Appendix B.

Illingworth & Rodkin, Inc.

Air Quality Assessment

This Page Intentionally Left Blank

HERITAGE OAKS MEMORIAL PARK CEMETERY AIR QUALITY ASSESSMENT

San José, California

November 10, 2023
Revised December 18, 2024 & March 12, 2025

Prepared for:

Leianne Humble
Senior Planner
Denise Duffy & Associates, Inc.
947 Cass Street, Suite 5
Monterey, CA. 93940

Prepared by:

Casey Divine
Jordyn Bauer
James A. Reyff

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400

I&R Project#: 23-153

Introduction

The purpose of this report is to address the air quality and health risk impacts associated with the proposed Heritage Oaks Memorial Park Cemetery project located east of McKean Road and south of Bailey Avenue in San José, California. Air quality impacts would be associated with the construction and operation of the project. Air pollutant emissions associated with construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impacts and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The approximately 275-acre project site is located on the south side of Bailey Avenue, approximately 1,200 feet easterly of McKean Road and is currently undeveloped. The project proposes to develop a memorial park (cemetery) on approximately 102 acres of the site. The proposed cemetery would include burial grounds, a two-story funeral home, chapel, and office (26,458 square feet) and associated parking lot, up to eight mausoleums totaling 23,750 square feet (each ranging from 1,900 – 7,650 square feet), a crematory with witness room (4,300 square feet), associated circulation roads and surface improvements and a maintenance building (5,231 square feet) and maintenance yard (28,800 square feet). Access is proposed from McKean Road as a fully improved private driveway along an existing Santa Clara Valley Water District access road.

The project also proposes to construct a recycled water pipeline to connect the project site with the Silver Creek Recycled Water pipeline at the Metcalf Energy Center. The proposed recycled water pipeline would consist of four segments extending within four public roads having a total length of approximately 17,000 linear feet (LF) to the boundary of the proposed site. The last segments would be constructed within the boundaries of the project site, with a length of approximately 5,000-LF. The pipeline trench shall be a maximum of four feet wide and four feet deep.

The project would also construct a potable water pipeline. The existing Great Oaks Water has an existing 16” Ductile Iron Pipe running within Santa Teresa Blvd. An 8” potable water line would run parallel to 8” recycled water line down Laguna Ave at a minimum of 10' apart. The beginning of the 8” diameter potable water would run approximately 500 LF via open trench installation until reaching Fisher Creek Bridge where the 8" diameter pipeline will daylight and be attached directly to the side of the bridge for approximately 80 LF where the pipeline will then continue underground via open trench installation approximately 3,500 LF to the end of the Laguna Ave and the Memorial Park property line. On Site, the water line extending from Laguna Ave will be plumbed to the proposed Pump House in which water will be pumped up the hillside. The pipeline will be constructed within an existing jeep trail up the hillside for approximately 970 LF creating an estimated earthwork volume of 575 CY of soil to be removed and replaced. No trees will be removed for any part of this segment. Onsite, the potable water extension will continue from the end segment from up the hill to a pumphouse, which will serve as the beginning point of the on-site potable water system westerly within the proposed private roadway within the Memorial Park

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

to serve fire hydrants and other potable water needs Administrative/Chapel buildings and Maintenance Buildings.

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 downwind of existing 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.

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 into BAAQMD's 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 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 single-family homes located approximately 2,000 feet to the northwest, with additional single-family homes scattered around the site at further distances. This project would not introduce new sensitive receptors (i.e., residents) to the area. Note that prevailing winds in the area are from the north/northwest.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide ambient air quality standards (NAAQS) and emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards.

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

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The current standards limit the amount of sulfur allowed in diesel fuel to 15 parts per million by weight

[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.

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

(ppmw). Ultra-low sulfur diesel (ULSD), as it is referred to, is required for use by all vehicles in the U.S.

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

State Regulations

The California Air Resources Board (CARB) has set statewide ambient air quality standards (CAAQS) and emission standards for on-road and off-road mobile sources that are more stringent than those adopted by the EPA. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a regulation to reduce emissions of DPM and NO_X from on-road heavy-duty diesel fueled vehicles.[4] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements have been phased in over the compliance period and depend on the model year of the vehicle.

