.27	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.32	0.29	—	0.29	0.27	—	0.27	1,862

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	2.15	0.09	—	0.09	0.08	—	0.08	547
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.39	0.02	—	0.02	0.01	—	0.01	90.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.22	0.00	0.75	0.75	0.00	0.18	0.18	786
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.01	0.35	0.01	0.07	0.08	< 0.005	0.02	0.02	294
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.29	0.28	0.00	0.75	0.75	0.00	0.18	0.18	727
Vendor	0.01	0.53	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.01	0.37	0.01	0.07	0.08	< 0.005	0.02	0.02	294
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.00	0.22	0.22	0.00	0.05	0.05	216
Vendor	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	122
Hauling	< 0.005	0.11	< 0.005	0.02	0.02	< 0.005	0.01	0.01	86.2
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.7
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	20.2
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.3

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.20	0.01	—	0.01	0.01	—	0.01	293
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.22	< 0.005	—	< 0.005	< 0.005	—	< 0.005	48.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.22	0.00	0.75	0.75	0.00	0.18	0.18	786
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.01	0.35	0.01	0.07	0.08	< 0.005	0.02	0.02	294
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.29	0.28	0.00	0.75	0.75	0.00	0.18	0.18	727

Vendor	0.01	0.53	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.01	0.37	0.01	0.07	0.08	< 0.005	0.02	0.02	294
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.00	0.22	0.22	0.00	0.05	0.05	216
Vendor	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	122
Hauling	< 0.005	0.11	< 0.005	0.02	0.02	< 0.005	0.01	0.01	86.2
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.7
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	20.2
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.3

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.89	0.26	—	0.26	0.24	—	0.24	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.40	0.02	—	0.02	0.01	—	0.01	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.25	0.00	0.75	0.75	0.00	0.18	0.18	713
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	408
Hauling	0.01	0.36	< 0.005	0.07	0.08	< 0.005	0.02	0.02	288
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	42.4
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	24.0
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	16.9
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.01
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.97
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.80

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	< 0.005	—	< 0.005	< 0.005	—	< 0.005	58.6

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.25	0.00	0.75	0.75	0.00	0.18	0.18	713
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	408
Hauling	0.01	0.36	< 0.005	0.07	0.08	< 0.005	0.02	0.02	288
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	42.4
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	24.0
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	16.9
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.01
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.97
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.80

3.11. Superstructure (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.90	8.04	0.29	—	0.29	0.27	—	0.27	1,721
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.65	0.02	—	0.02	0.02	—	0.02	138
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.30	0.00	0.75	0.75	0.00	0.18	0.18	741
Vendor	0.01	0.56	0.01	0.10	0.11	0.01	0.03	0.03	422
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	60.2
Vendor	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	33.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.97
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Superstructure (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.12	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.77
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.30	0.00	0.75	0.75	0.00	0.18	0.18	741
Vendor	0.01	0.56	0.01	0.10	0.11	0.01	0.03	0.03	422
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.06	0.06	0.00	0.01	0.01	60.2
Vendor	< 0.005	0.04	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	33.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.97

Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Superstructure (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	7.59	0.26	—	0.26	0.24	—	0.24	1,722
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	7.59	0.26	—	0.26	0.24	—	0.24	1,722
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	4.00	0.14	—	0.14	0.13	—	0.13	906
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.73	0.03	—	0.03	0.02	—	0.02	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.22	0.00	0.75	0.75	0.00	0.18	0.18	786
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	415

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.29	0.28	0.00	0.75	0.75	0.00	0.18	0.18	727
Vendor	0.01	0.53	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.00	0.39	0.39	0.00	0.09	0.09	387
Vendor	0.01	0.28	< 0.005	0.05	0.06	< 0.005	0.02	0.02	218
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.07	0.07	0.00	0.02	0.02	64.1
Vendor	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	36.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Superstructure (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.77	< 0.005	—	< 0.005	< 0.005	—	< 0.005	189
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	31.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.30	0.22	0.00	0.75	0.75	0.00	0.18	0.18	786
Vendor	0.01	0.51	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.29	0.28	0.00	0.75	0.75	0.00	0.18	0.18	727
Vendor	0.01	0.53	0.01	0.10	0.11	0.01	0.03	0.03	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.00	0.39	0.39	0.00	0.09	0.09	387
Vendor	0.01	0.28	< 0.005	0.05	0.06	< 0.005	0.02	0.02	218
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.00	0.07	0.07	0.00	0.02	0.02	64.1
Vendor	< 0.005	0.05	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	36.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Landscaping/Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	4.14	0.13	—	0.13	0.12	—	0.12	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	4.14	0.13	—	0.13	0.12	—	0.12	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.02	—	0.02	0.02	—	0.02	170
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.2
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	0.00	0.21	0.21	0.00	0.05	0.05	213
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Worker	0.07	0.07	0.00	0.21	0.21	0.00	0.05	0.05	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Landscaping/Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	4.88	0.10	—	0.10	0.09	—	0.09	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	4.88	0.10	—	0.10	0.09	—	0.09	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.87	0.02	—	0.02	0.02	—	0.02	170
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.16	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.2
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.08	0.05	0.00	0.21	0.21	0.00	0.05	0.05	213
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.00	0.21	0.21	0.00	0.05	0.05	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	35.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	3.53	0.11	—	0.11	0.10	—	0.10	536
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.55	0.02	—	0.02	0.02	—	0.02	83.9
Architectural Coatings	1.38	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Architectural Coatings	0.25	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.30	0.30	0.00	0.07	0.07	291
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	46.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	1.38	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.25	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.00	0.30	0.30	0.00	0.07	0.07	291
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.00	0.05	0.05	0.00	0.01	0.01	46.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.43	0.09	—	0.09	0.09	—	0.09	536

Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.43	0.09	—	0.09	0.09	—	0.09	536
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.05	0.03	—	0.03	0.03	—	0.03	164
Architectural Coatings	2.68	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.19	0.01	—	0.01	< 0.005	—	< 0.005	27.1
Architectural Coatings	0.49	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.11	0.08	0.00	0.30	0.30	0.00	0.07	0.07	309
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.00	0.30	0.30	0.00	0.07	0.07	285
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.09	0.09	0.00	0.02	0.02	88.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	2.68	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.49	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.11	0.08	0.00	0.30	0.30	0.00	0.07	0.07	309
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.00	0.30	0.30	0.00	0.07	0.07	285
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.09	0.09	0.00	0.02	0.02	88.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.84	1.03	0.02	2.42	2.44	0.02	0.61	0.63	2,657
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.75	1.21	0.02	2.42	2.44	0.02	0.61	0.63	2,500
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.30	0.20	< 0.005	0.42	0.42	< 0.005	0.11	0.11	397

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	349
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	23.2

Total	—	—	—	—	—	—	—	—	372
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	349
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	23.2
Total	—	—	—	—	—	—	—	—	372
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	57.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.85
Total	—	—	—	—	—	—	—	—	61.6

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	349
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	23.2
Total	—	—	—	—	—	—	—	—	372
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	349
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	23.2
Total	—	—	—	—	—	—	—	—	372
Annual	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	57.7
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	3.85
Total	—	—	—	—	—	—	—	—	61.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	2.27	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—
Landscape Equipment	0.68	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Total	3.36	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	2.27	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—
Total	2.68	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	0.41	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65
Total	0.55	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Consumer Products	2.27	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—
Landscape Equipment	0.68	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Total	3.36	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	20.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	2.27	—	—	—	—	—	—	—	—
Architectural Coatings	0.41	—	—	—	—	—	—	—	—
Total	2.68	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Consumer Products	0.41	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65
Total	0.55	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.65

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	29.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	29.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	29.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	29.6
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	4.89
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	4.89

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	29.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	29.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	29.6

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	29.6
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	4.89
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	4.89

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	165
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	165
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	165
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	165
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	27.3

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	27.3

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	165
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	165
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	165
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	165
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	27.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	27.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.76
Total	—	—	—	—	—	—	—	—	0.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.76
Total	—	—	—	—	—	—	—	—	0.76
Annual	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.13
Total	—	—	—	—	—	—	—	—	0.13

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.76
Total	—	—	—	—	—	—	—	—	0.76
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	0.76
Total	—	—	—	—	—	—	—	—	0.76
Annual	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	0.13
Total	—	—	—	—	—	—	—	—	0.13

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/3/2024	9/20/2024	5.00	14.0	—
Site Preparation/Grading	Site Preparation	9/23/2024	10/4/2024	5.00	10.0	—
Excavation/UG Utilities	Site Preparation	10/7/2024	11/18/2024	5.00	31.0	—
Building Construction	Building Construction	8/4/2025	1/30/2026	5.00	130	—
Superstructure	Building Construction	11/21/2024	9/26/2025	5.00	222	—
Landscaping/Paving	Paving	3/2/2026	5/29/2026	5.00	65.0	—
Architectural Coating	Architectural Coating	10/13/2025	6/5/2026	5.00	170	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	4.67	33.0	0.73
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.67	84.0	0.37
Demolition	Skid Steer Loaders	Diesel	Average	2.00	6.67	71.0	0.37
Demolition	Off-Highway Trucks	Diesel	Average	1.00	6.67	376	0.38
Demolition	Sweepers/Scrubbers	Diesel	Average	1.00	1.33	36.0	0.46
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Site Preparation/Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation/Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Site Preparation/Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation/Grading	Sweepers/Scrubbers	Diesel	Average	1.00	2.00	36.0	0.46
Excavation/UG Utilities	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Excavation/UG Utilities	Skid Steer Loaders	Diesel	Average	1.00	4.00	71.0	0.37
Excavation/UG Utilities	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Excavation/UG Utilities	Other General Industrial Equipment	Diesel	Average	1.00	4.00	35.0	0.34
Excavation/UG Utilities	Tractors/Loaders/Backhoes	Diesel	Average	2.00	4.00	84.0	0.37
Excavation/UG Utilities	Rollers	Diesel	Average	1.00	1.33	36.0	0.38
Excavation/UG Utilities	Sweepers/Scrubbers	Diesel	Average	1.00	2.13	36.0	0.46
Excavation/UG Utilities	Graders	Diesel	Average	1.00	8.00	148	0.41
Building Construction	Rough Terrain Forklifts	Diesel	Average	1.00	3.75	96.0	0.40

Building Construction	Air Compressors	Diesel	Average	1.00	2.50	37.0	0.48
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	2.54	10.0	0.56
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	2.50	367	0.29
Superstructure	Cranes	Diesel	Average	1.00	7.28	367	0.29
Superstructure	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Superstructure	Generator Sets	Diesel	Average	2.00	3.62	14.0	0.74
Superstructure	Air Compressors	Diesel	Average	3.00	5.43	37.0	0.48
Landscaping/Paving	Pavers	Diesel	Average	1.00	0.25	81.0	0.42
Landscaping/Paving	Rollers	Diesel	Average	1.00	1.27	36.0	0.38
Landscaping/Paving	Trenchers	Diesel	Average	1.00	3.17	40.0	0.50
Landscaping/Paving	Skid Steer Loaders	Diesel	Average	1.00	1.90	71.0	0.37
Landscaping/Paving	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Landscaping/Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Landscaping/Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	3.00	8.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Interim	1.00	4.67	33.0	0.73
Demolition	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38

Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	6.67	84.0	0.37
Demolition	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	6.67	71.0	0.37
Demolition	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	6.67	376	0.38
Demolition	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	1.33	36.0	0.46
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	1.00	367	0.40
Site Preparation/Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Site Preparation/Grading	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	2.00	376	0.38
Site Preparation/Grading	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	8.00	71.0	0.37
Site Preparation/Grading	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	2.00	36.0	0.46
Excavation/UG Utilities	Excavators	Diesel	Tier 4 Interim	1.00	4.00	36.0	0.38
Excavation/UG Utilities	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	4.00	71.0	0.37
Excavation/UG Utilities	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	2.00	376	0.38
Excavation/UG Utilities	Other General Industrial Equipment	Diesel	Tier 4 Interim	1.00	4.00	35.0	0.34
Excavation/UG Utilities	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	4.00	84.0	0.37
Excavation/UG Utilities	Rollers	Diesel	Tier 4 Interim	1.00	1.33	36.0	0.38
Excavation/UG Utilities	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	2.13	36.0	0.46
Excavation/UG Utilities	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Building Construction	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	3.75	96.0	0.40
Building Construction	Air Compressors	Electric	Average	1.00	2.50	37.0	0.48
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	2.54	10.0	0.56
Building Construction	Cranes	Electric	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	2.00	6.00	82.0	0.20

Building Construction	Tractors/Loaders/Backh	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Building Construction	Cranes	Electric	Average	1.00	2.50	367	0.29
Superstructure	Cranes	Electric	Average	1.00	7.28	367	0.29
Superstructure	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	8.00	96.0	0.40
Superstructure	Generator Sets	Electric	Average	2.00	3.62	14.0	0.74
Superstructure	Air Compressors	Electric	Average	3.00	5.43	37.0	0.48
Landscaping/Paving	Pavers	Diesel	Tier 4 Interim	1.00	0.25	81.0	0.42
Landscaping/Paving	Rollers	Diesel	Tier 4 Interim	1.00	1.27	36.0	0.38
Landscaping/Paving	Trenchers	Diesel	Tier 4 Interim	1.00	3.17	40.0	0.50
Landscaping/Paving	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	1.90	71.0	0.37
Landscaping/Paving	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	8.00	96.0	0.40
Landscaping/Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Landscaping/Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Electric	Average	3.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	14.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation/Grading	—	—	—	—
Site Preparation/Grading	Worker	10.0	11.7	LDA,LDT1,LDT2

Site Preparation/Grading	Vendor	—	8.40	HHDT,MHDT
Site Preparation/Grading	Hauling	0.00	20.0	HHDT
Site Preparation/Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	90.3	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	14.7	8.40	HHDT,MHDT
Building Construction	Hauling	3.91	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Landscaping/Paving	—	—	—	—
Landscaping/Paving	Worker	25.0	11.7	LDA,LDT1,LDT2
Landscaping/Paving	Vendor	—	8.40	HHDT,MHDT
Landscaping/Paving	Hauling	0.00	20.0	HHDT
Landscaping/Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	36.1	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Excavation/UG Utilities	—	—	—	—
Excavation/UG Utilities	Worker	22.5	11.7	LDA,LDT1,LDT2
Excavation/UG Utilities	Vendor	—	8.40	HHDT,MHDT
Excavation/UG Utilities	Hauling	10.7	20.0	HHDT
Excavation/UG Utilities	Onsite truck	—	—	HHDT
Superstructure	—	—	—	—
Superstructure	Worker	90.3	11.7	LDA,LDT1,LDT2
Superstructure	Vendor	14.7	8.40	HHDT,MHDT
Superstructure	Hauling	0.00	20.0	HHDT

Superstructure	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	14.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation/Grading	—	—	—	—
Site Preparation/Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Site Preparation/Grading	Vendor	—	8.40	HHDT,MHDT
Site Preparation/Grading	Hauling	0.00	20.0	HHDT
Site Preparation/Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	90.3	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	14.7	8.40	HHDT,MHDT
Building Construction	Hauling	3.91	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Landscaping/Paving	—	—	—	—
Landscaping/Paving	Worker	25.0	11.7	LDA,LDT1,LDT2
Landscaping/Paving	Vendor	—	8.40	HHDT,MHDT
Landscaping/Paving	Hauling	0.00	20.0	HHDT
Landscaping/Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	36.1	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Excavation/UG Utilities	—	—	—	—
Excavation/UG Utilities	Worker	22.5	11.7	LDA,LDT1,LDT2
Excavation/UG Utilities	Vendor	—	8.40	HHDT,MHDT
Excavation/UG Utilities	Hauling	10.7	20.0	HHDT
Excavation/UG Utilities	Onsite truck	—	—	HHDT
Superstructure	—	—	—	—
Superstructure	Worker	90.3	11.7	LDA,LDT1,LDT2
Superstructure	Vendor	14.7	8.40	HHDT,MHDT
Superstructure	Hauling	0.00	20.0	HHDT
Superstructure	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	214,974	71,658	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	15,000	—

Site Preparation/Grading	—	—	0.00	0.00	—
Excavation/UG Utilities	150	2,500	15.5	0.00	—
Landscaping/Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	809	0.03	< 0.005
2025	0.00	809	0.03	< 0.005
2026	0.00	809	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	642	579	483	222,733	3,436	3,101	2,583	1,192,155

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	642	579	483	222,733	3,436	3,101	2,583	1,192,155
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)

Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
214974	71,658	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	707,017	178	0.0330	0.0040	0.00
Enclosed Parking with Elevator	47,140	178	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	707,017	178	0.0330	0.0040	0.00
Enclosed Parking with Elevator	47,140	178	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	4,279,435	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	4,279,435	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	87.3	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	87.3	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.6	annual days of extreme heat
Extreme Precipitation	2.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	37.5
AQ-DPM	76.9
Drinking Water	22.7
Lead Risk Housing	61.3

Pesticides	13.7
Toxic Releases	33.2
Traffic	13.0
Effect Indicators	—
CleanUp Sites	7.71
Groundwater	96.8
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	51.2
Solid Waste	0.00
Sensitive Population	—
Asthma	84.5
Cardio-vascular	48.2
Low Birth Weights	29.2
Socioeconomic Factor Indicators	—
Education	80.6
Housing	90.5
Linguistic	85.3
Poverty	82.4
Unemployment	67.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	31.07917362
Employed	81.98383164
Median HI	18.79892211

Education	—
Bachelor's or higher	62.49197998
High school enrollment	100
Preschool enrollment	61.70922623
Transportation	—
Auto Access	1.62966765
Active commuting	90.82509945
Social	—
2-parent households	9.790837931
Voting	39.93327345
Neighborhood	—
Alcohol availability	11.79263442
Park access	81.35506224
Retail density	97.61324265
Supermarket access	94.25125112
Tree canopy	58.28307455
Housing	—
Homeownership	8.443474913
Housing habitability	24.89413576
Low-inc homeowner severe housing cost burden	96.52252021
Low-inc renter severe housing cost burden	48.36391634
Uncrowded housing	49.60862312
Health Outcomes	—
Insured adults	18.72192994
Arthritis	74.6
Asthma ER Admissions	23.5
High Blood Pressure	59.0

Cancer (excluding skin)	68.9
Asthma	46.1
Coronary Heart Disease	57.7
Chronic Obstructive Pulmonary Disease	59.8
Diagnosed Diabetes	48.6
Life Expectancy at Birth	49.3
Cognitively Disabled	7.3
Physically Disabled	10.8
Heart Attack ER Admissions	41.4
Mental Health Not Good	45.5
Chronic Kidney Disease	45.1
Obesity	51.8
Pedestrian Injuries	50.9
Physical Health Not Good	46.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	57.0
Current Smoker	48.5
No Leisure Time for Physical Activity	40.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	30.4
English Speaking	10.3
Foreign-born	83.4
Outdoor Workers	82.3

Climate Change Adaptive Capacity	—
Impervious Surface Cover	15.1
Traffic Density	22.0
Traffic Access	87.4
Other Indices	—
Hardship	63.1
Other Decision Support	—
2016 Voting	38.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	64.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	San Jose Clean Energy 2020 rate = 178 lb/MWh.
Land Use	Total lot acreage, square footage, dwelling units, and parking spaces from provided construction worksheet filled out by applicant.
Construction: Construction Phases	Provided by construction applicant in filled out worksheet.
Construction: Off-Road Equipment	Provided by project applicant in filled out construction worksheet.
Construction: Trips and VMT	Demolition = 150-tons demolished and hauled (2.5 trips/day), Building Construction = 250 concrete truck round trips (3.91 trips/day).
Construction: On-Road Fugitive Dust	Air District BMP = 15 mph. San Jose required standard permit condition.
Operations: Hearths	No hearths.
Operations: Energy Use	San Jose REACH - no natural gas. Convert natural gas to electricity.
Operations: Water and Waste Water	Wastewater treatment = 100% aerobic - no septic tanks or lagoons.

23-011 380 N 1st St, San Jose T4i Enhanced BMPs HRA Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-011 380 N 1st St, San Jose T4i Enhanced BMPs HRA
Construction Start Date	9/3/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	1.60
Location	380 N First St, San Jose, CA 95112, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1858
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	118	Dwelling Unit	0.49	106,160	0.00	0.00	353	—

Enclosed Parking with Elevator	74.0	Space	0.00	12,770	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-1-A	Use Electric or Hybrid Powered Equipment
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	9.88	15.4	0.56	1.10	1.41	0.51	0.17	0.53	3,779
Mit.	9.24	8.93	0.18	1.10	1.28	0.17	0.17	0.34	2,326
% Reduced	6%	42%	67%	—	9%	67%	—	36%	38%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	10.4	11.2	0.40	0.22	0.56	0.37	0.03	0.38	2,521
Mit.	9.31	6.69	0.10	0.22	0.31	0.09	0.03	0.11	1,580
% Reduced	11%	40%	76%	—	44%	76%	—	70%	37%
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.00	6.92	0.24	0.06	0.28	0.22	0.01	0.23	1,617
Mit.	2.80	2.19	0.02	0.06	0.08	0.02	0.01	0.03	566
% Reduced	7%	68%	92%	—	70%	92%	—	89%	65%
Annual (Max)	—	—	—	—	—	—	—	—	—

Unmit.	0.55	1.26	0.04	0.01	0.05	0.04	< 0.005	0.04	268
Mit.	0.51	0.40	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	93.7
% Reduced	7%	68%	92%	—	70%	92%	—	89%	65%

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2024	1.05	8.60	0.31	1.10	1.41	0.29	0.17	0.45	2,318
2025	2.13	15.4	0.56	0.08	0.63	0.51	0.02	0.53	3,779
2026	9.88	7.60	0.23	0.02	0.25	0.21	0.01	0.21	1,527
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2024	1.17	8.30	0.34	0.22	0.56	0.31	0.03	0.34	1,812
2025	10.4	11.2	0.40	0.05	0.45	0.37	0.01	0.38	2,521
2026	10.3	10.7	0.35	0.05	0.40	0.32	0.01	0.34	2,518
Average Daily	—	—	—	—	—	—	—	—	—
2024	0.22	1.70	0.07	0.06	0.13	0.06	0.01	0.07	393
2025	2.35	6.92	0.24	0.03	0.28	0.22	0.01	0.23	1,617
2026	3.00	2.22	0.07	0.01	0.08	0.06	< 0.005	0.06	457
Annual	—	—	—	—	—	—	—	—	—
2024	0.04	0.31	0.01	0.01	0.02	0.01	< 0.005	0.01	65.1
2025	0.43	1.26	0.04	0.01	0.05	0.04	< 0.005	0.04	268
2026	0.55	0.40	0.01	< 0.005	0.01	0.01	< 0.005	0.01	75.7

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2024	0.37	8.93	0.18	1.10	1.28	0.17	0.17	0.34	2,326
2025	0.75	6.08	0.03	0.08	0.11	0.03	0.02	0.05	1,557
2026	9.24	4.92	0.10	0.02	0.12	0.09	0.01	0.09	994
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2024	0.32	6.69	0.09	0.22	0.31	0.09	0.03	0.11	1,580
2025	9.31	4.45	0.02	0.05	0.08	0.02	0.01	0.04	1,126
2026	9.29	4.93	0.10	0.05	0.12	0.09	0.01	0.09	1,123
Average Daily	—	—	—	—	—	—	—	—	—
2024	0.07	1.15	0.02	0.06	0.08	0.02	0.01	0.03	286
2025	1.67	2.19	0.01	0.03	0.04	0.01	0.01	0.02	566
2026	2.80	1.14	0.02	0.01	0.03	0.02	< 0.005	0.02	245
Annual	—	—	—	—	—	—	—	—	—
2024	0.01	0.21	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	47.3
2025	0.31	0.40	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	93.7
2026	0.51	0.21	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	40.6

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	8.35	0.31	—	0.31	0.29	—	0.29	2,252
Demolition	—	—	—	1.08	1.08	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.01	—	0.01	0.01	—	0.01	86.4
Demolition	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.3
Demolition	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.24	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	54.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.09
Annual	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.35

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	8.67	0.18	—	0.18	0.17	—	0.17	2,252
Demolition	—	—	—	1.08	1.08	—	0.16	0.16	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.33	0.01	—	0.01	0.01	—	0.01	86.4
Demolition	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.3
Demolition	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.4

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.24	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	54.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.09
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.35

3.3. Site Preparation/Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	3.17	0.13	—	0.13	0.12	—	0.12	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	3.17	0.13	—	0.13	0.12	—	0.12	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.14
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation/Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.59	0.07	—	0.07	0.07	—	0.07	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	3.59	0.07	—	0.07	0.07	—	0.07	914
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.14
Dust From Material Movement	—	—	—	0.00	0.00	—	0.00	0.00	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Excavation/UG Utilities (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.84	7.12	0.34	—	0.34	0.31	—	0.31	1,520
Dust From Material Movement	—	—	—	0.21	0.21	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.60	0.03	—	0.03	0.03	—	0.03	129
Dust From Material Movement	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.01	—	0.01	< 0.005	—	< 0.005	21.4
Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.18	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	39.5
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.34
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.18

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55

3.6. Excavation/UG Utilities (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	6.49	0.09	—	0.09	0.09	—	0.09	1,520
Dust From Material Movement	—	—	—	0.21	0.21	—	0.02	0.02	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.55	0.01	—	0.01	0.01	—	0.01	129
Dust From Material Movement	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.4
Dust From Material Movement	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	12.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.18	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	39.5
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.34
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.32	0.29	—	0.29	0.27	—	0.27	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.32	0.29	—	0.29	0.27	—	0.27	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	2.15	0.09	—	0.09	0.08	—	0.08	547

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.39	0.02	—	0.02	0.01	—	0.01	90.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.06	0.00	0.03	0.03	0.00	0.01	0.01	50.4
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.1
Hauling	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.08	0.00	0.03	0.03	0.00	0.01	0.01	49.1
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.3
Hauling	< 0.005	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.3
Vendor	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.8
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.13
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.36
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.95
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.68

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.20	0.01	—	0.01	0.01	—	0.01	293
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.22	< 0.005	—	< 0.005	< 0.005	—	< 0.005	48.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.06	0.00	0.03	0.03	0.00	0.01	0.01	50.4
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.1
Hauling	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.08	0.00	0.03	0.03	0.00	0.01	0.01	49.1
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.3
Hauling	< 0.005	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	14.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.3
Vendor	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.8

Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.13
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.36
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.95
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.68

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.89	0.26	—	0.26	0.24	—	0.24	1,862
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.40	0.02	—	0.02	0.01	—	0.01	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.07	0.00	0.03	0.03	0.00	0.01	0.01	48.2

Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.7
Hauling	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	13.9
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.80
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.32
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.81
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.46
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.38
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.13

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	4.10	0.02	—	0.02	0.02	—	0.02	999
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	< 0.005	—	< 0.005	< 0.005	—	< 0.005	58.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.71
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.23	0.07	0.00	0.03	0.03	0.00	0.01	0.01	48.2
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.7
Hauling	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	13.9
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.80
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.32
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.81
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.46
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.38
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.13

3.11. Superstructure (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	8.04	0.29	—	0.29	0.27	—	0.27	1,721
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.65	0.02	—	0.02	0.02	—	0.02	138

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.26	0.08	0.00	0.03	0.03	0.00	0.01	0.01	50.1
Vendor	0.01	0.18	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.03
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.27
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.54
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Superstructure (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.12	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.77
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.26	0.08	0.00	0.03	0.03	0.00	0.01	0.01	50.1
Vendor	0.01	0.18	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.03
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.27
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.54
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Superstructure (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	7.59	0.26	—	0.26	0.24	—	0.24	1,722
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	7.59	0.26	—	0.26	0.24	—	0.24	1,722
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	4.00	0.14	—	0.14	0.13	—	0.13	906
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.73	0.03	—	0.03	0.02	—	0.02	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.06	0.00	0.03	0.03	0.00	0.01	0.01	50.4
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.08	0.00	0.03	0.03	0.00	0.01	0.01	49.1
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—

Worker	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	25.6
Vendor	< 0.005	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	21.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.23
Vendor	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.50
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Superstructure (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.46	0.01	—	0.01	0.01	—	0.01	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.77	< 0.005	—	< 0.005	< 0.005	—	< 0.005	189
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	< 0.005	—	< 0.005	< 0.005	—	< 0.005	31.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.25	0.06	0.00	0.03	0.03	0.00	0.01	0.01	50.4
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.24	0.08	0.00	0.03	0.03	0.00	0.01	0.01	49.1
Vendor	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.13	0.04	0.00	0.02	0.02	0.00	< 0.005	< 0.005	25.6
Vendor	< 0.005	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	21.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.23
Vendor	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.50
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Landscaping/Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	4.14	0.13	—	0.13	0.12	—	0.12	957
Paving	0.00	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	4.14	0.13	—	0.13	0.12	—	0.12	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.02	—	0.02	0.02	—	0.02	170
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.2
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Landscaping/Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	4.88	0.10	—	0.10	0.09	—	0.09	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	4.88	0.10	—	0.10	0.09	—	0.09	957
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.87	0.02	—	0.02	0.02	—	0.02	170
Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.16	< 0.005	—	< 0.005	< 0.005	—	< 0.005	28.2

Paving	0.00	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.51	3.53	0.11	—	0.11	0.10	—	0.10	536
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.55	0.02	—	0.02	0.02	—	0.02	83.9
Architectural Coatings	1.38	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Architectural Coatings	0.25	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.50

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	1.38	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	0.25	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.02	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.43	0.09	—	0.09	0.09	—	0.09	536
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.43	0.09	—	0.09	0.09	—	0.09	536
Architectural Coatings	8.79	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.05	0.03	—	0.03	0.03	—	0.03	164
Architectural Coatings	2.68	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.19	0.01	—	0.01	< 0.005	—	< 0.005	27.1
Architectural Coatings	0.49	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.09	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.96

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	8.79	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Architectural Coatings	2.68	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Architectural Coatings	0.49	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Worker	0.10	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.09	0.03	0.00	0.01	0.01	0.00	< 0.005	< 0.005	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	5.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/3/2024	9/20/2024	5.00	14.0	—
Site Preparation/Grading	Site Preparation	9/23/2024	10/4/2024	5.00	10.0	—
Excavation/UG Utilities	Site Preparation	10/7/2024	11/18/2024	5.00	31.0	—
Building Construction	Building Construction	8/4/2025	1/30/2026	5.00	130	—
Superstructure	Building Construction	11/21/2024	9/26/2025	5.00	222	—
Landscaping/Paving	Paving	3/2/2026	5/29/2026	5.00	65.0	—
Architectural Coating	Architectural Coating	10/13/2025	6/5/2026	5.00	170	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	4.67	33.0	0.73
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.67	84.0	0.37
Demolition	Skid Steer Loaders	Diesel	Average	2.00	6.67	71.0	0.37
Demolition	Off-Highway Trucks	Diesel	Average	1.00	6.67	376	0.38
Demolition	Sweepers/Scrubbers	Diesel	Average	1.00	1.33	36.0	0.46
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Site Preparation/Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation/Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Site Preparation/Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation/Grading	Sweepers/Scrubbers	Diesel	Average	1.00	2.00	36.0	0.46
Excavation/UG Utilities	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Excavation/UG Utilities	Skid Steer Loaders	Diesel	Average	1.00	4.00	71.0	0.37
Excavation/UG Utilities	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Excavation/UG Utilities	Other General Industrial Equipment	Diesel	Average	1.00	4.00	35.0	0.34
Excavation/UG Utilities	Tractors/Loaders/Backhoes	Diesel	Average	2.00	4.00	84.0	0.37
Excavation/UG Utilities	Rollers	Diesel	Average	1.00	1.33	36.0	0.38
Excavation/UG Utilities	Sweepers/Scrubbers	Diesel	Average	1.00	2.13	36.0	0.46

Excavation/UG Utilities	Graders	Diesel	Average	1.00	8.00	148	0.41
Building Construction	Rough Terrain Forklifts	Diesel	Average	1.00	3.75	96.0	0.40
Building Construction	Air Compressors	Diesel	Average	1.00	2.50	37.0	0.48
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	2.54	10.0	0.56
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	2.50	367	0.29
Superstructure	Cranes	Diesel	Average	1.00	7.28	367	0.29
Superstructure	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Superstructure	Generator Sets	Diesel	Average	2.00	3.62	14.0	0.74
Superstructure	Air Compressors	Diesel	Average	3.00	5.43	37.0	0.48
Landscaping/Paving	Pavers	Diesel	Average	1.00	0.25	81.0	0.42
Landscaping/Paving	Rollers	Diesel	Average	1.00	1.27	36.0	0.38
Landscaping/Paving	Trenchers	Diesel	Average	1.00	3.17	40.0	0.50
Landscaping/Paving	Skid Steer Loaders	Diesel	Average	1.00	1.90	71.0	0.37
Landscaping/Paving	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Landscaping/Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Landscaping/Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	3.00	8.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Interim	1.00	4.67	33.0	0.73

Demolition	Excavators	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	6.67	84.0	0.37
Demolition	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	6.67	71.0	0.37
Demolition	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	6.67	376	0.38
Demolition	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	1.33	36.0	0.46
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	1.00	367	0.40
Site Preparation/Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Site Preparation/Grading	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	2.00	376	0.38
Site Preparation/Grading	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	8.00	71.0	0.37
Site Preparation/Grading	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	2.00	36.0	0.46
Excavation/UG Utilities	Excavators	Diesel	Tier 4 Interim	1.00	4.00	36.0	0.38
Excavation/UG Utilities	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	4.00	71.0	0.37
Excavation/UG Utilities	Off-Highway Trucks	Diesel	Tier 4 Interim	1.00	2.00	376	0.38
Excavation/UG Utilities	Other General Industrial Equipment	Diesel	Tier 4 Interim	1.00	4.00	35.0	0.34
Excavation/UG Utilities	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	4.00	84.0	0.37
Excavation/UG Utilities	Rollers	Diesel	Tier 4 Interim	1.00	1.33	36.0	0.38
Excavation/UG Utilities	Sweepers/Scrubbers	Diesel	Tier 4 Interim	1.00	2.13	36.0	0.46
Excavation/UG Utilities	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Building Construction	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	3.75	96.0	0.40
Building Construction	Air Compressors	Electric	Average	1.00	2.50	37.0	0.48
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	2.54	10.0	0.56
Building Construction	Cranes	Electric	Average	1.00	4.00	367	0.29