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

To address the issue of diesel emissions in the state, CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*[5]. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road emission standards for new diesel engines, as well as adoption of regulations for ULSD fuel in California.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San

[4] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.
[5] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

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

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[6] 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 not within a BAAQMD 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.[7] 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 35th percentile on CalEnviroScreen.[8]

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,

[6] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.
[7] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en.
[8] OEHAA, CalEnviroScreen 4.0 Maps https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

mitigation measures, and background air quality information. They include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions, as shown in Table 1.[9] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds		Operational Thresholds	
	Average Daily Emissions (lbs./day)		Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54		54	10
NO_x	54		54	10
PM_{10}	82 (Exhaust)		82	15
$PM_{2.5}$	54 (Exhaust)		54	10
CO	Not Applicable		9.0 ppm (8-hour avg) or 20.0 ppm (1-hour avg)	
Fugitive Dust (PM_{10}/$PM_{2.5}$)	Best Management Practices (BMPs)*		Not Applicable	
Health Risks and Hazards	**Single Sources/Individual Projects**		**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 following 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

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

grading and new construction to a less-than-significant level. The contractor shall implement the following BMPs that are required of all projects:

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

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

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

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

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

6. 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.

BAAQMD Rules and Regulations

Cremation is the act of reducing a human corpse by incineration. For this project, a multiple chamber, natural gas-fired crematory would be used. A primary and secondary incinerator are used. The crematory would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the natural gas combustion and the cremation of bodies. Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
  - Rule 2-5: New Source Review of Toxic Air Contaminants
- Regulation 6 – Particulate Matter
  - Rule 1-3: General Requirements
- Regulation 7 – Odorous Substances
- Regulation 8 – Organic Compounds
  - Rule 2-3: Miscellaneous Operations

Permits

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

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

Rule 2-1 lists sources that are exempt from permitting.

New Source Review

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

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO_2, PM_{10}, or CO of 10.0 pounds or more per highest day.

Rule 2-5 applies to new and modified sources of TAC emissions. BAAQMD evaluates the TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by

improving the level of control when existing sources are modified or replaced. Toxics BACT (or TBACT) is applied to any new or modified source of TACs where the source risk is a cancer risk greater than 1.0 in one million and/or a chronic hazard index greater than 0.20. Permits are not issued for any new or modified source that has risks or net project risks that exceed a cancer risk of 10.0 in one million or a chronic or acute hazard index of 1.0.

Regulation 6, Rule 1: Particulate Matter – General Requirements The owner/operator is expected to comply with Regulation 6-1 (Particulate Matter and Visible Emissions Standards), since the unit is fueled with LPG. Thus, for any period aggregating more than three minutes in any hour, there should be no visible emission as dark or darker than No. 1 on the Ringlemann Chart (Regulation 6-1-301) and no visible emission to exceed 20% opacity (Regulation 6-1-302).

Regulation 6-1-305 prohibits emissions of visible particles from causing a nuisance on property other than that of the operator.

Regulation 6-1-310 limits particulate emissions to 0.15 grains/dscf of exhaust gas volume.

Regulation 6-1-311 limits the Total Suspended Particulate (TSP) Weight Limits.

Regulation 6-1-401 requires the operator to have the means to visually monitor emissions from the operation at all times. The emissions from the incinerator will occur during active, manned operation of the source. Therefore, the emissions will be always visible to the operator.

Regulation 7: Odorous Substances In Regulation 7, Sections 301 and 302 limit discharges of odorous emissions from sources. This source is not expected to be a source of public nuisance for either odor or emissions if it is maintained and operated in accordance with the manufacturer's recommendations.

Regulation 8, Rule 2: Miscellaneous Operations Regulation 8-2-301 prohibits any miscellaneous operation from discharging an emission containing more than 15 pounds per day and containing a concentration of 300 ppm total carbon on a dry basis.

<u>San José Envision 2040 General Plan</u>

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 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-10.13 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-11.2 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-11.5 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.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

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

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM_{10} under the CAAQS, but not the NAAQS. The area has attained both State and Federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The O_3 precursor pollutant thresholds are for ROG and NOx, while PM_{10}, and $PM_{2.5}$ have specific thresholds. The thresholds apply to both construction period emissions and operational period emissions.

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, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses for construction 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 Disturbed[1]
Cemetery-Crematorium Construction				
General Office Building[2]	59.7	1000sqft	59,739	1.0
Parking Lot[3]	459.0	1000sqft	-	10.5
Recycled Water Line Construction				
Road Construction[4]	4.20	Mile	-	2
Potable Water Line Construction				
Road Construction[4]	0.95	Mile	-	2

[1] Default acreages used in order to capture estimated construction area.
[2] CalEEMod does not have a land use type for a cemetery, so the general office building land use was used to capture the funeral home, chapel, office, mausoleum, crematory, and maintenance building land uses.
[3] The parking lot land use was used to capture the parking areas and associated circulation roads and surface improvements.
[4] Road construction land use was used to represent the underground recycled and potable water line in order to capture the linear construction activities.

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic.