Building Construction	Forklifts	Diesel	Tier 4 Interim	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Building Construction	Cranes	Electric	Average	1.00	2.50	367	0.29
Superstructure	Cranes	Electric	Average	1.00	7.28	367	0.29
Superstructure	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	8.00	96.0	0.40
Superstructure	Generator Sets	Electric	Average	2.00	3.62	14.0	0.74
Superstructure	Air Compressors	Electric	Average	3.00	5.43	37.0	0.48
Landscaping/Paving	Pavers	Diesel	Tier 4 Interim	1.00	0.25	81.0	0.42
Landscaping/Paving	Rollers	Diesel	Tier 4 Interim	1.00	1.27	36.0	0.38
Landscaping/Paving	Trenchers	Diesel	Tier 4 Interim	1.00	3.17	40.0	0.50
Landscaping/Paving	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	1.90	71.0	0.37
Landscaping/Paving	Rough Terrain Forklifts	Diesel	Tier 4 Interim	1.00	8.00	96.0	0.40
Landscaping/Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Landscaping/Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Electric	Average	3.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	14.9	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation/Grading	—	—	—	—
Site Preparation/Grading	Worker	10.0	0.50	LDA,LDT1,LDT2
Site Preparation/Grading	Vendor	—	0.50	HHDT,MHDT
Site Preparation/Grading	Hauling	0.00	0.50	HHDT
Site Preparation/Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	90.3	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	14.7	0.50	HHDT,MHDT
Building Construction	Hauling	3.91	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Landscaping/Paving	—	—	—	—
Landscaping/Paving	Worker	25.0	0.50	LDA,LDT1,LDT2
Landscaping/Paving	Vendor	—	0.50	HHDT,MHDT
Landscaping/Paving	Hauling	0.00	0.50	HHDT
Landscaping/Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	36.1	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Excavation/UG Utilities	—	—	—	—
Excavation/UG Utilities	Worker	22.5	0.50	LDA,LDT1,LDT2
Excavation/UG Utilities	Vendor	—	0.50	HHDT,MHDT
Excavation/UG Utilities	Hauling	10.7	0.50	HHDT
Excavation/UG Utilities	Onsite truck	—	—	HHDT
Superstructure	—	—	—	—
Superstructure	Worker	90.3	0.50	LDA,LDT1,LDT2

Superstructure	Vendor	14.7	0.50	HHDT,MHDT
Superstructure	Hauling	0.00	0.50	HHDT
Superstructure	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	20.0	0.50	LDA,LDT1,LDT2
Demolition	Vendor	—	0.50	HHDT,MHDT
Demolition	Hauling	14.9	0.50	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation/Grading	—	—	—	—
Site Preparation/Grading	Worker	10.0	0.50	LDA,LDT1,LDT2
Site Preparation/Grading	Vendor	—	0.50	HHDT,MHDT
Site Preparation/Grading	Hauling	0.00	0.50	HHDT
Site Preparation/Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	90.3	0.50	LDA,LDT1,LDT2
Building Construction	Vendor	14.7	0.50	HHDT,MHDT
Building Construction	Hauling	3.91	0.50	HHDT
Building Construction	Onsite truck	—	—	HHDT
Landscaping/Paving	—	—	—	—
Landscaping/Paving	Worker	25.0	0.50	LDA,LDT1,LDT2
Landscaping/Paving	Vendor	—	0.50	HHDT,MHDT
Landscaping/Paving	Hauling	0.00	0.50	HHDT
Landscaping/Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	36.1	0.50	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	0.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	0.50	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Excavation/UG Utilities	—	—	—	—
Excavation/UG Utilities	Worker	22.5	0.50	LDA,LDT1,LDT2
Excavation/UG Utilities	Vendor	—	0.50	HHDT,MHDT
Excavation/UG Utilities	Hauling	10.7	0.50	HHDT
Excavation/UG Utilities	Onsite truck	—	—	HHDT
Superstructure	—	—	—	—
Superstructure	Worker	90.3	0.50	LDA,LDT1,LDT2
Superstructure	Vendor	14.7	0.50	HHDT,MHDT
Superstructure	Hauling	0.00	0.50	HHDT
Superstructure	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	214,974	71,658	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	15,000	—
Site Preparation/Grading	—	—	0.00	0.00	—
Excavation/UG Utilities	150	2,500	15.5	0.00	—
Landscaping/Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	809	0.03	< 0.005
2025	0.00	809	0.03	< 0.005
2026	0.00	809	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.6	annual days of extreme heat
Extreme Precipitation	2.55	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	37.5
AQ-DPM	76.9

Drinking Water	22.7
Lead Risk Housing	61.3
Pesticides	13.7
Toxic Releases	33.2
Traffic	13.0
Effect Indicators	—
CleanUp Sites	7.71
Groundwater	96.8
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	51.2
Solid Waste	0.00
Sensitive Population	—
Asthma	84.5
Cardio-vascular	48.2
Low Birth Weights	29.2
Socioeconomic Factor Indicators	—
Education	80.6
Housing	90.5
Linguistic	85.3
Poverty	82.4
Unemployment	67.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	31.07917362

Employed	81.98383164
Median HI	18.79892211
Education	—
Bachelor's or higher	62.49197998
High school enrollment	100
Preschool enrollment	61.70922623
Transportation	—
Auto Access	1.62966765
Active commuting	90.82509945
Social	—
2-parent households	9.790837931
Voting	39.93327345
Neighborhood	—
Alcohol availability	11.79263442
Park access	81.35506224
Retail density	97.61324265
Supermarket access	94.25125112
Tree canopy	58.28307455
Housing	—
Homeownership	8.443474913
Housing habitability	24.89413576
Low-inc homeowner severe housing cost burden	96.52252021
Low-inc renter severe housing cost burden	48.36391634
Uncrowded housing	49.60862312
Health Outcomes	—
Insured adults	18.72192994
Arthritis	74.6

Asthma ER Admissions	23.5
High Blood Pressure	59.0
Cancer (excluding skin)	68.9
Asthma	46.1
Coronary Heart Disease	57.7
Chronic Obstructive Pulmonary Disease	59.8
Diagnosed Diabetes	48.6
Life Expectancy at Birth	49.3
Cognitively Disabled	7.3
Physically Disabled	10.8
Heart Attack ER Admissions	41.4
Mental Health Not Good	45.5
Chronic Kidney Disease	45.1
Obesity	51.8
Pedestrian Injuries	50.9
Physical Health Not Good	46.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	57.0
Current Smoker	48.5
No Leisure Time for Physical Activity	40.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	64.0
Elderly	30.4
English Speaking	10.3

Foreign-born	83.4
Outdoor Workers	82.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	15.1
Traffic Density	22.0
Traffic Access	87.4
Other Indices	—
Hardship	63.1
Other Decision Support	—
2016 Voting	38.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	64.0
Healthy Places Index Score for Project Location (b)	33.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	San Jose Clean Energy 2020 rate = 178 lb/MWh.
Land Use	Total lot acreage, square footage, dwelling units, and parking spaces from provided construction worksheet filled out by applicant.
Construction: Construction Phases	Provided by construction applicant in filled out worksheet.
Construction: Off-Road Equipment	Provided by project applicant in filled out construction worksheet.
Construction: Trips and VMT	Demolition = 150-tons demolished and hauled (2.5 trips/day), Building Construction = 250 concrete truck round trips (3.91 trips/day). HRA = 0.5 miles trip length for localized emissions.
Construction: On-Road Fugitive Dust	Air District BMP = 15 mph. San Jose required standard permit condition.
Operations: Hearths	No hearths.
Operations: Energy Use	San Jose REACH - no natural gas. Convert natural gas to electricity.
Operations: Water and Waste Water	Wastewater treatment = 100% aerobic - no septic tanks or lagoons.

Attachment 2: Project Construction Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

380 N. 1st Street, San Jose, CA

DPM Construction Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2024	Construction	0.0124	Point	56	24.7	0.00793	9.99E-04	1.78E-05
2025	Construction	0.0441	Point	56	88.3	0.02829	3.56E-03	6.37E-05
2026	Construction	0.0123	Point	56	24.6	0.00789	9.95E-04	1.78E-05
Total		***0.0688***			***137.6***	***0.0441***	***0.0056***	

Emissions assumed to be evenly distributed over each construction areas

hr/day = 12 (7am - 7pm M-F)
days/yr = 260
hours/year = 3120

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Source Type	No. Sources	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Emissions per Point Source (g/s)
2024	Construction	0.0032	Point	56	6.4	0.00205	2.58E-04	4.61E-06
2025	Construction	0.0020	Point	56	3.9	0.00126	1.59E-04	2.84E-06
2026	Construction	0.0034	Point	56	6.7	0.00215	2.71E-04	4.84E-06
Total		***0.0085***			***17.0***	***0.0055***	***0.0007***	

Emissions assumed to be evenly distributed over each construction areas

hr/day = 12 (7am - 7pm M-F)
days/yr = 260
hours/year = 3120

380 N. 1st Street, San Jose, CA

PM2.5 Fugitive Dust Construction Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2024	Construction	CON_FUG	0.0017	3.4	0.00110	1.38E-04	1826.1	7.57E-08
2025	Construction	CON_FUG	0.0015	3.0	0.00095	1.20E-04	1826.1	6.57E-08
2026	Construction	CON_FUG	0.0003	0.7	0.00022	2.72E-05	1826.1	1.49E-08
Total			***0.0035***	***7.1***	***0.0023***	***0.0003***		

Emissions assumed to be evenly distributed over each construction areas

hr/day = 12 (7am - 7pm M-F)
days/yr = 260
hours/year = 3120

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

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2024	Construction	CON_FUG	0.0017	3.4	0.00110	1.38E-04	1826.1	7.57E-08
2025	Construction	CON_FUG	0.0015	3.0	0.00095	1.20E-04	1826.1	6.57E-08
2026	Construction	CON_FUG	0.0003	0.7	0.00022	2.72E-05	1826.1	1.49E-08
Total			***0.0035***	***7.1***	***0.0023***	***0.0003***		

Emissions assumed to be evenly distributed over each construction areas

hr/day = 12 (7am - 7pm M-F)
days/yr = 260
hours/year = 3120

380 N. 1st Street, San Jose, CA

- Construction Health Impact Modeling

Source Parameters for Point Sources Used in Construction Modeling

Source	Stack Height (ft)	Stack Diam (in)	Exhaust Temp (F)	Volume Flow (acfm)	Velocity (ft/min)	Velocity (ft/sec)
Construction Equipment	9.0	2.5	918	632	18540	309.0

Source	Stack Height (m)	Stack Diam (m)	Exhaust Temp (K)			Velocity (ft/sec)
Construction Equipment	2.74	0.064	765.37			94.2

380 N. 1st Street, San Jose, CA - Construction Health Impact Summary

Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.0254	0.0079	*	*	0.005	0.03
2025	0.0907	0.0069	16.14	0.26	0.02	0.10
2026	0.0253	0.0016	4.16	0.07	0.005	0.03
Total	-	-	**20.30**	**0.33**	-	-
Maximum	0.0907	0.0079	**-**	**-**	**0.02**	**0.10**

* Maximum cancer risk occurs when exposure begins in 2025.

Maximum Impacts at MEI Residential Location - With Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2024	0.0066	0.0079	1.17	0.02	0.001	0.01
2025	0.0041	0.0069	0.67	0.01	0.001	0.01
2026	0.0069	0.0016	0.18	0.02	0.001	0.01
Total	-	-	**2.01**	**0.05**	-	-
Maximum	0.0069	0.0079	**-**	**-**	**0.001**	**0.01**

- Tier 4 Interim Engines, Electric Cranes, Generators, and Air Compressors, and BMPs Mitigation

380 N. 1st Street, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height (1st Floor Level)

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
							Modeled						
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0907	10	1.23	2024	0.0254	-	-			
1	1	0 - 1	2024	0.0254	-	-	2024	0.0254	-	-	0.01	0.01	0.03
2	1	1 - 2	2025	0.0907	10	14.90	2025	0.0907	1	0.26	0.02	0.01	0.10
3	1	2 - 3	2026	0.0253	10	4.16	2026	0.0253	1	0.07	0.01	0.002	0.03
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**20.30**				**0.33**			

* Third trimester of pregnancy

380 N. 1st Street, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height (2nd Floor Level)

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0894	10	1.22	2024	0.0251	-	-			
1	1	0 - 1	2024	0.0251	-	-	2024	0.0251	-	-	0.01	0.01	0.03
2	1	1 - 2	2025	0.0894	10	14.68	2025	0.0894	1	0.26	0.02	0.01	0.10
3	1	2 - 3	2026	0.0249	10	4.09	2026	0.0249	1	0.07	0.005	0.001	0.03
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**19.99**				**0.33**			

* Third trimester of pregnancy

380 N. 1st Street, San Jose, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height (1st Floor Level)

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum		
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Risk (per million)	Year	Annual	Sensitivity Factor	Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2024	0.0066	10	0.09	2024	0.0066	-	-			
1	1	0 - 1	2024	0.0066	10	1.08	2024	0.0066	1	0.02	0.001	0.01	0.01
2	1	1 - 2	2025	0.0041	10	0.67	2025	0.0041	1	0.01	0.001	0.01	0.01
3	1	2 - 3	2026	0.0069	3	0.18	2026	0.0069	1	0.02	0.001	0.002	0.01
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.01**				**0.05**			

* Third trimester of pregnancy

Attachment 3: Cumulative Screening Information and Modeling Calculations

CT-EMFAC2021 Emissions Factors for Santa Clara County 2024

File Name: 380 N 1st St - Santa Clara (SF) - 2024 - Annual.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/27/2023 16:13
Area: Santa Clara (SF)
Analysis Year: 2024
Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.016	0.415	0.581
Truck 2	0.019	0.914	0.046
Non-Truck	0.965	0.007	0.923

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

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

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph
PM2.5	0.009072	0.005953	0.004055	0.002902	0.0022	0.001763	0.001493	0.00134	0.001278	0.001292
TOG	0.14987	0.09695	0.064809	0.046027	0.034749	0.027622	0.023027	0.020115	0.018414	0.017682
Diesel PM	0.001191	0.001034	0.000783	0.000605	0.000502	0.000439	0.000404	0.000397	0.000417	0.000464

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

Pollutant Name	Emission Factor
TOG	1.028536

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

Pollutant Name	Emission Factor
PM2.5	0.002107

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
PM2.5	0.003516	0.00406	0.004597	0.005125	0.005407	0.005497	0.005517	0.00502	0.003974	0.002943

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

Pollutant Name	Emission Factor
PM2.5	0.015281

END

N. 1st Street 2024 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2024***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2024 Vehicles (veh/day)
Total	**6,635**	**7,166**

Increase From 2016	1.08
Vehicles/Direction	**3,583**
Avg Vehicles/Hour/Direction	149

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
N 1st Street S. of Fox Ave	6,635	233
	Percent of Total Vehicles	3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	31.7	3.4	25	3,583	6,089	65,543	1.339E-09	9.876E-10	6.8	3.16
DPM_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	31.7	3.4	25	3,583	6,077	65,408	1.339E-09	9.876E-10	6.8	3.16
									Total	7,166						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	140	7.63E-06	9	6.42%	230	1.26E-05	17	5.62%	201	1.10E-05
2	2.58%	92	5.05E-06	10	7.34%	263	1.44E-05	18	3.27%	117	6.39E-06
3	2.87%	103	5.61E-06	11	6.42%	230	1.26E-05	19	2.35%	84	4.60E-06
4	3.32%	119	6.51E-06	12	6.88%	246	1.35E-05	20	0.86%	31	1.68E-06
5	2.18%	78	4.26E-06	13	6.25%	224	1.22E-05	21	3.09%	111	6.06E-06
6	3.38%	121	6.62E-06	14	6.19%	222	1.21E-05	22	4.13%	148	8.08E-06
7	6.02%	216	1.18E-05	15	5.10%	183	9.98E-06	23	2.52%	90	4.94E-06
8	4.64%	166	9.09E-06	16	3.78%	136	7.40E-06	24	0.92%	33	1.79E-06
								Total		3,583	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	140	7.61E-06	9	6.42%	230	1.25E-05	17	5.62%	201	1.10E-05
2	2.58%	92	5.04E-06	10	7.34%	263	1.43E-05	18	3.27%	117	6.38E-06
3	2.87%	103	5.60E-06	11	6.42%	230	1.25E-05	19	2.35%	84	4.59E-06
4	3.32%	119	6.49E-06	12	6.88%	246	1.34E-05	20	0.86%	31	1.68E-06
5	2.18%	78	4.25E-06	13	6.25%	224	1.22E-05	21	3.09%	111	6.04E-06
6	3.38%	121	6.60E-06	14	6.19%	222	1.21E-05	22	4.13%	148	8.06E-06
7	6.02%	216	1.18E-05	15	5.10%	183	9.96E-06	23	2.52%	90	4.93E-06
8	4.64%	166	9.07E-06	16	3.78%	136	7.39E-06	24	0.92%	33	1.79E-06
								Total		3,583	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = **2024**

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,583	6,089	65,543	5.870E-09	4.328E-09	2.6	1.21
PM25_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,583	6,077	65,408	5.870E-09	4.328E-09	2.6	1.21
									Total	7,166						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002200			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	41	9.88E-06	9	7.11%	255	6.10E-05	17	7.39%	265	6.34E-05
2	0.42%	15	3.58E-06	10	4.39%	157	3.76E-05	18	8.18%	293	7.01E-05
3	0.41%	15	3.48E-06	11	4.66%	167	4.00E-05	19	5.70%	204	4.89E-05
4	0.26%	9	2.24E-06	12	5.89%	211	5.05E-05	20	4.27%	153	3.67E-05
5	0.50%	18	4.29E-06	13	6.15%	220	5.28E-05	21	3.26%	117	2.79E-05
6	0.90%	32	7.75E-06	14	6.04%	216	5.18E-05	22	3.30%	118	2.83E-05
7	3.79%	136	3.25E-05	15	7.01%	251	6.02E-05	23	2.46%	88	2.11E-05
8	7.76%	278	6.66E-05	16	7.14%	256	6.12E-05	24	1.87%	67	1.60E-05
								Total		3,583	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	41	9.86E-06	9	7.11%	255	6.09E-05	17	7.39%	265	6.32E-05
2	0.42%	15	3.58E-06	10	4.39%	157	3.75E-05	18	8.18%	293	7.00E-05
3	0.41%	15	3.48E-06	11	4.66%	167	3.99E-05	19	5.70%	204	4.88E-05
4	0.26%	9	2.24E-06	12	5.89%	211	5.04E-05	20	4.27%	153	3.66E-05
5	0.50%	18	4.28E-06	13	6.15%	220	5.27E-05	21	3.26%	117	2.79E-05
6	0.90%	32	7.74E-06	14	6.04%	216	5.17E-05	22	3.30%	118	2.82E-05
7	3.79%	136	3.24E-05	15	7.01%	251	6.00E-05	23	2.46%	88	2.11E-05
8	7.76%	278	6.65E-05	16	7.14%	256	6.11E-05	24	1.87%	67	1.60E-05
								Total		3,583	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,583	6,089	65,543	9.271E-08	6.836E-08	2.6	1.21
TEXH_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,583	6,077	65,408	9.271E-08	6.836E-08	2.6	1.21
									Total	7,166						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.03475			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	41	1.56E-04	9	7.11%	255	9.64E-04	17	7.39%	265	1.00E-03
2	0.42%	15	5.66E-05	10	4.39%	157	5.94E-04	18	8.18%	293	1.11E-03
3	0.41%	15	5.50E-05	11	4.66%	167	6.32E-04	19	5.70%	204	7.72E-04
4	0.26%	9	3.54E-05	12	5.89%	211	7.98E-04	20	4.27%	153	5.79E-04
5	0.50%	18	6.77E-05	13	6.15%	220	8.34E-04	21	3.26%	117	4.41E-04
6	0.90%	32	1.22E-04	14	6.04%	216	8.18E-04	22	3.30%	118	4.47E-04
7	3.79%	136	5.14E-04	15	7.01%	251	9.50E-04	23	2.46%	88	3.33E-04
8	7.76%	278	1.05E-03	16	7.14%	256	9.67E-04	24	1.87%	67	2.53E-04
								Total		3,583	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	41	1.56E-04	9	7.11%	255	9.62E-04	17	7.39%	265	9.99E-04
2	0.42%	15	5.65E-05	10	4.39%	157	5.93E-04	18	8.18%	293	1.11E-03
3	0.41%	15	5.49E-05	11	4.66%	167	6.31E-04	19	5.70%	204	7.70E-04
4	0.26%	9	3.54E-05	12	5.89%	211	7.96E-04	20	4.27%	153	5.78E-04
5	0.50%	18	6.76E-05	13	6.15%	220	8.32E-04	21	3.26%	117	4.40E-04
6	0.90%	32	1.22E-04	14	6.04%	216	8.16E-04	22	3.30%	118	4.46E-04
7	3.79%	136	5.13E-04	15	7.01%	251	9.48E-04	23	2.46%	88	3.33E-04
8	7.76%	278	1.05E-03	16	7.14%	256	9.65E-04	24	1.87%	67	2.52E-04
								Total		3,583	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,583	6,089	65,543	1.098E-07	8.094E-08	2.6	1.21
TEVAP_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,583	6,077	65,408	1.098E-07	8.094E-08	2.6	1.21
									Total	7,166						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.04114			

Emisson Factors from CT-EMFAC2021

2024 Hourl

Hour

6.65E-01 1

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	41	1.85E-04	9	7.11%	255	1.14E-03	17	7.39%	265	1.18E-03
2	0.42%	15	6.70E-05	10	4.39%	157	7.04E-04	18	8.18%	293	1.31E-03
3	0.41%	15	6.51E-05	11	4.66%	167	7.48E-04	19	5.70%	204	9.14E-04
4	0.26%	9	4.20E-05	12	5.89%	211	9.45E-04	20	4.27%	153	6.86E-04
5	0.50%	18	8.02E-05	13	6.15%	220	9.87E-04	21	3.26%	117	5.23E-04
6	0.90%	32	1.45E-04	14	6.04%	216	9.68E-04	22	3.30%	118	5.29E-04
7	3.79%	136	6.08E-04	15	7.01%	251	1.13E-03	23	2.46%	88	3.95E-04
8	7.76%	278	1.25E-03	16	7.14%	256	1.15E-03	24	1.87%	67	2.99E-04
								Total		3,583	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	41	1.84E-04	9	7.11%	255	1.14E-03	17	7.39%	265	1.18E-03
2	0.42%	15	6.69E-05	10	4.39%	157	7.02E-04	18	8.18%	293	1.31E-03
3	0.41%	15	6.50E-05	11	4.66%	167	7.47E-04	19	5.70%	204	9.12E-04
4	0.26%	9	4.19E-05	12	5.89%	211	9.43E-04	20	4.27%	153	6.84E-04
5	0.50%	18	8.00E-05	13	6.15%	220	9.85E-04	21	3.26%	117	5.21E-04
6	0.90%	32	1.45E-04	14	6.04%	216	9.66E-04	22	3.30%	118	5.28E-04
7	3.79%	136	6.07E-04	15	7.01%	251	1.12E-03	23	2.46%	88	3.94E-04
8	7.76%	278	1.24E-03	16	7.14%	256	1.14E-03	24	1.87%	67	2.99E-04
								Total		3,583	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,583	6,089	65,543	6.082E-08	4.484E-08	2.6	1.21
FUG_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,583	6,077	65,408	6.082E-08	4.484E-08	2.6	1.21
									Total	7,166						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00541			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02280			

Emisson Factors from CT-EMFAC2021

2024 Hourl	
	Hour
3.68E-01	1
1.34E-01	2
1.30E-01	3

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	41	1.02E-04	9	7.11%	255	6.32E-04	17	7.39%	265	6.56E-04
2	0.42%	15	3.71E-05	10	4.39%	157	3.90E-04	18	8.18%	293	7.27E-04
3	0.41%	15	3.61E-05	11	4.66%	167	4.15E-04	19	5.70%	204	5.06E-04
4	0.26%	9	2.32E-05	12	5.89%	211	5.23E-04	20	4.27%	153	3.80E-04
5	0.50%	18	4.44E-05	13	6.15%	220	5.47E-04	21	3.26%	117	2.90E-04
6	0.90%	32	8.03E-05	14	6.04%	216	5.37E-04	22	3.30%	118	2.93E-04
7	3.79%	136	3.37E-04	15	7.01%	251	6.23E-04	23	2.46%	88	2.19E-04
8	7.76%	278	6.90E-04	16	7.14%	256	6.34E-04	24	1.87%	67	1.66E-04
								Total		3,583	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	41	1.02E-04	9	7.11%	255	6.31E-04	17	7.39%	265	6.55E-04
2	0.42%	15	3.70E-05	10	4.39%	157	3.89E-04	18	8.18%	293	7.25E-04
3	0.41%	15	3.60E-05	11	4.66%	167	4.14E-04	19	5.70%	204	5.05E-04
4	0.26%	9	2.32E-05	12	5.89%	211	5.22E-04	20	4.27%	153	3.79E-04
5	0.50%	18	4.43E-05	13	6.15%	220	5.46E-04	21	3.26%	117	2.89E-04
6	0.90%	32	8.02E-05	14	6.04%	216	5.35E-04	22	3.30%	118	2.92E-04
7	3.79%	136	3.36E-04	15	7.01%	251	6.22E-04	23	2.46%	88	2.18E-04
8	7.76%	278	6.89E-04	16	7.14%	256	6.33E-04	24	1.87%	67	1.66E-04
								Total		3,583	

380 N. 1st Street, San Jose, CA - N. 1st Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Project MEI Receptors, 1.5m receptor height

Emission Year	2024
Receptor Information	Project MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Project MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Project MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0005	0.0392	0.0464

Project MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0282	0.0257	0.0025

380 N. 1st Street, San Jose, CA - N. 1st Street Cancer Risk & PM2.5 Impacts at Project MEI - 1.5 meter (1st floor) receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2024	10	0.0005	0.0392	0.0464	0.007	0.003	0.0002	0.01
1	1	0 - 1	2024	10	0.0005	0.0392	0.0464	0.080	0.037	0.0026	0.12
2	1	1 - 2	2025	10	0.0005	0.0392	0.0464	0.080	0.037	0.0026	0.12
3	1	2 - 3	2026	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
4	1	3 - 4	2027	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
5	1	4 - 5	2028	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
6	1	5 - 6	2029	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
7	1	6 - 7	2030	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
8	1	7 - 8	2031	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
9	1	8 - 9	2032	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
10	1	9 - 10	2033	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
11	1	10 - 11	2034	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
12	1	11 - 12	2035	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
13	1	12 - 13	2036	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
14	1	13 - 14	2037	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
15	1	14 - 15	2038	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
16	1	15 - 16	2039	3	0.0005	0.0392	0.0464	0.013	0.006	0.0004	0.02
17	1	16-17	2040	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
18	1	17-18	2041	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
19	1	18-19	2042	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
20	1	19-20	2043	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
21	1	20-21	2044	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
22	1	21-22	2045	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
23	1	22-23	2046	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
24	1	23-24	2047	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
25	1	24-25	2048	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
26	1	25-26	2049	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
27	1	26-27	2050	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
28	1	27-28	2051	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
29	1	28-29	2052	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
30	1	29-30	2053	1	0.0005	0.0392	0.0464	0.001	0.001	0.0000	0.00
Total Increased Cancer Risk								0.36	0.166	0.012	**0.54**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.03	0.03

* Third trimester of pregnancy

Coleman Avenue 2024 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2024***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2024 Vehicles (veh/day)
Total	**19,124**	**20,654**

Increase From 2016	1.08
Vehicles/Direction	**10,327**
Avg Vehicles/Hour/Direction	430

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
N 1st Street S. of Fox Ave	19,124	671
	Percent of Total Vehicles	3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	55.7	3.4	40	10,327	7,624	82,066	1.737E-09	1.281E-09	6.8	3.16
DPM_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	55.7	3.4	40	10,327	7,217	77,681	1.737E-09	1.281E-09	6.8	3.16
									Total	20,654						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and DPM Emissions - DPM_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	402	1.24E-05	9	6.42%	663	2.04E-05	17	5.62%	580	1.79E-05
2	2.58%	266	8.20E-06	10	7.34%	758	2.33E-05	18	3.27%	337	1.04E-05
3	2.87%	296	9.11E-06	11	6.42%	663	2.04E-05	19	2.35%	243	7.47E-06
4	3.32%	343	1.06E-05	12	6.88%	710	2.19E-05	20	0.86%	89	2.73E-06
5	2.18%	225	6.92E-06	13	6.25%	645	1.99E-05	21	3.09%	320	9.84E-06
6	3.38%	349	1.07E-05	14	6.19%	639	1.97E-05	22	4.13%	426	1.31E-05
7	6.02%	621	1.91E-05	15	5.10%	527	1.62E-05	23	2.52%	260	8.02E-06
8	4.64%	479	1.48E-05	16	3.78%	391	1.20E-05	24	0.92%	95	2.91E-06
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.90%	402	1.17E-05	9	6.42%	663	1.93E-05	17	5.62%	580	1.69E-05
2	2.58%	266	7.76E-06	10	7.34%	758	2.21E-05	18	3.27%	337	9.83E-06
3	2.87%	296	8.62E-06	11	6.42%	663	1.93E-05	19	2.35%	243	7.07E-06
4	3.32%	343	1.00E-05	12	6.88%	710	2.07E-05	20	0.86%	89	2.59E-06
5	2.18%	225	6.55E-06	13	6.25%	645	1.88E-05	21	3.09%	320	9.31E-06
6	3.38%	349	1.02E-05	14	6.19%	639	1.86E-05	22	4.13%	426	1.24E-05
7	6.02%	621	1.81E-05	15	5.10%	527	1.53E-05	23	2.52%	260	7.59E-06
8	4.64%	479	1.40E-05	16	3.78%	391	1.14E-05	24	0.92%	95	2.76E-06
								Total		10,327	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = **2024**

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,327	7,624	82,066	5.864E-09	4.323E-09	2.6	1.21
PM25_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,327	7,217	77,681	5.864E-09	4.323E-09	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001340			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.24E-05	9	7.11%	734	7.63E-05	17	7.39%	763	7.92E-05
2	0.42%	43	4.48E-06	10	4.39%	453	4.71E-05	18	8.18%	844	8.77E-05
3	0.41%	42	4.36E-06	11	4.66%	482	5.00E-05	19	5.70%	588	6.11E-05
4	0.26%	27	2.81E-06	12	5.89%	608	6.32E-05	20	4.27%	441	4.59E-05
5	0.50%	52	5.36E-06	13	6.15%	635	6.60E-05	21	3.26%	336	3.50E-05
6	0.90%	93	9.70E-06	14	6.04%	623	6.48E-05	22	3.30%	340	3.54E-05
7	3.79%	391	4.07E-05	15	7.01%	724	7.53E-05	23	2.46%	254	2.64E-05
8	7.76%	802	8.33E-05	16	7.14%	737	7.66E-05	24	1.87%	193	2.00E-05
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.17E-05	9	7.11%	734	7.22E-05	17	7.39%	763	7.50E-05
2	0.42%	43	4.24E-06	10	4.39%	453	4.45E-05	18	8.18%	844	8.30E-05
3	0.41%	42	4.12E-06	11	4.66%	482	4.74E-05	19	5.70%	588	5.78E-05
4	0.26%	27	2.66E-06	12	5.89%	608	5.98E-05	20	4.27%	441	4.34E-05
5	0.50%	52	5.07E-06	13	6.15%	635	6.25E-05	21	3.26%	336	3.31E-05
6	0.90%	93	9.18E-06	14	6.04%	623	6.13E-05	22	3.30%	340	3.35E-05
7	3.79%	391	3.85E-05	15	7.01%	724	7.12E-05	23	2.46%	254	2.50E-05
8	7.76%	802	7.89E-05	16	7.14%	737	7.25E-05	24	1.87%	193	1.90E-05
								Total		10,327	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,327	7,624	82,066	8.802E-08	6.490E-08	2.6	1.21
TEXH_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,327	7,217	77,681	8.802E-08	6.490E-08	2.6	1.21
									Total	20,654						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.02012			

Emisson Factors from CT-EMFAC2021

2024
Hourl

Hour

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	1.85E-04	9	7.11%	734	1.15E-03	17	7.39%	763	1.19E-03
2	0.42%	43	6.73E-05	10	4.39%	453	7.06E-04	18	8.18%	844	1.32E-03
3	0.41%	42	6.54E-05	11	4.66%	482	7.51E-04	19	5.70%	588	9.17E-04
4	0.26%	27	4.21E-05	12	5.89%	608	9.48E-04	20	4.27%	441	6.88E-04
5	0.50%	52	8.05E-05	13	6.15%	635	9.91E-04	21	3.26%	336	5.25E-04
6	0.90%	93	1.46E-04	14	6.04%	623	9.72E-04	22	3.30%	340	5.31E-04
7	3.79%	391	6.10E-04	15	7.01%	724	1.13E-03	23	2.46%	254	3.96E-04
8	7.76%	802	1.25E-03	16	7.14%	737	1.15E-03	24	1.87%	193	3.01E-04
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.76E-04	9	7.11%	734	1.08E-03	17	7.39%	763	1.13E-03
2	0.42%	43	6.37E-05	10	4.39%	453	6.69E-04	18	8.18%	844	1.25E-03
3	0.41%	42	6.19E-05	11	4.66%	482	7.11E-04	19	5.70%	588	8.68E-04
4	0.26%	27	3.99E-05	12	5.89%	608	8.98E-04	20	4.27%	441	6.52E-04
5	0.50%	52	7.62E-05	13	6.15%	635	9.38E-04	21	3.26%	336	4.97E-04
6	0.90%	93	1.38E-04	14	6.04%	623	9.20E-04	22	3.30%	340	5.03E-04
7	3.79%	391	5.78E-04	15	7.01%	724	1.07E-03	23	2.46%	254	3.75E-04
8	7.76%	802	1.18E-03	16	7.14%	737	1.09E-03	24	1.87%	193	2.84E-04
								Total		10,327	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2024

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,327	7,624	82,066	1.125E-07	8.296E-08	2.6	1.21
TEVAP_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,327	7,217	77,681	1.125E-07	8.296E-08	2.6	1.21
									Total	20,654						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.02571			

Emisson Factors from CT-EMFAC2021

2024 Hourl

Hour	
1	8.54E-01

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	2.37E-04	9	7.11%	734	1.46E-03	17	7.39%	763	1.52E-03
2	0.42%	43	8.60E-05	10	4.39%	453	9.03E-04	18	8.18%	844	1.68E-03
3	0.41%	42	8.36E-05	11	4.66%	482	9.60E-04	19	5.70%	588	1.17E-03
4	0.26%	27	5.38E-05	12	5.89%	608	1.21E-03	20	4.27%	441	8.80E-04
5	0.50%	52	1.03E-04	13	6.15%	635	1.27E-03	21	3.26%	336	6.71E-04
6	0.90%	93	1.86E-04	14	6.04%	623	1.24E-03	22	3.30%	340	6.79E-04
7	3.79%	391	7.80E-04	15	7.01%	724	1.44E-03	23	2.46%	254	5.07E-04
8	7.76%	802	1.60E-03	16	7.14%	737	1.47E-03	24	1.87%	193	3.84E-04
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	2.24E-04	9	7.11%	734	1.39E-03	17	7.39%	763	1.44E-03
2	0.42%	43	8.14E-05	10	4.39%	453	8.55E-04	18	8.18%	844	1.59E-03
3	0.41%	42	7.91E-05	11	4.66%	482	9.09E-04	19	5.70%	588	1.11E-03
4	0.26%	27	5.10E-05	12	5.89%	608	1.15E-03	20	4.27%	441	8.33E-04
5	0.50%	52	9.74E-05	13	6.15%	635	1.20E-03	21	3.26%	336	6.35E-04
6	0.90%	93	1.76E-04	14	6.04%	623	1.18E-03	22	3.30%	340	6.42E-04
7	3.79%	391	7.39E-04	15	7.01%	724	1.37E-03	23	2.46%	254	4.80E-04
8	7.76%	802	1.51E-03	16	7.14%	737	1.39E-03	24	1.87%	193	3.64E-04
								Total		10,327	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = **2024**