The construction build-out scenario, including equipment quantities, average hours per day, total number of workdays, and schedule, were provided by the project applicant (included in *Attachment 1)*. The provided information for the crematorium construction included demolition, site preparation, site grading (including import of 220,910 cubic yards of soil), exterior building construction, and interior building. The paving equipment information and schedule was based on CalEEMod default inputs with provided asphalt hauling quantities (13,966 cubic yards). The provided information for the recycled water pipeline included demolition (21,905-sf of roadway and open lands volumes and 2,433 tons of pavement), trenching (including the import of 10,074 cubic yard of soil and export of 10,649 cubic yard of soil), and paving (140 truckloads of asphalt). The provided information for the potable water pipeline included demolition (13,160-sf of roadway and open lands volumes and 6603 tons of pavement), trenching (including the import of 2,382 cubic yard of soil and export of 2,670 cubic yard of soil), and paving (140 truckloads of asphalt).

The construction schedules assumed that the earliest possible start date for the crematorium would be January 2025, and the project would be built out over a period of approximately 19 months or 415 construction workdays. The earliest possible start date for construction of the recycled waterline would be January 2026 and the waterline would be constructed over a period of approximately 12 months or 245 workdays. The earliest possible start date for construction of the potable waterline would be January 2026 and the waterline would be constructed over a period of approximately 3 months or 54 workdays. The earliest year of project 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 for the entire project 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, amount of asphalt truck trips to and from the site, and the estimate of concrete trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. Haul trips for demolition and grading were estimated by CalEEMod using the provided demolition and soil import/export volumes. The number of total asphalt haul trips was provided for the project, while the total number of concrete haul trips were estimated and converted to daily one-way trips, assuming two trips per delivery. These values are shown in the project construction worksheets included in *Attachment 1.*

Summary of Computed Construction Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 3 shows the unmitigated annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 3, predicted unmitigated annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 3. Construction Period Emissions - Unmitigated

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2025 (Crematorium)	0.31	3.90	0.13	0.12
2026 (Crematorium + Recycled Water Line + Potable Water Line)	0.46	0.96	0.03	0.02
Average Daily Construction Emissions Per Year (pounds/day)				
2025 (261 construction workdays)	2.38	29.90	1.01	0.89
2026 (245 construction workdays)	5.99	12.48	0.33	0.31
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 include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site deposit mud on local streets, which is 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. The San José General Policy MS-10.1 specifies that projects assess projected air emissions from new developments in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Construction projects must identify and implement all of these feasible air emission reduction measures. Therefore, the project would be required to implement the following BAAQMD BMPs, 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.

Standard Permit Conditions / Basic BMPs: **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 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 BAAQMD basic BMPs that are required of all projects, as listed above.

Operational Period Emissions

ROG, PM, and NOx air emissions from the project would be generated primarily from the crematory and from autos driven by future patrons. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical ROG emission sources from these types of land uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

A separate CalEEMod run was conducted in order to capture the project's operational activities (i.e., landscaping maintenance, etc.) and emissions. The proposed project land uses for operation were entered into CalEEMod as described in Table 4.

Table 4. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
General Office Building	36.0	1000sqft	35,989	0.8
Parking Lot	140	Spaces	-	1.3
City Park[1]	275	Acres	-	275

[1] The City Park land use was used to capture operational activity for the cemetery uses, such as landscaping and fertilizer use.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2027 if construction begins in 2025. Emissions associated with build-out later than 2027 would be lower.

Traffic Information

A traffic analysis was not conducted for this project due to negligible impacts, so the default traffic inputs for the operational land uses specified by CalEEMod were used.

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. An emission factor of 178 pounds of CO_2 per megawatt of electricity produced was entered into CalEEMod, which is based on San José Clean Energy's (SJCE) 2020 emissions rate.[10]

[10] San José Clean Energy Website, Standard GreenSource service. Web: https://sanjosecleanenergy.org/commercial-rates/

Project Crematory

The project would use a natural gas fired crematory. The crematory could operate daily and would have 500 cremations by Year 1, 1,000 cremations by Year 2, 2,000 cremations by Year 5, and 3,000 cremations by Year 10. The crematory air pollutants emissions were estimated for build-out conditions using the crematory emissions calculation spreadsheet in the BAAQMD Permit Handbook.[11] This method utilizes emission factors for natural gas combustion from AP-42 Table 1.4-1 and 1.4-2 and emission factors for the combustion of the body and case wrappings from EPA FIRE database (for PM_{10}) and medical waste incineration from AP-42 Table 2.3-1 and 2.3-2. Based on crematory information provided by the applicant, the following data was input into the crematory emissions calculation spreadsheet:

- Maximum Natural Gas Firing Rate = 2.05 MMBtu/hr
- Maximum Annual Bodies Cremated = 3,000 bodies (full build-out)
- Maximum Daily Bodies Cremated = 8 bodies/day
- Maximum Hourly Burn Rate = 75 lb/hr
- Average body weight = 150 lbs
- Typical Annual Operating Days = 365 day/yr

The calculated operational emissions from the crematory are included in Table 5. The crematory emissions calculations spreadsheet is included in *Attachment 1.*

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water use were applied to the project.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod. The daily emissions were calculated assuming 365 days of operation. Table 5 shows average daily emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

[11] BAAQMD Engineering Division, *Permit Handbook,* 2021. Web: https://www.baaqmd.gov/~/media/files/engineering/permit-handbook/baaqmd-permit-handbook.pdf?sc_lang=en

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2027 Project Operational Emissions (CalEEMod) (*tons/year*)	1.71	0.37	0.86	0.23
Project Crematory Emissions (*tons/year)*	-	1.00	0.17	0.17
Total Operational Emissions	1.71	1.37	1.03	0.40
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Thresholds?	No	No	No	No
Total (lbs./day)[1]	9.35	7.53	5.65	2.21
BAAQMD Thresholds (lbs./day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

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

Project impacts related to increased health risk would occur by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., crematory). Project construction activity would generate dust and equipment exhaust. The project also proposes stationary equipment that causes direct emissions of air pollutants which requires permitting by BAAQMD (i.e., crematory). Traffic from this project would have negligible impacts to sensitive receptors.

The BAAQMD CEQA Air Quality Guidelines recommends that any proposed project that includes the siting of a new source of pollutants and TACs assess associated impacts within 1,000 feet (and schools at ¼ mile), considering both individual and nearby cumulative sources (i.e., proposed project plus existing and foreseeable future projects). The project site is located over 2,000 feet away from the nearest sensitive receptor. However, emissions of air pollutants or TACs from project stationary sources are subject to BAAQMD permitting requirements that would require the District to apply all applicable rules and regulations to limit or control these emissions. Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants would apply to any potential emissions from these sources. The District's risk policy is to not issue a permit to any source that would cause a cancer risk of greater than 10 chances per million. Therefore, project impacts to sensitive receptors were addressed for short-term construction and long-term operational conditions from project stationary sources.

Health Risk Methodology for Construction and Operation

Health risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations, and by computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and operation of the crematory. To evaluate the increased cancer risks from the project, a 30-year exposure period

was used, per BAAQMD guidance,[12] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

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

The methodology for computing health risks impacts is contained in Appendix E of the BAAQMD CEQA Guidelines. TAC and $PM_{2.5}$ emissions are calculated, a dispersion model used to estimate ambient pollutant concentrations, and cancer risks and HI calculated using DPM concentrations.

Modeled Sensitive Receptors

Receptors typically included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). The project site is located over 2,000 feet away from the nearest sensitive receptor. However, a ring of receptors at 1,000 feet from the project construction site was placed in order to evaluate project risk impacts at BAAQMD's maximum sensitive receptors distance. These receptors are assumed to be residential and include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Health Risk from Project Recycled Water Line and Potable Water Line Construction

The construction of both the recycled water line and potable water line would be linear. This means that demolition, trenching, installation of the recycled and potable water lines, and paving would occur continuously and progressively along the proposed pipeline's routes. The resulting health risk impacts would be negligible as construction of the water lines would continuously approach, then move away, from any given receptor along the proposed paths before an impactful quantity of emissions would be generated. As a result, no further health risk analysis for the construction of the recycled water line and potable water line was conducted.

Health Risk from Project Crematorium Construction

The primary health risk impact issues associated with construction projects are cancer risks associated with diesel exhaust (i.e., DMP), 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 for the crematorium was conducted that evaluated potential health effects to nearby sensitive receptors from crematorium construction emissions of DPM and $PM_{2.5}$.[13] This assessment included dispersion modeling to predict the off-site concentrations resulting from project the crematorium construction, so that lifetime cancer risks and non-cancer health effects could be estimated.

[12]BAAQMD, Appendix E of the 2022 *BAAQMD CEQA Guidelines*, April 2023
[13] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Crematorium Construction Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. Total DPM emissions were estimated to be 0.13 tons (250 pounds) and fugitive dust emissions ($PM_{2.5}$) to be 0.22 tons (448 pounds) from all crematorium construction stages. The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) in the vicinity of the crematorium 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.[14] Emission sources for the crematorium construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area source.[15] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Figure 1 shows the project construction site and receptors.