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,327	7,624	82,066	9.805E-08	7.230E-08	2.6	1.21
FUG_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,327	7,217	77,681	9.805E-08	7.230E-08	2.6	1.21
									Total	20,654						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00502			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02241			

Emisson Factors from CT-EMFAC2021

2024 Hourl	
	Hour
7.44E-01	1
2.70E-01	2
2.62E-01	3

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	119	2.07E-04	9	7.11%	734	1.28E-03	17	7.39%	763	1.33E-03
2	0.42%	43	7.49E-05	10	4.39%	453	7.87E-04	18	8.18%	844	1.47E-03
3	0.41%	42	7.28E-05	11	4.66%	482	8.37E-04	19	5.70%	588	1.02E-03
4	0.26%	27	4.69E-05	12	5.89%	608	1.06E-03	20	4.27%	441	7.67E-04
5	0.50%	52	8.96E-05	13	6.15%	635	1.10E-03	21	3.26%	336	5.84E-04
6	0.90%	93	1.62E-04	14	6.04%	623	1.08E-03	22	3.30%	340	5.91E-04
7	3.79%	391	6.80E-04	15	7.01%	724	1.26E-03	23	2.46%	254	4.42E-04
8	7.76%	802	1.39E-03	16	7.14%	737	1.28E-03	24	1.87%	193	3.35E-04
								Total		10,327	

2024 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	119	1.96E-04	9	7.11%	734	1.21E-03	17	7.39%	763	1.25E-03
2	0.42%	43	7.09E-05	10	4.39%	453	7.45E-04	18	8.18%	844	1.39E-03
3	0.41%	42	6.89E-05	11	4.66%	482	7.92E-04	19	5.70%	588	9.67E-04
4	0.26%	27	4.44E-05	12	5.89%	608	1.00E-03	20	4.27%	441	7.26E-04
5	0.50%	52	8.49E-05	13	6.15%	635	1.04E-03	21	3.26%	336	5.53E-04
6	0.90%	93	1.53E-04	14	6.04%	623	1.03E-03	22	3.30%	340	5.60E-04
7	3.79%	391	6.44E-04	15	7.01%	724	1.19E-03	23	2.46%	254	4.18E-04
8	7.76%	802	1.32E-03	16	7.14%	737	1.21E-03	24	1.87%	193	3.17E-04
								Total		10,327	

380 N. 1st Street, San Jose, CA - Coleman Avenue Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Project MEI Receptors, 1.5m receptor height

Emission Year	2024
Receptor Information	Project MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Project MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Project MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0001	0.0060	0.0076

Project MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0070	0.0066	0.0004

380 N. 1st Street, San Jose, CA - Coleman Avenue Cancer Risk & PM2.5 Impacts at Project MEI - 1.5 meter (1st floor) receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2024	10	0.0001	0.0060	0.0076	0.002	0.000	0.0000	0.00
1	1	0 - 1	2024	10	0.0001	0.0060	0.0076	0.021	0.006	0.0004	0.03
2	1	1 - 2	2025	10	0.0001	0.0060	0.0076	0.021	0.006	0.0004	0.03
3	1	2 - 3	2026	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
4	1	3 - 4	2027	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
5	1	4 - 5	2028	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
6	1	5 - 6	2029	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
7	1	6 - 7	2030	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
8	1	7 - 8	2031	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
9	1	8 - 9	2032	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
10	1	9 - 10	2033	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
11	1	10 - 11	2034	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
12	1	11 - 12	2035	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
13	1	12 - 13	2036	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
14	1	13 - 14	2037	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
15	1	14 - 15	2038	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
16	1	15 - 16	2039	3	0.0001	0.0060	0.0076	0.003	0.001	0.0001	0.00
17	1	16-17	2040	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
18	1	17-18	2041	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
19	1	18-19	2042	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
20	1	19-20	2043	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
21	1	20-21	2044	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
22	1	21-22	2045	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
23	1	22-23	2046	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
24	1	23-24	2047	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
25	1	24-25	2048	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
26	1	25-26	2049	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
27	1	26-27	2050	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
28	1	27-28	2051	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
29	1	28-29	2052	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
30	1	29-30	2053	1	0.0001	0.0060	0.0076	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.10	0.025	0.002	**0.12**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00003	0.01	0.01

* Third trimester of pregnancy

E. Julian Street 2024 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2024***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2024 Vehicles (veh/day)
Total	**9,752**	**10,532**

Increase From 2016	1.08
Vehicles/Direction	**5,266**
Avg Vehicles/Hour/Direction	219

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
Monroe Street and Stevens Creek Boulevard	9,752	342
	Percent of Total Vehicles	3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2024**

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	43.7	3.4	25	10,532	8,114	87,341	2.856E-09	2.106E-09	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00050			

Emisson Factors from CT-EMFAC2021

2024
Hourl
Hour

2024 Hourly Traffic Volumes and DPM Emissions - DPM_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.90%	410	2.17E-05	9	6.42%	676	3.57E-05	17	5.62%	591	3.12E-05
2	2.58%	272	1.43E-05	10	7.34%	773	4.08E-05	18	3.27%	344	1.82E-05
3	2.87%	302	1.59E-05	11	6.42%	676	3.57E-05	19	2.35%	247	1.31E-05
4	3.32%	350	1.85E-05	12	6.88%	724	3.82E-05	20	0.86%	91	4.78E-06
5	2.18%	229	1.21E-05	13	6.25%	658	3.47E-05	21	3.09%	326	1.72E-05
6	3.38%	356	1.88E-05	14	6.19%	652	3.44E-05	22	4.13%	435	2.29E-05
7	6.02%	634	3.35E-05	15	5.10%	537	2.84E-05	23	2.52%	266	1.40E-05
8	4.64%	489	2.58E-05	16	3.78%	398	2.10E-05	24	0.92%	97	5.10E-06
								Total		10,532	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,532	8,114	87,341	1.251E-08	9.228E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.002200			

Emisson Factors from CT-EMFAC2021

2024
Hourl
Hour

2024 Hourly Traffic Volumes and PM2.5 Emissions - PM25_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	121	2.81E-05	9	7.11%	749	1.73E-04	17	7.39%	778	1.80E-04
2	0.42%	44	1.02E-05	10	4.39%	462	1.07E-04	18	8.18%	861	1.99E-04
3	0.41%	43	9.89E-06	11	4.66%	491	1.14E-04	19	5.70%	600	1.39E-04
4	0.26%	28	6.37E-06	12	5.89%	620	1.44E-04	20	4.27%	450	1.04E-04
5	0.50%	53	1.22E-05	13	6.15%	648	1.50E-04	21	3.26%	343	7.94E-05
6	0.90%	95	2.20E-05	14	6.04%	636	1.47E-04	22	3.30%	347	8.03E-05
7	3.79%	399	9.24E-05	15	7.01%	739	1.71E-04	23	2.46%	259	6.00E-05
8	7.76%	818	1.89E-04	16	7.14%	752	1.74E-04	24	1.87%	197	4.55E-05
								Total		10,532	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,532	8,114	87,341	1.977E-07	1.458E-07	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.03475			

Emisson Factors from CT-EMFAC2021

2024
Hourl
Hour

2024 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	121	4.43E-04	9	7.11%	749	2.74E-03	17	7.39%	778	2.84E-03
2	0.42%	44	1.61E-04	10	4.39%	462	1.69E-03	18	8.18%	861	3.15E-03
3	0.41%	43	1.56E-04	11	4.66%	491	1.80E-03	19	5.70%	600	2.19E-03
4	0.26%	28	1.01E-04	12	5.89%	620	2.27E-03	20	4.27%	450	1.65E-03
5	0.50%	53	1.92E-04	13	6.15%	648	2.37E-03	21	3.26%	343	1.25E-03
6	0.90%	95	3.48E-04	14	6.04%	636	2.32E-03	22	3.30%	347	1.27E-03
7	3.79%	399	1.46E-03	15	7.01%	739	2.70E-03	23	2.46%	259	9.47E-04
8	7.76%	818	2.99E-03	16	7.14%	752	2.75E-03	24	1.87%	197	7.18E-04
								Total		10,532	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height	Line Area: (Sigma z) Initial Vertical Dimension
TEVAP_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,532	8,114	87,341	2.340E-07	1.726E-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)	1.02854			
Emissions per Vehicle per Mile (g/VMT)	0.04114			

Emisson Factors from CT-EMFAC2021

2024 Hourl

Hour	
1	1.89E+00

2024 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	121	5.25E-04	9	7.11%	749	3.24E-03	17	7.39%	778	3.37E-03
2	0.42%	44	1.90E-04	10	4.39%	462	2.00E-03	18	8.18%	861	3.73E-03
3	0.41%	43	1.85E-04	11	4.66%	491	2.13E-03	19	5.70%	600	2.60E-03
4	0.26%	28	1.19E-04	12	5.89%	620	2.68E-03	20	4.27%	450	1.95E-03
5	0.50%	53	2.28E-04	13	6.15%	648	2.80E-03	21	3.26%	343	1.48E-03
6	0.90%	95	4.12E-04	14	6.04%	636	2.75E-03	22	3.30%	347	1.50E-03
7	3.79%	399	1.73E-03	15	7.01%	739	3.20E-03	23	2.46%	259	1.12E-03
8	7.76%	818	3.54E-03	16	7.14%	752	3.25E-03	24	1.87%	197	8.50E-04
								Total		10,532	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2024

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	Line Area: (Sigma z) Initial Vertical Dimension
FUG_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,532	8,114	87,341	1.297E-07	9.561E-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)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00541			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02280			

Emisson Factors from CT-EMFAC2021

2024 Hourl

Hour	
1	1.05E+00
2	3.80E-01
3	3.69E-01

2024 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	121	2.91E-04	9	7.11%	749	1.80E-03	17	7.39%	778	1.87E-03
2	0.42%	44	1.05E-04	10	4.39%	462	1.11E-03	18	8.18%	861	2.06E-03
3	0.41%	43	1.03E-04	11	4.66%	491	1.18E-03	19	5.70%	600	1.44E-03
4	0.26%	28	6.60E-05	12	5.89%	620	1.49E-03	20	4.27%	450	1.08E-03
5	0.50%	53	1.26E-04	13	6.15%	648	1.55E-03	21	3.26%	343	8.23E-04
6	0.90%	95	2.28E-04	14	6.04%	636	1.52E-03	22	3.30%	347	8.32E-04
7	3.79%	399	9.57E-04	15	7.01%	739	1.77E-03	23	2.46%	259	6.22E-04
8	7.76%	818	1.96E-03	16	7.14%	752	1.80E-03	24	1.87%	197	4.71E-04
								Total		10,532	

380 N. 1st Street, San Jose, CA - E. Julian Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Project MEI Receptors, 1.5m receptor height

Emission Year	2024
Receptor Information	Project MEI receptor
Number of Receptors	1
Receptor Height	1.5 meters
Receptor Distances	At Project MEI location
Meteorological Conditions	
BAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Project MEI Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0007	0.0401	0.0474

Project MEI PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0288	0.0263	0.0025

380 N. 1st Street, San Jose, CA - E. Julian Street Cancer Risk & PM2.5
Impacts at Project MEI - 1.5 meter (1st floor) receptor height
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2024	10	0.0007	0.0401	0.0474	0.010	0.003	0.0002	0.01
1	1	0 - 1	2024	10	0.0007	0.0401	0.0474	0.115	0.038	0.0026	0.16
2	1	1 - 2	2025	10	0.0007	0.0401	0.0474	0.115	0.038	0.0026	0.16
3	1	2 - 3	2026	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
4	1	3 - 4	2027	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
5	1	4 - 5	2028	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
6	1	5 - 6	2029	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
7	1	6 - 7	2030	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
8	1	7 - 8	2031	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
9	1	8 - 9	2032	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
10	1	9 - 10	2033	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
11	1	10 - 11	2034	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
12	1	11 - 12	2035	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
13	1	12 - 13	2036	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
14	1	13 - 14	2037	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
15	1	14 - 15	2038	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
16	1	15 - 16	2039	3	0.0007	0.0401	0.0474	0.018	0.006	0.0004	0.02
17	1	16-17	2040	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
18	1	17-18	2041	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
19	1	18-19	2042	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
20	1	19-20	2043	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
21	1	20-21	2044	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
22	1	21-22	2045	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
23	1	22-23	2046	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
24	1	23-24	2047	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
25	1	24-25	2048	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
26	1	25-26	2049	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
27	1	26-27	2050	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
28	1	27-28	2051	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
29	1	28-29	2052	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
30	1	29-30	2053	1	0.0007	0.0401	0.0474	0.002	0.001	0.0000	0.00
Total Increased Cancer Risk								0.52	0.170	0.012	**0.70**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.03	0.03

* Third trimester of pregnancy

CT-EMFAC2021 Emissions Factors for Santa Clara County 2027

File Name: 380 N 1st St - Santa Clara (SF) - 2027 - Annual.EF
CT-EMFAC2021 Version: 1.0.2.0
Run Date: 11/27/2023 16:14
Area: Santa Clara (SF)
Analysis Year: 2027
Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.017	0.414	0.553
Truck 2	0.018	0.896	0.045
Non-Truck	0.965	0.007	0.911

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 63 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
PM2.5	0.007822	0.005111	0.003482	0.002496	0.001891	0.001513	0.001282	0.001152	0.001101	0.001116
TOG	0.116896	0.0756	0.050551	0.035992	0.027249	0.021722	0.018152	0.015881	0.014543	0.013954
Diesel PM	0.000893	0.000778	0.000602	0.000476	0.000398	0.00035	0.000325	0.000324	0.000345	0.000388

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

Pollutant Name	Emission Factor
TOG	0.954655

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

Pollutant Name	Emission Factor
PM2.5	0.002102

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
PM2.5	0.003482	0.004025	0.004561	0.00509	0.005372	0.005458	0.005477	0.004985	0.00395	0.002931

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

Pollutant Name	Emission Factor
PM2.5	0.015277

END

N. 1st Street 2027 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2027***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2027 Vehicles (veh/day)
Total	**6,635**	**7,365**

Increase From 2016	1.11
Vehicles/Direction	**3,682**
Avg Vehicles/Hour/Direction	153

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
N 1st Street S. of Fox Ave	6,635	233
	Percent of Total Vehicles	3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	31.7	3.4	25	3,682	6,089	65,543	1.091E-09	8.047E-10	6.8	3.16
DPM_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	31.7	3.4	25	3,682	6,077	65,408	1.091E-09	8.047E-10	6.8	3.16
									Total	7,365						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and DPM Emissions - DPM_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	145	6.30E-06	9	6.40%	236	1.02E-05	17	5.61%	207	8.95E-06
2	2.66%	98	4.24E-06	10	7.41%	273	1.18E-05	18	3.24%	119	5.17E-06
3	2.88%	106	4.59E-06	11	6.34%	233	1.01E-05	19	2.21%	81	3.52E-06
4	3.28%	121	5.23E-06	12	6.96%	256	1.11E-05	20	0.86%	32	1.37E-06
5	2.15%	79	3.43E-06	13	6.22%	229	9.92E-06	21	3.06%	113	4.88E-06
6	3.28%	121	5.23E-06	14	6.17%	227	9.84E-06	22	4.19%	154	6.68E-06
7	6.06%	223	9.67E-06	15	5.16%	190	8.23E-06	23	2.61%	96	4.16E-06
8	4.54%	167	7.24E-06	16	3.92%	144	6.25E-06	24	0.85%	31	1.36E-06
								Total		3,683	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	145	6.29E-06	9	6.40%	236	1.02E-05	17	5.61%	207	8.93E-06
2	2.66%	98	4.23E-06	10	7.41%	273	1.18E-05	18	3.24%	119	5.16E-06
3	2.88%	106	4.58E-06	11	6.34%	233	1.01E-05	19	2.21%	81	3.52E-06
4	3.28%	121	5.22E-06	12	6.96%	256	1.11E-05	20	0.86%	32	1.37E-06
5	2.15%	79	3.42E-06	13	6.22%	229	9.90E-06	21	3.06%	113	4.87E-06
6	3.28%	121	5.22E-06	14	6.17%	227	9.82E-06	22	4.19%	154	6.67E-06
7	6.06%	223	9.65E-06	15	5.16%	190	8.21E-06	23	2.61%	96	4.15E-06
8	4.54%	167	7.23E-06	16	3.92%	144	6.24E-06	24	0.85%	31	1.35E-06
								Total		3,683	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,682	6,089	65,543	5.186E-09	3.823E-09	2.6	1.21
PM25_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,682	6,077	65,408	5.186E-09	3.823E-09	2.6	1.21
									Total	7,365						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.001891			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	42	8.71E-06	9	7.11%	262	5.39E-05	17	7.39%	272	5.60E-05
2	0.42%	15	3.18E-06	10	4.39%	162	3.33E-05	18	8.18%	301	6.20E-05
3	0.40%	15	3.03E-06	11	4.66%	172	3.53E-05	19	5.69%	210	4.31E-05
4	0.26%	10	1.97E-06	12	5.89%	217	4.46E-05	20	4.27%	157	3.24E-05
5	0.49%	18	3.71E-06	13	6.15%	226	4.66E-05	21	3.26%	120	2.47E-05
6	0.90%	33	6.82E-06	14	6.04%	222	4.58E-05	22	3.30%	122	2.50E-05
7	3.79%	140	2.87E-05	15	7.01%	258	5.31E-05	23	2.46%	91	1.86E-05
8	7.76%	286	5.88E-05	16	7.14%	263	5.41E-05	24	1.87%	69	1.42E-05
								Total		3,682	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	42	8.70E-06	9	7.11%	262	5.38E-05	17	7.39%	272	5.59E-05
2	0.42%	15	3.18E-06	10	4.39%	162	3.32E-05	18	8.18%	301	6.19E-05
3	0.40%	15	3.02E-06	11	4.66%	172	3.52E-05	19	5.69%	210	4.30E-05
4	0.26%	10	1.97E-06	12	5.89%	217	4.45E-05	20	4.27%	157	3.23E-05
5	0.49%	18	3.71E-06	13	6.15%	226	4.65E-05	21	3.26%	120	2.47E-05
6	0.90%	33	6.81E-06	14	6.04%	222	4.57E-05	22	3.30%	122	2.50E-05
7	3.79%	140	2.87E-05	15	7.01%	258	5.30E-05	23	2.46%	91	1.86E-05
8	7.76%	286	5.87E-05	16	7.14%	263	5.40E-05	24	1.87%	69	1.41E-05
								Total		3,682	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,682	6,089	65,543	7.472E-08	5.509E-08	2.6	1.21
TEXH_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,682	6,077	65,408	7.472E-08	5.509E-08	2.6	1.21
									Total	7,365						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.02725			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	42	1.26E-04	9	7.11%	262	7.76E-04	17	7.39%	272	8.07E-04
2	0.42%	15	4.59E-05	10	4.39%	162	4.79E-04	18	8.18%	301	8.93E-04
3	0.40%	15	4.37E-05	11	4.66%	172	5.09E-04	19	5.69%	210	6.21E-04
4	0.26%	10	2.84E-05	12	5.89%	217	6.43E-04	20	4.27%	157	4.66E-04
5	0.49%	18	5.35E-05	13	6.15%	226	6.72E-04	21	3.26%	120	3.56E-04
6	0.90%	33	9.83E-05	14	6.04%	222	6.60E-04	22	3.30%	122	3.60E-04
7	3.79%	140	4.14E-04	15	7.01%	258	7.65E-04	23	2.46%	91	2.69E-04
8	7.76%	286	8.47E-04	16	7.14%	263	7.80E-04	24	1.87%	69	2.04E-04
								Total		3,682	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	42	1.25E-04	9	7.11%	262	7.75E-04	17	7.39%	272	8.05E-04
2	0.42%	15	4.58E-05	10	4.39%	162	4.78E-04	18	8.18%	301	8.91E-04
3	0.40%	15	4.36E-05	11	4.66%	172	5.08E-04	19	5.69%	210	6.20E-04
4	0.26%	10	2.83E-05	12	5.89%	217	6.42E-04	20	4.27%	157	4.65E-04
5	0.49%	18	5.34E-05	13	6.15%	226	6.70E-04	21	3.26%	120	3.55E-04
6	0.90%	33	9.81E-05	14	6.04%	222	6.58E-04	22	3.30%	122	3.60E-04
7	3.79%	140	4.13E-04	15	7.01%	258	7.64E-04	23	2.46%	91	2.68E-04
8	7.76%	286	8.46E-04	16	7.14%	263	7.78E-04	24	1.87%	69	2.04E-04
								Total		3,682	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,682	6,089	65,543	1.047E-07	7.721E-08	2.6	1.21
TEVAP_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,682	6,077	65,408	1.047E-07	7.721E-08	2.6	1.21
									Total	7,365						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle per Hour (g/hour)	0.95466			
Emissions per Vehicle per Mile (g/VMT)	0.03819			

Emisson Factors from CT-EMFAC2021

2027
Hourl
Hour
6.34E-01 1

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	42	1.76E-04	9	7.11%	262	1.09E-03	17	7.39%	272	1.13E-03
2	0.42%	15	6.43E-05	10	4.39%	162	6.72E-04	18	8.18%	301	1.25E-03
3	0.40%	15	6.12E-05	11	4.66%	172	7.13E-04	19	5.69%	210	8.71E-04
4	0.26%	10	3.98E-05	12	5.89%	217	9.01E-04	20	4.27%	157	6.53E-04
5	0.49%	18	7.50E-05	13	6.15%	226	9.41E-04	21	3.26%	120	4.99E-04
6	0.90%	33	1.38E-04	14	6.04%	222	9.24E-04	22	3.30%	122	5.05E-04
7	3.79%	140	5.80E-04	15	7.01%	258	1.07E-03	23	2.46%	91	3.76E-04
8	7.76%	286	1.19E-03	16	7.14%	263	1.09E-03	24	1.87%	69	2.86E-04
								Total		3,682	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	42	1.76E-04	9	7.11%	262	1.09E-03	17	7.39%	272	1.13E-03
2	0.42%	15	6.41E-05	10	4.39%	162	6.70E-04	18	8.18%	301	1.25E-03
3	0.40%	15	6.11E-05	11	4.66%	172	7.12E-04	19	5.69%	210	8.69E-04
4	0.26%	10	3.97E-05	12	5.89%	217	8.99E-04	20	4.27%	157	6.52E-04
5	0.49%	18	7.48E-05	13	6.15%	226	9.39E-04	21	3.26%	120	4.98E-04
6	0.90%	33	1.37E-04	14	6.04%	222	9.22E-04	22	3.30%	122	5.04E-04
7	3.79%	140	5.79E-04	15	7.01%	258	1.07E-03	23	2.46%	91	3.76E-04
8	7.76%	286	1.19E-03	16	7.14%	263	1.09E-03	24	1.87%	69	2.86E-04
								Total		3,682	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - N. 1st Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_NB_1ST	N. 1st St Northbound	NB	1	630.5	0.39	9.7	32	1.3	25	3,682	6,089	65,543	6.239E-08	4.600E-08	2.6	1.21
FUG_SB_1ST	N. 1st St Southbound	SB	1	629.2	0.39	9.7	32	1.3	25	3,682	6,077	65,408	6.239E-08	4.600E-08	2.6	1.21
									Total	7,365						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00537			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02275			

Emisson Factors from CT-EMFAC2021

2027 Hourl	
	Hour
3.77E-01	1
1.38E-01	2
1.31E-01	3

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_1ST

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	42	1.05E-04	9	7.11%	262	6.48E-04	17	7.39%	272	6.74E-04
2	0.42%	15	3.83E-05	10	4.39%	162	4.00E-04	18	8.18%	301	7.46E-04
3	0.40%	15	3.65E-05	11	4.66%	172	4.25E-04	19	5.69%	210	5.19E-04
4	0.26%	10	2.37E-05	12	5.89%	217	5.37E-04	20	4.27%	157	3.89E-04
5	0.49%	18	4.47E-05	13	6.15%	226	5.61E-04	21	3.26%	120	2.97E-04
6	0.90%	33	8.21E-05	14	6.04%	222	5.51E-04	22	3.30%	122	3.01E-04
7	3.79%	140	3.46E-04	15	7.01%	258	6.39E-04	23	2.46%	91	2.24E-04
8	7.76%	286	7.08E-04	16	7.14%	263	6.51E-04	24	1.87%	69	1.70E-04
								Total		3,682	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_1ST

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	42	1.05E-04	9	7.11%	262	6.47E-04	17	7.39%	272	6.72E-04
2	0.42%	15	3.82E-05	10	4.39%	162	3.99E-04	18	8.18%	301	7.44E-04
3	0.40%	15	3.64E-05	11	4.66%	172	4.24E-04	19	5.69%	210	5.18E-04
4	0.26%	10	2.37E-05	12	5.89%	217	5.36E-04	20	4.27%	157	3.89E-04
5	0.49%	18	4.46E-05	13	6.15%	226	5.60E-04	21	3.26%	120	2.97E-04
6	0.90%	33	8.19E-05	14	6.04%	222	5.50E-04	22	3.30%	122	3.00E-04
7	3.79%	140	3.45E-04	15	7.01%	258	6.38E-04	23	2.46%	91	2.24E-04
8	7.76%	286	7.06E-04	16	7.14%	263	6.50E-04	24	1.87%	69	1.70E-04
								Total		3,682	

380 N. 1st Street, San Jose, CA - N. 1st Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 2nd (6.7m) & 3rd (10.4m) Floor (1st & 2nd Residential Levels) Receptors Heights

Emission Year	2027
Receptor Information	Maximum On-Site Receptor
Number of Receptors	56
Receptor Height	2nd (6.7m) & 3rd (10.4m) Floors
Receptor Distances	6 meter grid spacing in residential areas

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

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0010	0.0559	0.0783	2nd Floor
2013-2017	0.0007	0.0257	0.0359	3rd Floor

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0506	0.0467	0.0039	2nd Floor
2013-2017	0.0232	0.0214	0.0018	3rd Floor

380 N. 1st Street, San Jose, CA - N. 1st Street Cancer Risk & PM2.5
Impacts at On-Site 2nd Floor (1st Residential Level) Receptors - 6.7m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2027	10	0.0010	0.0559	0.0783	0.014	0.004	0.0004	0.02
1	1	0 - 1	2027	10	0.0010	0.0559	0.0783	0.169	0.052	0.0043	0.23
2	1	1 - 2	2028	10	0.0010	0.0559	0.0783	0.169	0.052	0.0043	0.23
3	1	2 - 3	2029	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
4	1	3 - 4	2030	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
5	1	4 - 5	2031	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
6	1	5 - 6	2032	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
7	1	6 - 7	2033	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
8	1	7 - 8	2034	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
9	1	8 - 9	2035	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
10	1	9 - 10	2036	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
11	1	10 - 11	2037	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
12	1	11 - 12	2038	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
13	1	12 - 13	2039	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
14	1	13 - 14	2040	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
15	1	14 - 15	2041	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
16	1	15 - 16	2042	3	0.0010	0.0559	0.0783	0.027	0.008	0.0007	0.04
17	1	16-17	2043	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
18	1	17-18	2044	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
19	1	18-19	2045	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
20	1	19-20	2046	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
21	1	20-21	2047	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
22	1	21-22	2048	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
23	1	22-23	2049	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
24	1	23-24	2050	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
25	1	24-25	2051	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
26	1	25-26	2052	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
27	1	26-27	2053	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
28	1	27-28	2054	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
29	1	28-29	2055	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
30	1	29-30	2056	1	0.0010	0.0559	0.0783	0.003	0.001	0.0001	0.00
Total Increased Cancer Risk								0.77	0.238	0.020	**1.02**

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

* Third trimester of pregnancy

380 N. 1st Street, San Jose, CA - N. 1st Street Cancer Risk & PM2.5
Impacts at On-Site 3rd Floor (2nd Residential Level) Receptors - 10.4m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2027	10	0.0007	0.0257	0.0359	0.009	0.002	0.0002	0.01
1	1	0 - 1	2027	10	0.0007	0.0257	0.0359	0.110	0.024	0.0020	0.14
2	1	1 - 2	2028	10	0.0007	0.0257	0.0359	0.110	0.024	0.0020	0.14
3	1	2 - 3	2029	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
4	1	3 - 4	2030	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
5	1	4 - 5	2031	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
6	1	5 - 6	2032	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
7	1	6 - 7	2033	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
8	1	7 - 8	2034	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
9	1	8 - 9	2035	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
10	1	9 - 10	2036	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
11	1	10 - 11	2037	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
12	1	11 - 12	2038	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
13	1	12 - 13	2039	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
14	1	13 - 14	2040	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
15	1	14 - 15	2041	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
16	1	15 - 16	2042	3	0.0007	0.0257	0.0359	0.017	0.004	0.0003	0.02
17	1	16-17	2043	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0007	0.0257	0.0359	0.002	0.000	0.0000	0.00
Total Increased Cancer Risk								0.50	0.109	0.009	**0.62**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.02	0.02

* Third trimester of pregnancy

Coleman Avenue 2027 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2027***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2027 Vehicles (veh/day)
Total	**19,124**	**21,228**

Increase From 2016	1.11
Vehicles/Direction	**10,614**
Avg Vehicles/Hour/Direction	442

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
N 1st Street S. of Fox Ave	19,124	671
Percent of Total Vehicles		3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	55.7	3.4	40	10,614	7,624	82,066	1.457E-09	1.074E-09	6.8	3.16
DPM_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	55.7	3.4	40	10,614	7,217	77,681	1.457E-09	1.074E-09	6.8	3.16
									Total	21,228						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.00032			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and DPM Emissions - DPM_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	419	1.05E-05	9	6.40%	679	1.71E-05	17	5.61%	595	1.50E-05
2	2.66%	282	7.09E-06	10	7.41%	786	1.98E-05	18	3.24%	344	8.64E-06
3	2.88%	306	7.68E-06	11	6.34%	673	1.69E-05	19	2.21%	235	5.89E-06
4	3.28%	348	8.75E-06	12	6.96%	739	1.86E-05	20	0.86%	91	2.29E-06
5	2.15%	228	5.73E-06	13	6.22%	660	1.66E-05	21	3.06%	325	8.16E-06
6	3.28%	348	8.75E-06	14	6.17%	655	1.65E-05	22	4.19%	445	1.12E-05
7	6.06%	643	1.62E-05	15	5.16%	548	1.38E-05	23	2.61%	277	6.96E-06
8	4.54%	482	1.21E-05	16	3.92%	416	1.05E-05	24	0.85%	90	2.27E-06
								Total		10,615	

2027 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.95%	419	9.97E-06	9	6.40%	679	1.62E-05	17	5.61%	595	1.42E-05
2	2.66%	282	6.71E-06	10	7.41%	786	1.87E-05	18	3.24%	344	8.18E-06
3	2.88%	306	7.27E-06	11	6.34%	673	1.60E-05	19	2.21%	235	5.58E-06
4	3.28%	348	8.28E-06	12	6.96%	739	1.76E-05	20	0.86%	91	2.17E-06
5	2.15%	228	5.43E-06	13	6.22%	660	1.57E-05	21	3.06%	325	7.72E-06
6	3.28%	348	8.28E-06	14	6.17%	655	1.56E-05	22	4.19%	445	1.06E-05
7	6.06%	643	1.53E-05	15	5.16%	548	1.30E-05	23	2.61%	277	6.59E-06
8	4.54%	482	1.15E-05	16	3.92%	416	9.89E-06	24	0.85%	90	2.15E-06
								Total		10,615	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,614	7,624	82,066	5.181E-09	3.820E-09	2.6	1.21
PM25_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,614	7,217	77,681	5.181E-09	3.820E-09	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.001152			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.09E-05	9	7.11%	755	6.74E-05	17	7.39%	784	7.01E-05
2	0.42%	45	3.98E-06	10	4.39%	466	4.16E-05	18	8.18%	868	7.75E-05
3	0.40%	42	3.79E-06	11	4.66%	495	4.42E-05	19	5.69%	604	5.39E-05
4	0.26%	28	2.46E-06	12	5.89%	625	5.58E-05	20	4.27%	453	4.05E-05
5	0.49%	52	4.65E-06	13	6.15%	653	5.83E-05	21	3.26%	346	3.09E-05
6	0.90%	96	8.53E-06	14	6.04%	641	5.73E-05	22	3.30%	350	3.13E-05
7	3.79%	402	3.59E-05	15	7.01%	744	6.65E-05	23	2.46%	261	2.33E-05
8	7.76%	824	7.36E-05	16	7.14%	758	6.77E-05	24	1.87%	198	1.77E-05
								Total		10,612	

2027 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.03E-05	9	7.11%	755	6.38E-05	17	7.39%	784	6.63E-05
2	0.42%	45	3.77E-06	10	4.39%	466	3.94E-05	18	8.18%	868	7.34E-05
3	0.40%	42	3.59E-06	11	4.66%	495	4.18E-05	19	5.69%	604	5.11E-05
4	0.26%	28	2.33E-06	12	5.89%	625	5.29E-05	20	4.27%	453	3.83E-05
5	0.49%	52	4.40E-06	13	6.15%	653	5.52E-05	21	3.26%	346	2.93E-05
6	0.90%	96	8.08E-06	14	6.04%	641	5.42E-05	22	3.30%	350	2.96E-05
7	3.79%	402	3.40E-05	15	7.01%	744	6.29E-05	23	2.46%	261	2.21E-05
8	7.76%	824	6.96E-05	16	7.14%	758	6.41E-05	24	1.87%	198	1.68E-05
								Total		10,612	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,614	7,624	82,066	7.142E-08	5.266E-08	2.6	1.21
TEXH_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,614	7,217	77,681	7.142E-08	5.266E-08	2.6	1.21
									Total	21,228						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle (g/VMT)	0.01588			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	1.50E-04	9	7.11%	755	9.29E-04	17	7.39%	784	9.66E-04
2	0.42%	45	5.49E-05	10	4.39%	466	5.74E-04	18	8.18%	868	1.07E-03
3	0.40%	42	5.23E-05	11	4.66%	495	6.09E-04	19	5.69%	604	7.44E-04
4	0.26%	28	3.40E-05	12	5.89%	625	7.70E-04	20	4.27%	453	5.58E-04
5	0.49%	52	6.40E-05	13	6.15%	653	8.04E-04	21	3.26%	346	4.26E-04
6	0.90%	96	1.18E-04	14	6.04%	641	7.89E-04	22	3.30%	350	4.31E-04
7	3.79%	402	4.95E-04	15	7.01%	744	9.16E-04	23	2.46%	261	3.21E-04
8	7.76%	824	1.01E-03	16	7.14%	758	9.33E-04	24	1.87%	198	2.44E-04
								Total		10,612	