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

[15] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

AERMOD Inputs and Meteorological Data

The modeling used a five-year meteorological data set (2013-2017) from the San Martin Airport prepared for use with the AERMOD model by the BAAQMD. Construction emissions were modeled as occurring daily between 7:00 a.m. to 5:00 p.m., according to the construction schedule provided by the project applicant. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2025 - 2026 period were calculated at the 1,000-foot receptors using the model. Receptor heights of 5 feet (1.5 meters) were used to represent the breathing height in single-family residences.[16]

Health Risk from Project Crematorium Operation

The project would operate a crematory, which emits a number of TACs from the retort exhaust stack. For the purposes of this analysis, the southeast crematory location (option 1) was used as the location in the dispersion modeling. Potential future health impacts to receptors were evaluated using air quality dispersion modeling to calculate TAC concentrations at 1,000 feet using BAAQMD-recommended methods for calculating health impacts (cancer risks and chronic and acute non-cancer health effects), as described in Appendix E of the BAAQMD CEQA Guidelines.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to model TAC and $PM_{2.5}$ emissions from the crematory and predict its concentrations at the 1,000-foot receptor locations. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission sources for CEQA projects.[17] The crematory exhaust stack was modeled as a point source with a stack height of 25 feet, 20-inch stack diameter, stack gas exhaust temperatures of 1,650 degrees Fahrenheit, and a stack exit velocity of 5 meters per second. The modeling used a 5-year meteorological data set (2013-2017) from the San Martin Airport prepared for use with the AERMOD model by BAAQMD.

TAC and $PM_{2.5}$ emissions used for the modeling were based on the project's estimated emissions calculated from the crematory emissions spreadsheet from the BAAQMD Permit Handbook. Emissions were assumed to occur during any hour of the day. One- and eight-hour average concentrations were calculated for TACs with acute 1-hour and 8-hour chronic non-cancer health effects. Long-term average concentrations were calculated for TACs with chronic non-cancer health effects, $PM_{2.5}$ concentrations, and for calculating TAC cancer risks. Concentrations were calculated at receptor heights of 5 feet (1.5 meters) representative of the breathing heights in single-family residences at 1,000 feet from the project construction site.

[16] 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

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

Summary of the Crematorium Health Risk Impacts

This assessment is based on screening modeling that used a receptor grid 1,000 feet from the crematorium site. Actual levels would be lower for receptors further from this grid. The maximum increased cancer risks from the crematorium construction and operation were calculated using the modeled TAC concentrations combined with BAAQMD CEQA guidance for residential exposures using age sensitivity factors and exposure parameters. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Third trimester, infant, child, and adult exposures were assumed to occur at all receptors during the entire construction and operational 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 acute HI value was computed as the sum of the HIs of all TACs with acute non-cancer health effects, while the maximum chronic HI value was calculated as the sum of all TACs with chronic non-cancer health effects.

The modeled maximum annual TAC and $PM_{2.5}$ concentrations were identified at receptors 1,000 feet from the crematorium construction area. Results of this assessment indicated that the project MEI was located at a 1,000-foot receptor to the south. The location of the MEI and 1,000-foot receptors are shown in Figure 1. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related impacts. *Attachment 2* to this report includes the emission calculations used for the construction and operational modeling and the cancer risk calculations.