2027 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	1.42E-04	9	7.11%	755	8.80E-04	17	7.39%	784	9.14E-04
2	0.42%	45	5.20E-05	10	4.39%	466	5.43E-04	18	8.18%	868	1.01E-03
3	0.40%	42	4.95E-05	11	4.66%	495	5.76E-04	19	5.69%	604	7.04E-04
4	0.26%	28	3.22E-05	12	5.89%	625	7.29E-04	20	4.27%	453	5.28E-04
5	0.49%	52	6.06E-05	13	6.15%	653	7.61E-04	21	3.26%	346	4.03E-04
6	0.90%	96	1.11E-04	14	6.04%	641	7.47E-04	22	3.30%	350	4.08E-04
7	3.79%	402	4.69E-04	15	7.01%	744	8.67E-04	23	2.46%	261	3.04E-04
8	7.76%	824	9.60E-04	16	7.14%	758	8.83E-04	24	1.87%	198	2.31E-04
								Total		10,612	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,614	7,624	82,066	1.073E-07	7.914E-08	2.6	1.21
TEVAP_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,614	7,217	77,681	1.073E-07	7.914E-08	2.6	1.21
									Total	21,228						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Emissions per Vehicle per Hour (g/hour)	0.95466			
Emissions per Vehicle per Mile (g/VMT)	0.02387			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour
8.13E-01 1

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	2.26E-04	9	7.11%	755	1.40E-03	17	7.39%	784	1.45E-03
2	0.42%	45	8.25E-05	10	4.39%	466	8.62E-04	18	8.18%	868	1.61E-03
3	0.40%	42	7.86E-05	11	4.66%	495	9.15E-04	19	5.69%	604	1.12E-03
4	0.26%	28	5.11E-05	12	5.89%	625	1.16E-03	20	4.27%	453	8.39E-04
5	0.49%	52	9.62E-05	13	6.15%	653	1.21E-03	21	3.26%	346	6.40E-04
6	0.90%	96	1.77E-04	14	6.04%	641	1.19E-03	22	3.30%	350	6.48E-04
7	3.79%	402	7.44E-04	15	7.01%	744	1.38E-03	23	2.46%	261	4.83E-04
8	7.76%	824	1.52E-03	16	7.14%	758	1.40E-03	24	1.87%	198	3.67E-04
								Total		10,612	

2027 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	2.14E-04	9	7.11%	755	1.32E-03	17	7.39%	784	1.37E-03
2	0.42%	45	7.81E-05	10	4.39%	466	8.16E-04	18	8.18%	868	1.52E-03
3	0.40%	42	7.44E-05	11	4.66%	495	8.66E-04	19	5.69%	604	1.06E-03
4	0.26%	28	4.83E-05	12	5.89%	625	1.10E-03	20	4.27%	453	7.94E-04
5	0.49%	52	9.11E-05	13	6.15%	653	1.14E-03	21	3.26%	346	6.06E-04
6	0.90%	96	1.67E-04	14	6.04%	641	1.12E-03	22	3.30%	350	6.13E-04
7	3.79%	402	7.05E-04	15	7.01%	744	1.30E-03	23	2.46%	261	4.57E-04
8	7.76%	824	1.44E-03	16	7.14%	758	1.33E-03	24	1.87%	198	3.48E-04
								Total		10,612	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - Coleman Avenue
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_NB_COL	Coleman Ave Northbound	NB	3	449.2	0.28	17.0	56	1.3	40	10,614	7,624	82,066	1.006E-07	7.416E-08	2.6	1.21
FUG_SB_COL	Coleman Ave Southbound	SB	3	425.2	0.26	17.0	56	1.3	40	10,614	7,217	77,681	1.006E-07	7.416E-08	2.6	1.21
									Total	21,228						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	40			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00499			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02236			

Emisson Factors from CT-EMFAC2021

2027 Hourl	
	Hour
7.62E-01	1
2.78E-01	2
2.65E-01	3

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_NB_COL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	122	2.12E-04	9	7.11%	755	1.31E-03	17	7.39%	784	1.36E-03
2	0.42%	45	7.73E-05	10	4.39%	466	8.08E-04	18	8.18%	868	1.51E-03
3	0.40%	42	7.36E-05	11	4.66%	495	8.58E-04	19	5.69%	604	1.05E-03
4	0.26%	28	4.79E-05	12	5.89%	625	1.08E-03	20	4.27%	453	7.86E-04
5	0.49%	52	9.02E-05	13	6.15%	653	1.13E-03	21	3.26%	346	6.00E-04
6	0.90%	96	1.66E-04	14	6.04%	641	1.11E-03	22	3.30%	350	6.07E-04
7	3.79%	402	6.98E-04	15	7.01%	744	1.29E-03	23	2.46%	261	4.53E-04
8	7.76%	824	1.43E-03	16	7.14%	758	1.31E-03	24	1.87%	198	3.44E-04
								Total		10,612	

2027 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_SB_COL

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	122	2.00E-04	9	7.11%	755	1.24E-03	17	7.39%	784	1.29E-03
2	0.42%	45	7.32E-05	10	4.39%	466	7.65E-04	18	8.18%	868	1.43E-03
3	0.40%	42	6.97E-05	11	4.66%	495	8.12E-04	19	5.69%	604	9.91E-04
4	0.26%	28	4.53E-05	12	5.89%	625	1.03E-03	20	4.27%	453	7.44E-04
5	0.49%	52	8.54E-05	13	6.15%	653	1.07E-03	21	3.26%	346	5.68E-04
6	0.90%	96	1.57E-04	14	6.04%	641	1.05E-03	22	3.30%	350	5.75E-04
7	3.79%	402	6.60E-04	15	7.01%	744	1.22E-03	23	2.46%	261	4.29E-04
8	7.76%	824	1.35E-03	16	7.14%	758	1.24E-03	24	1.87%	198	3.26E-04
								Total		10,612	

380 N. 1st Street, San Jose, CA - Coleman Avenue Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 2nd (6.7m) & 3rd (10.4m) Floor (1st & 2nd Residential Levels) Receptors Heights

Emission Year	2027
Receptor Information	Maximum On-Site Receptor
Number of Receptors	56
Receptor Height	2nd (6.7m) & 3rd (10.4m) Floors
Receptor Distances	6 meter grid spacing in residential areas

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

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0001	0.0061	0.0091	2nd Floor
2013-2017	0.0001	0.0051	0.0076	3rd Floor

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0090	0.0085	0.0004	2nd Floor
2013-2017	0.0075	0.0072	0.0004	3rd Floor

380 N. 1st Street, San Jose, CA - Coleman Avenue Cancer Risk & PM2.5
Impacts at On-Site 2nd Floor (1st Residential Level) Receptors - 6.7m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2027	10	0.0001	0.0061	0.0091	0.002	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0001	0.0061	0.0091	0.021	0.006	0.0005	0.03
2	1	1 - 2	2028	10	0.0001	0.0061	0.0091	0.021	0.006	0.0005	0.03
3	1	2 - 3	2029	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0001	0.0061	0.0091	0.003	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0001	0.0061	0.0091	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.10	0.026	0.002	**0.12**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00003	0.01	0.01

* Third trimester of pregnancy

380 N. 1st Street, San Jose, CA - Coleman Avenue Cancer Risk & PM2.5
Impacts at On-Site 3rd Floor (2nd Residential Level) Receptors - 10.4m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0001	0.0051	0.0076	0.001	0.000	0.0000	0.00
1	1	0 - 1	2027	10	0.0001	0.0051	0.0076	0.018	0.005	0.0004	0.02
2	1	1 - 2	2028	10	0.0001	0.0051	0.0076	0.018	0.005	0.0004	0.02
3	1	2 - 3	2029	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
4	1	3 - 4	2030	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
5	1	4 - 5	2031	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
6	1	5 - 6	2032	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
7	1	6 - 7	2033	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
8	1	7 - 8	2034	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
9	1	8 - 9	2035	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
10	1	9 - 10	2036	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
11	1	10 - 11	2037	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
12	1	11 - 12	2038	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
13	1	12 - 13	2039	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
14	1	13 - 14	2040	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
15	1	14 - 15	2041	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
16	1	15 - 16	2042	3	0.0001	0.0051	0.0076	0.003	0.001	0.0001	0.00
17	1	16-17	2043	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0001	0.0051	0.0076	0.000	0.000	0.0000	0.00
Total Increased Cancer Risk								0.08	0.022	0.002	**0.11**

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

* Third trimester of pregnancy

E. Julian Street 2027 Traffic Emissions and Health Risk Calculations

Analysis Year = ***2027***

Vehicle Type	2016 Caltrans Vehicles (veh/day)	2027 Vehicles (veh/day)
Total	**9,752**	**10,825**

Increase From 2016	1.11
Vehicles/Direction	**5,412**
Avg Vehicles/Hour/Direction	226

Traffic Data Year = ***2016***

San Jose GIS Traffic Volumes	AADT Total	Total Truck
Monroe Street and Stevens Creek Boulevard	9,752	342
	Percent of Total Vehicles	3.51%

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

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2027**

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	43.7	3.4	25	10,825	8,114	87,341	2.327E-09	1.716E-09	6.8	3.16

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.00040			

Emisson Factors from CT-EMFAC2021

2027
Hourl
Hour

2027 Hourly Traffic Volumes and DPM Emissions - DPM_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.95%	428	1.79E-05	9	6.40%	693	2.90E-05	17	5.61%	607	2.54E-05
2	2.66%	288	1.21E-05	10	7.41%	802	3.36E-05	18	3.24%	351	1.47E-05
3	2.88%	312	1.31E-05	11	6.34%	686	2.87E-05	19	2.21%	239	1.00E-05
4	3.28%	355	1.49E-05	12	6.96%	753	3.15E-05	20	0.86%	93	3.90E-06
5	2.15%	233	9.74E-06	13	6.22%	673	2.82E-05	21	3.06%	331	1.39E-05
6	3.28%	355	1.49E-05	14	6.17%	668	2.80E-05	22	4.19%	454	1.90E-05
7	6.06%	656	2.75E-05	15	5.16%	559	2.34E-05	23	2.61%	283	1.18E-05
8	4.54%	491	2.06E-05	16	3.92%	424	1.78E-05	24	0.85%	92	3.85E-06
								Total		10,826	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2027

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,825	8,114	87,341	1.106E-08	8.152E-09	2.6	1.21

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.001891			

Emisson Factors from CT-EMFAC2021

2027
Hourl
Hour

2027 Hourly Traffic Volumes and PM2.5 Emissions - PM25_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	2.48E-05	9	7.11%	770	1.53E-04	17	7.39%	800	1.59E-04
2	0.42%	45	9.04E-06	10	4.39%	475	9.45E-05	18	8.18%	885	1.76E-04
3	0.40%	43	8.61E-06	11	4.66%	504	1.00E-04	19	5.69%	616	1.23E-04
4	0.26%	28	5.60E-06	12	5.89%	638	1.27E-04	20	4.27%	462	9.19E-05
5	0.49%	53	1.06E-05	13	6.15%	666	1.32E-04	21	3.26%	353	7.02E-05
6	0.90%	97	1.94E-05	14	6.04%	654	1.30E-04	22	3.30%	357	7.11E-05
7	3.79%	410	8.16E-05	15	7.01%	759	1.51E-04	23	2.46%	266	5.30E-05
8	7.76%	840	1.67E-04	16	7.14%	773	1.54E-04	24	1.87%	202	4.03E-05
								Total		10,823	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2027

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Line Area: Area (sq ft)	Line Area: Emission (g/s/m2)	Line Area: Emission (lb/hr/ft2)	Line Area: Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,825	8,114	87,341	1.593E-07	1.175E-07	2.6	1.21

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	25			
Emissions per Vehicle (g/VMT)	0.02725			

Emisson Factors from CT-EMFAC2021

2027
Hourl
Hour

2027 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	3.57E-04	9	7.11%	770	2.21E-03	17	7.39%	800	2.29E-03
2	0.42%	45	1.30E-04	10	4.39%	475	1.36E-03	18	8.18%	885	2.54E-03
3	0.40%	43	1.24E-04	11	4.66%	504	1.45E-03	19	5.69%	616	1.77E-03
4	0.26%	28	8.07E-05	12	5.89%	638	1.83E-03	20	4.27%	462	1.32E-03
5	0.49%	53	1.52E-04	13	6.15%	666	1.91E-03	21	3.26%	353	1.01E-03
6	0.90%	97	2.79E-04	14	6.04%	654	1.87E-03	22	3.30%	357	1.02E-03
7	3.79%	410	1.18E-03	15	7.01%	759	2.17E-03	23	2.46%	266	7.63E-04
8	7.76%	840	2.41E-03	16	7.14%	773	2.22E-03	24	1.87%	202	5.80E-04
								Total		10,823	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2027

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,825	8,114	87,341	2.233E-07	1.646E-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)	0.95466			
Emissions per Vehicle per Mile (g/VMT)	0.03819			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour	
1	1.80E+00

2027 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	5.00E-04	9	7.11%	770	3.09E-03	17	7.39%	800	3.21E-03
2	0.42%	45	1.83E-04	10	4.39%	475	1.91E-03	18	8.18%	885	3.56E-03
3	0.40%	43	1.74E-04	11	4.66%	504	2.03E-03	19	5.69%	616	2.47E-03
4	0.26%	28	1.13E-04	12	5.89%	638	2.56E-03	20	4.27%	462	1.86E-03
5	0.49%	53	2.13E-04	13	6.15%	666	2.67E-03	21	3.26%	353	1.42E-03
6	0.90%	97	3.91E-04	14	6.04%	654	2.63E-03	22	3.30%	357	1.43E-03
7	3.79%	410	1.65E-03	15	7.01%	759	3.05E-03	23	2.46%	266	1.07E-03
8	7.76%	840	3.37E-03	16	7.14%	773	3.10E-03	24	1.87%	202	8.13E-04
								Total		10,823	

380 N. 1st Street, San Jose, CA - Residential Roadway Modeling
Cumulative Operation - E. Julian Street
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2027

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area: Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_WB_JUL	E. Julian Street Westbound	WB	2	609.4	0.38	13.3	44	1.3	25	10,825	8,114	87,341	1.330E-07	9.808E-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)	0.00210			
Brake Wear - Emissions per Vehicle (g/VMT)	0.00537			
Road Dust - Emissions per Vehicle (g/VMT)	0.01528			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.02275			

Emisson Factors from CT-EMFAC2021

2027
Hourl

Hour	
1	1.07E+00
2	3.92E-01
3	3.73E-01

2027 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_WB_JUL

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	124	2.98E-04	9	7.11%	770	1.84E-03	17	7.39%	800	1.91E-03
2	0.42%	45	1.09E-04	10	4.39%	475	1.14E-03	18	8.18%	885	2.12E-03
3	0.40%	43	1.04E-04	11	4.66%	504	1.21E-03	19	5.69%	616	1.47E-03
4	0.26%	28	6.74E-05	12	5.89%	638	1.53E-03	20	4.27%	462	1.11E-03
5	0.49%	53	1.27E-04	13	6.15%	666	1.59E-03	21	3.26%	353	8.44E-04
6	0.90%	97	2.33E-04	14	6.04%	654	1.56E-03	22	3.30%	357	8.55E-04
7	3.79%	410	9.82E-04	15	7.01%	759	1.82E-03	23	2.46%	266	6.37E-04
8	7.76%	840	2.01E-03	16	7.14%	773	1.85E-03	24	1.87%	202	4.84E-04
								Total		10,823	

380 N. 1st Street, San Jose, CA - E. Julian Street Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
On-Site 2nd (6.7m) & 3rd (10.4m) Floor (1st & 2nd Residential Levels) Receptors Heights

Emission Year	2027
Receptor Information	Maximum On-Site Receptor
Number of Receptors	56
Receptor Height	2nd (6.7m) & 3rd (10.4m) Floors
Receptor Distances	6 meter grid spacing in residential areas

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

On-Site Cancer Risk Maximum Concentrations

Meteorological Data Years	Concentration (µg/m3)			
	DPM	Exhaust TOG	Evaporative TOG	
2013-2017	0.0003	0.0148	0.0208	2nd Floor
2013-2017	0.0002	0.0116	0.0162	3rd Floor

On-Site PM2.5 Maximum Concentrations

Meteorological Data Years	PM2.5 Concentration (µg/m3)			
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5	
2013-2017	0.0134	0.0124	0.0010	2nd Floor
2013-2017	0.0105	0.0097	0.0008	3rd Floor