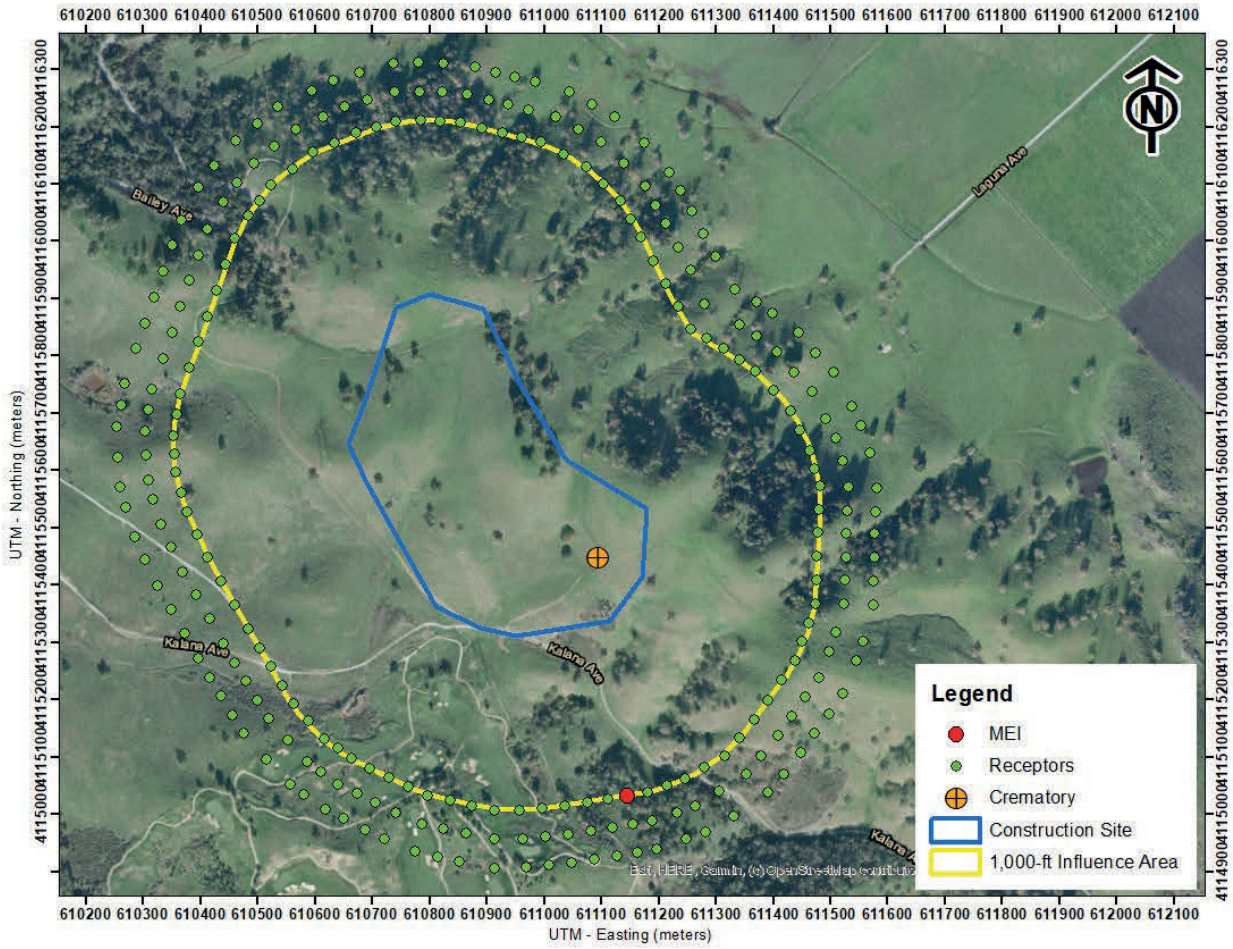
Table 6. Crematorium Construction & Operation Risk Impacts at 1,000-ft Receptors

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Crematory Construction (Unmitigated)	3.13	0.05	<0.01
Crematory Operation	0.72	0.02	0.08
Total/Maximum Crematory Impact	3.85	0.05	0.08
BAAQMD Single-Source Threshold	***10***	***0.3***	***1.0***
Exceed Threshold?	*No*	*No*	*No*

Cumulative Community Risks of all TAC Sources at Project MEI

BAAQMD guidance is to address the cumulative impact of TAC and air pollutant impacts from sources within 1,000 feet of the project site. There are no substantial sources of TACs and no sensitive receptors within 1,000 feet of the Project site.

Figure 2. Locations of Project Construction Site, Project Crematory, +1,000-ft Receptors, and Maximum TAC Impact



Supporting Documentation

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

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

Attachment 1: CalEEMod Modeling Inputs and Outputs

Total Construction Criteria Air Pollutants							
Construction Criteria Air	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2025	0.31	3.90	0.13	0.12	0.30	1430.03	
2026	0.46	0.96	0.03	0.02	0.02	414.98	
	Total Construction Emissions						
Tons	0.77	4.86	0.16	0.14		1845.01	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	2.38	29.90	1.01	0.89			**261**
2026	5.99	12.48	0.33	0.31			**245**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	1543.68	9724.30	313.90	280.06		0.00	
Average	3.72	23.43	0.76	0.67		0.00	506.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants					
Unmitigated	ROG	NOX	Total PM10	Total PM2.5	
Year	Tons				
CalEEMod	1.71	0.37	0.86	0.23	
Crematory		1.00	0.17	0.17	
	Total Annual Operational Emissions				
Total Tons/year	1.71	1.37	1.03	0.40	
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**	
	Average Daily Emissions				
Pounds Per Day	9.35	7.53	5.65	2.21	0.95
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**	

Crematorium Construction Criteria Air Pollutants							
Construction Criteria Air	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2025	0.31	3.90	0.13	0.12	0.30	1430.03	
2026	0.42	0.45	0.01	0.01	0.01	187.89	
	Total Construction Emissions						
Tons	0.74	4.36	0.14	0.13		1617.92	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	2.38	29.90	1.01	0.89			**261**
2026	5.52	5.89	0.17	0.16			**154**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	1470.76	8710.39	289.36	257.15		0.00	
Average	3.54	20.99	0.70	0.62		0.00	415.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Operational Criteria Air Pollutants					
Unmitigated	ROG	NOX	Total PM10	Total PM2.5	
Year	Tons				
CalEEMod	1.71	0.37	0.86	0.23	
Crematory		1.00	0.17	0.17	
	Total Annual Operational Emissions				
Total Tons/year	1.71	1.37	1.03	0.40	
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**	
	Average Daily Emissions				
Pounds Per Day	9.35	7.53	5.65	2.21	0.95
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**	

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Mobile	798.36			
Area	0.53			
Energy	111.61			
Water	121.77			
Waste	17.83			
Refrig.	0.01			
TOTAL	1050.12	0.00	0.00	0.00
Net GHG Emissions		1050.12		0.00

Crematoium Number of Days Per Year				
2025	1/1/2025	12/31/25	365	261
2026	1/1/26	8/3/2026	215	154
			580	**415**
				Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2025	1/31/2025	5	23
Site Preparation	2/1/2025	6/1/2025	5	85
Grading	2/15/2025	4/24/2026	5	310
Building Construction	4/1/2025	4/1/2026	5	262
Paving	6/3/2026	8/3/2026	5	44
Architectural Coating	4/2/2026	6/2/2026	5	44
Trenching	4/15/2025	6/15/2025	5	44

Potable Line Construction Criteria Air Pollutants							
Construction Criteria Air	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2025							
2026	0.03	0.40	0.01	0.01	0.01	176.14	
	Total Construction Emissions						
Tons	0.03	0.40	0.01	0.01		176.14	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	0.00	0.00	0.00	0.08			
2026	0.39	5.25	0.13	0.12			**245**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	59.99	808.92	20.14	18.78		0.00	
Average	0.14	1.95	0.05	0.05		0.00	245.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Water Line Number of Days Per Year				
2026	1/1/2026	12/9/2026	343	245
			343	**245** ***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2026	2/25/2026	5	40
Trenching	2/26/2026	10/21/2026	5	170
Paving	10/22/2026	12/9/2026	5	35

Potable Line Construction Criteria Air Pollutants							
Construction Criteria Air	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	**CO2e**	
Year	Tons					MT	
Construction Equipment							
2025							
2026	0.01	0.10	0.002	0.002	0.003	50.95	
	Total Construction Emissions						
Tons	0.01	0.10	0.00	0.00		50.95	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	0.00	0.00	0.00	0.02			
2026	0.08	1.33	0.03	0.03			**54**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	12.93	204.99	4.40	4.13		0.00	
Average	0.03	0.49	0.01	0.01		0.00	54.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Water Line Number of Days Per Year				
2026	1/1/2026	3/16/2026	75	54
			75	**54** ***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/1/2026	1/12/2026	5	8
Trenching	1/13/2026	3/9/2026	5	40
Paving	3/10/2026	3/16/2026	5	5

Air Quality/Noise Construction Information Data Request

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

acres disturbed

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

	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition Site Clearing	Start Date:						Overall Import/Export Volumes
		End Date:						This is an undeveloped site with no existing buildings requiring demolition. Some minor pavement demo at public r
						0.2	237	Demolition Volume
						7.7	10567	Square footage of buildings to be demolished
						7.7	17389	(or total tons to be hauled)
						7.7	12633	
	Site Preparation	Start Date:						
		End Date:						Site prep will consist of preparing areas for grading cut and fill
						0.0	0	
						4.1	104333	
						4.1	50533	
	Grading / Excavation	Start Date:						
		End Date:						Soil Hauling Volume
						2.2	46111	
						3.7	98138	
						4.6	158080	This site will be balanced earthwoork
						0.3	2838	
						4.6	86136	
	Trenching/Foundation	Start Date:						
		End Date:						
						6	9475	
						6	15851	
	Building - Exterior	Start Date:						
	This is for Phase 1 Only	End Date:						
						0.6	10316	
						4.0	56390	
						4.0	131282	
						4.6	86136	
						0.5	2732	
	Building - Interior/Architectural Coating	Start Date:						
		End Date:						
						1.4	2246	
						8	6765	
	Paving	Start Date:						
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
	Additional Phases	Start Date:		Total phase:				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

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

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Air Quality/Noise Construction Information Data Request