380 N. 1st Street, San Jose, CA - E. Julian Street Cancer Risk & PM2.5
Impacts at On-Site 2nd Floor (1st Residential Level) Receptors - 6.7m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	
0	0.25	-0.25 - 0*	2027	10	0.0003	0.0148	0.0208	0.004	0.001	0.0001	0.01
1	1	0 - 1	2027	10	0.0003	0.0148	0.0208	0.049	0.014	0.0011	0.06
2	1	1 - 2	2028	10	0.0003	0.0148	0.0208	0.049	0.014	0.0011	0.06
3	1	2 - 3	2029	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
4	1	3 - 4	2030	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
5	1	4 - 5	2031	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
6	1	5 - 6	2032	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
7	1	6 - 7	2033	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
8	1	7 - 8	2034	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
9	1	8 - 9	2035	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
10	1	9 - 10	2036	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
11	1	10 - 11	2037	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
12	1	11 - 12	2038	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
13	1	12 - 13	2039	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
14	1	13 - 14	2040	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
15	1	14 - 15	2041	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
16	1	15 - 16	2042	3	0.0003	0.0148	0.0208	0.008	0.002	0.0002	0.01
17	1	16-17	2043	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0003	0.0148	0.0208	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.22	0.063	0.005	**0.29**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0001	0.01	0.01

* Third trimester of pregnancy

380 N. 1st Street, San Jose, CA - E. Julian Street Cancer Risk & PM2.5
Impacts at On-Site 3rd Floor (2nd Residential Level) Receptors - 10.4m receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

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

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

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

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

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

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

Values

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

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2027	10	0.0002	0.0116	0.0162	0.003	0.001	0.0001	0.00
1	1	0 - 1	2027	10	0.0002	0.0116	0.0162	0.039	0.011	0.0009	0.05
2	1	1 - 2	2028	10	0.0002	0.0116	0.0162	0.039	0.011	0.0009	0.05
3	1	2 - 3	2029	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
4	1	3 - 4	2030	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
5	1	4 - 5	2031	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
6	1	5 - 6	2032	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
7	1	6 - 7	2033	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
8	1	7 - 8	2034	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
9	1	8 - 9	2035	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
10	1	9 - 10	2036	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
11	1	10 - 11	2037	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
12	1	11 - 12	2038	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
13	1	12 - 13	2039	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
14	1	13 - 14	2040	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
15	1	14 - 15	2041	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
16	1	15 - 16	2042	3	0.0002	0.0116	0.0162	0.006	0.002	0.0001	0.01
17	1	16-17	2043	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
18	1	17-18	2044	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
19	1	18-19	2045	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
20	1	19-20	2046	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
21	1	20-21	2047	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
22	1	21-22	2048	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
23	1	22-23	2049	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
24	1	23-24	2050	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
25	1	24-25	2051	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
26	1	25-26	2052	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
27	1	26-27	2053	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
28	1	27-28	2054	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
29	1	28-29	2055	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
30	1	29-30	2056	1	0.0002	0.0116	0.0162	0.001	0.000	0.0000	0.00
Total Increased Cancer Risk								0.18	0.049	0.004	**0.23**

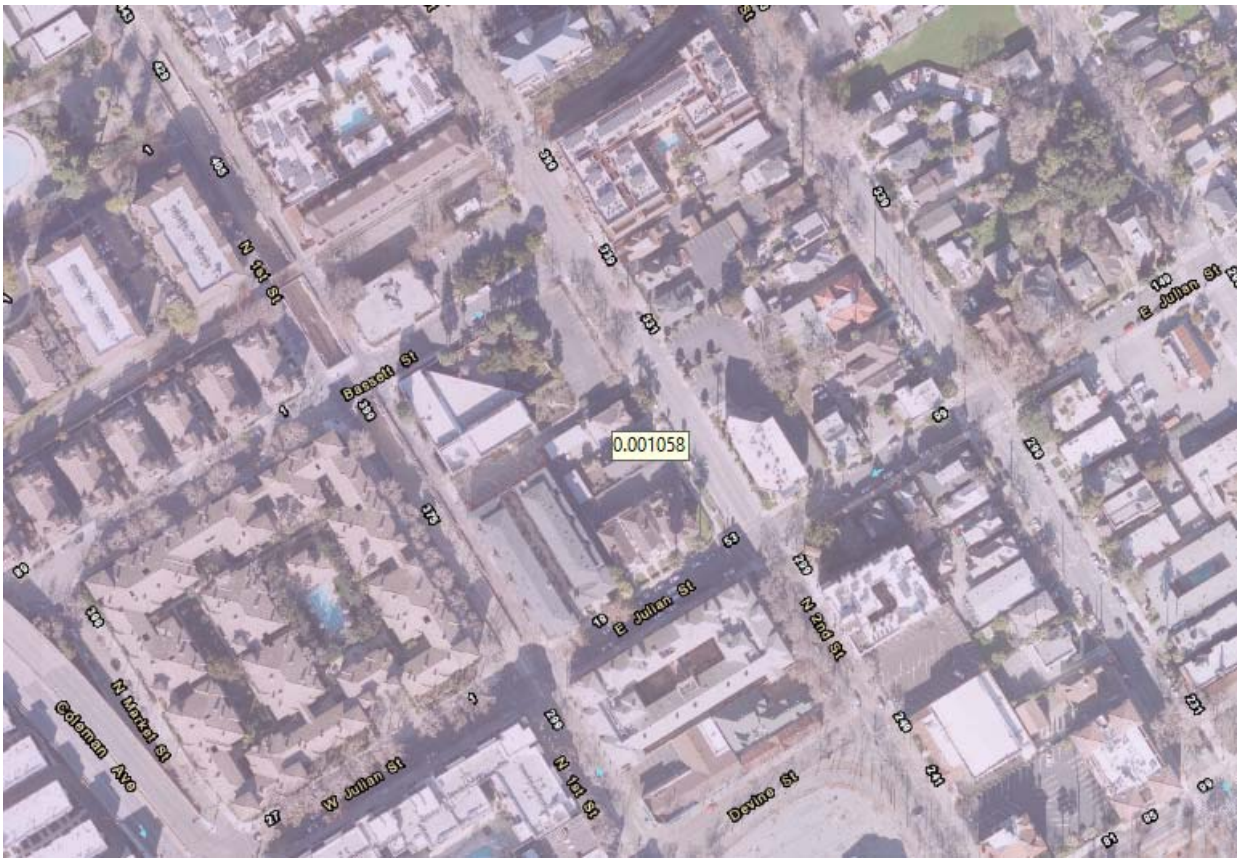
Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.00005	0.01	0.01

* Third trimester of pregnancy

BAAQMD RASTER Screening Data – Railroad Cancer Risk Impacts at the MEI

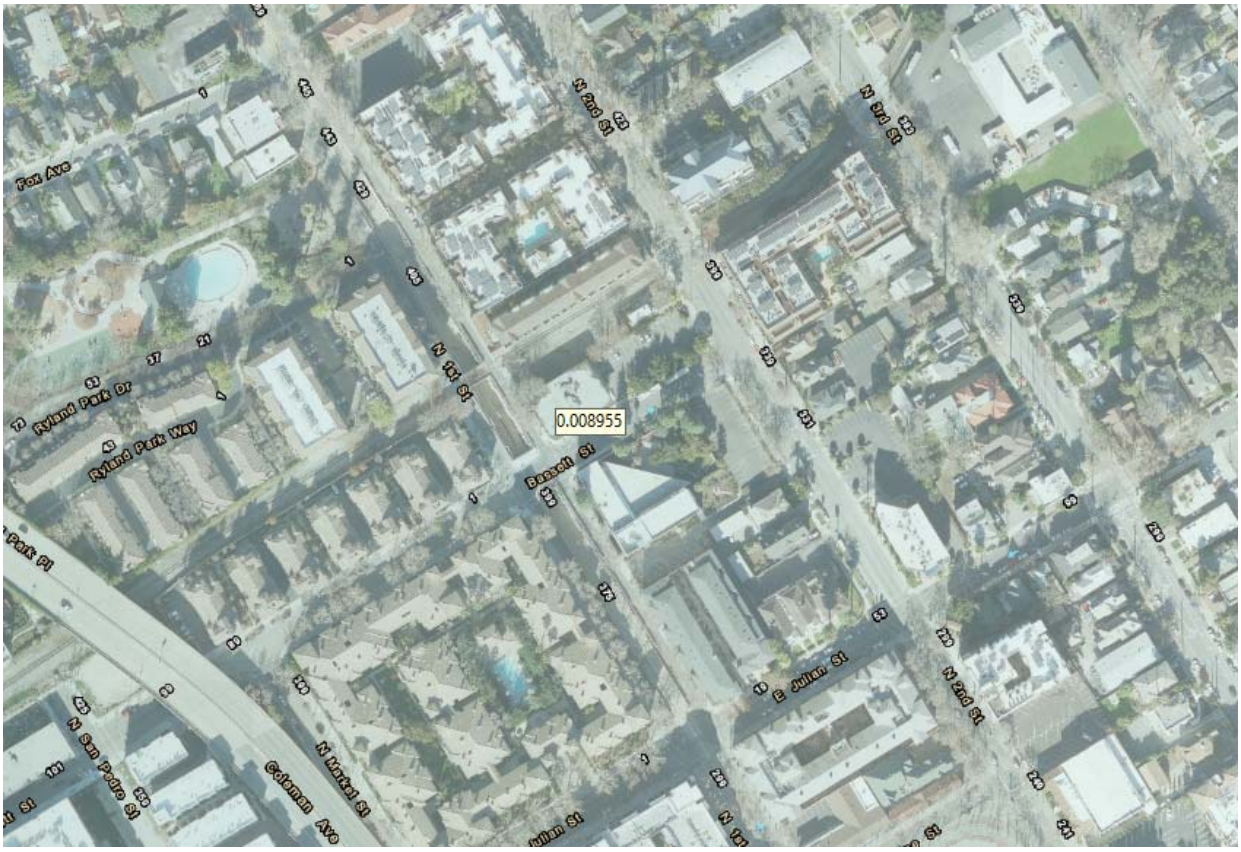
BAAQMD RASTER Screening Data – Railroad $PM_{2.5}$ Concentration Impacts at the MEI

BAAQMD RASTER Screening Data – Railroad Hazard Index Impacts at the MEI

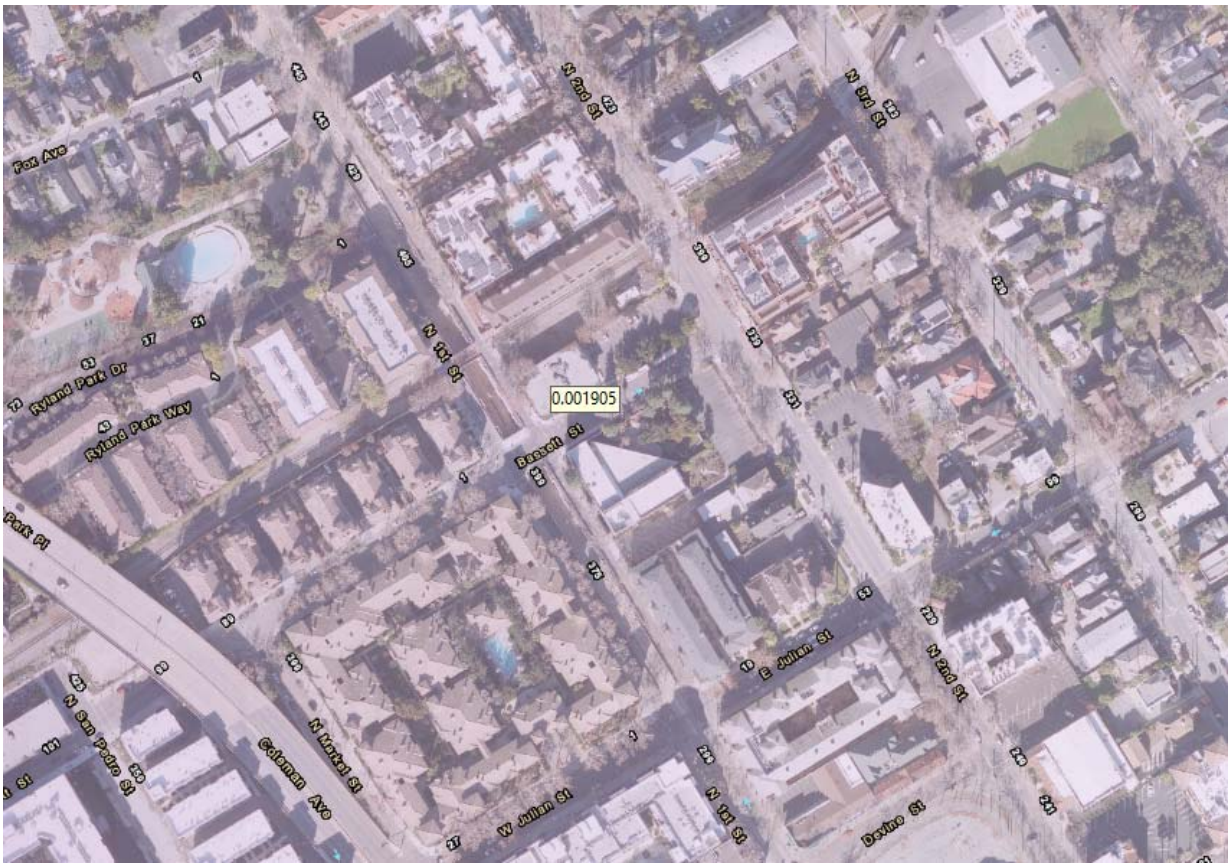


BAAQMD RASTER Screening Data – Railroad Cancer Risk Impacts at the Project Site

BAAQMD RASTER Screening Data – Railroad $PM_{2.5}$ Concentration Impacts at the Project Site



BAAQMD RASTER Screening Data – Railroad Hazard Index Impacts at the Project Site

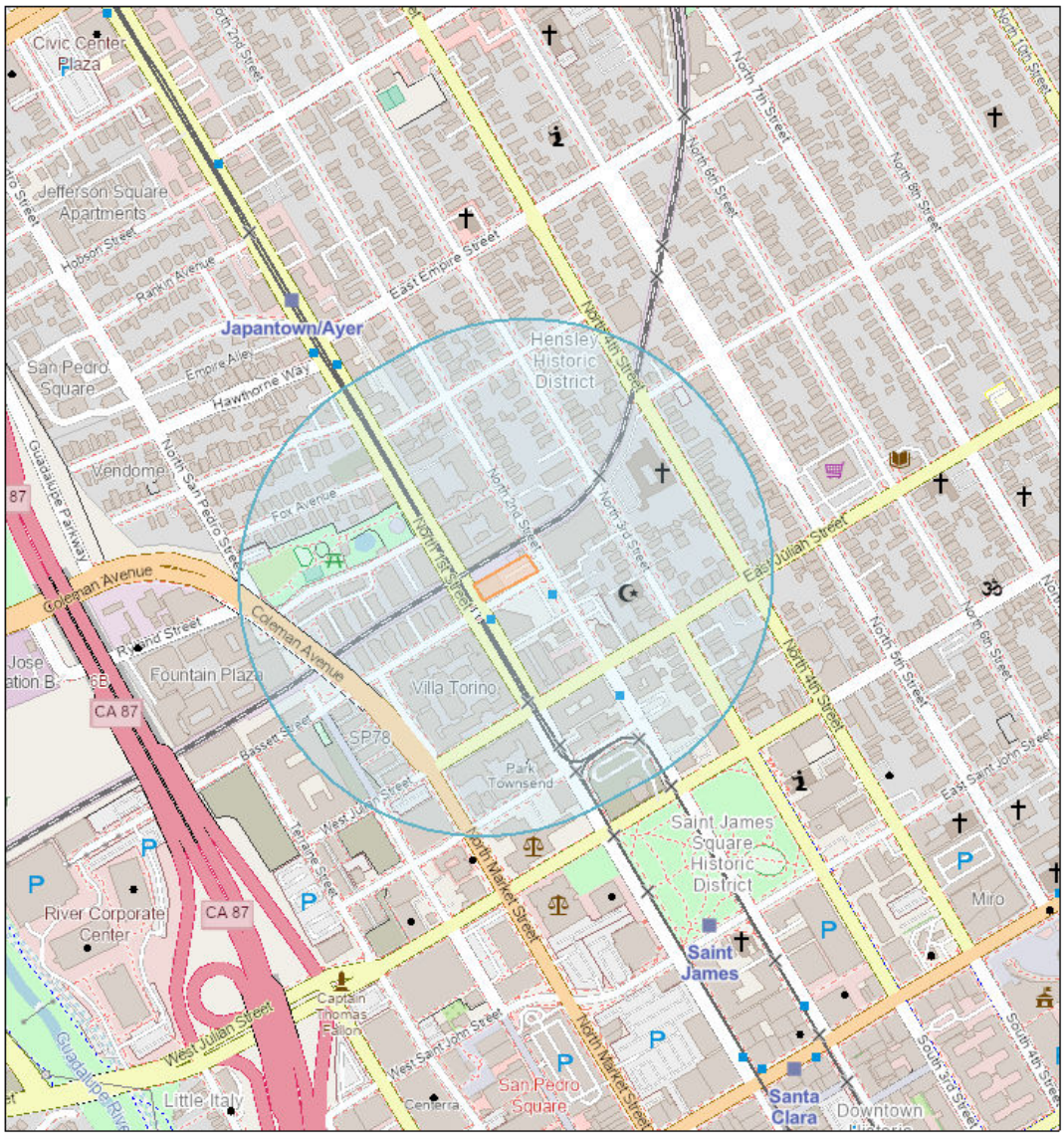


Screening Report

Area of Interest (AOI) Information

Area : 3,846,365.24 ft²

Jun 2 2023 11:33:37 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	0	N/A	N/A

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.