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

acres disturbed

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

	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	Start Date:						Overall Import/Export Volumes
		End Date:						
						1	2365	Demolition Volume
						0	0	Square footage of buildings to be demolished
						0	0	(*or* total tons to be hauled)
						0	0	
	Site Preparation	Start Date:						
		End Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
	Grading / Excavation	Start Date:						
		End Date:						Soil Hauling Volume (Roadway)
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	Soil Hauling Volume (Open Lands)
						#DIV/0!	0	Export Volume = 575 cubic yards?
						#DIV/0!	0	Import volume = 0 cubic yards?
	Trenching/Foundation	Start Date:						
		End Date:						
						8	48810	
						8	81654	
	Building - Exterior	Start Date:						
		End Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
	Building - Interior/Architectural Coating	Start Date:						
		End Date:						
						#DIV/0!	0	
						#DIV/0!	0	
	Paving	Start Date:						
		Start Date:						
						0	0	
						8	15288	
						8	13306	
						8	8512	
						8	10049	
	Additional Phases	Start Date:		Total phase:				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

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

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Air Quality/Noise Construction Information Data Request

Project Name: Heritage Oaks-Memorial Park 8" Domostic Water

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size
- 0 Dwelling Units
- 2 (Trench Pipeline) total project acres disturbed
- 0 s.f. residential
- 0 s.f. retail
- 0 s.f. office/commercial
- 0 s.f. other, specify:
- 0 s.f. parking garage — 0 spaces
- 0 s.f. parking lot — 0 spaces

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

Construction Hours 8 am to 5 pm

Pile Driving? Y/N? No.

Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Y/N? NO.

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

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

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	Demolition	**Start Date:**		**Total phase:**	**1**			**Overall Import/Export Volumes**
		End Date:						
	Concrete/Industrial Saws	81	0.73	1	8	8	0	**Demolition Volume**
	Excavators	158	0.38			0	0	Square footage of buildings to be demolished
	Rubber-Tired Dozers	247	0.4			0	0	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0	8,040 (Roadway) SF and 5,120 (Open Lands) SF *or*
	Other Equipment?							**X** Hauling volume (tons)
								Any pavement demolished and hauled? 600 **tons**
	Site Preparation	**Start Date:**		**Total phase:**				
		End Date:						
	Graders	187	0.41			#DIV/0!	0	
	Rubber Tired Dozers	247	0.4			#DIV/0!	0	
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0	
	Other Equipment?							
	Grading / Excavation	**Start Date:**		**Total phase:**				
		End Date:						**Soil Hauling Volume (Roadway)**
	Excavators	158	0.38			#DIV/0!	0	Export volume = **2,382** cubic yards?
	Graders	187	0.41			#DIV/0!	0	Import volume = **2,382** cubic yards?
	Rubber Tired Dozers	247	0.4			#DIV/0!	0	**Soil Hauling Volume (Open Lands)**
	Concrete/Industrial Saws	81	0.73			#DIV/0!	0	Export Volume = 288 cubic yards?
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0	Import volume = 0 cubic yards?
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**2026-2027 (TBD)**	**Total phase:**	**1**			
		End Date:	**2026-2027 (TBD)**					
	Tractor/Loader/Backhoe	97	0.37	8	40	320	0	
	Excavators	158	0.38	8	40	320	0	
	Other Equipment?							
	Building - Exterior	**Start Date:**		**Total phase:**				**Cement Trucks? _?_ Total Round-Trips**
		End Date:						
	Cranes	231	0.29			#DIV/0!	0	Electric? (Y/N) __No_ Otherwise assumed diesel
	Forklifts	89	0.2			#DIV/0!	0	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
	Generator Sets	84	0.74			#DIV/0!	0	Or temporary line power? (Y/N) ___
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0	
	Welders	46	0.45			#DIV/0!	0	
	Other Equipment?							
Building - Interior/Architectural Coating		**Start Date:**		**Total phase:**				
		End Date:						
	Air Compressors	78	0.48			#DIV/0!	0	
	Aerial Lift	62	0.31			#DIV/0!	0	
	Other Equipment?							
	Paving	**Start Date:**	**2026-2027 (TBD)**	**Total phase:**	**1**			
		Start Date:	**2026-2027 (TBD)**					
	Cement and Mortar Mixers	9	0.56			0	0	
	Pavers	130	0.42	8	5	40	0	**Asphalt? 1,541 cubic yards or ____ round trips? -** 18 tons per truck. 140 truck loads
	Paving Equipment	132	0.36	8	5	40	0	
	Rollers	80	0.38	8	5	40	0	
	Tractors/Loaders/Backhoes	97	0.37	8	5	40	0	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	
						#DIV/0!	0	

Equipment types listed in "Equipment Types" worksheet tab.

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

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Application #	Heritage Oaks
Plant #	
Source #	

EMISSION CALCULATIONS FOR CREMATORY

Basis:	
Maximum Natural Gas Firing Rate (MMBTU/hr)	2.05
Maximum Annual Bodies Cremated (body/yr)	3000
Maximum Daily Bodies Cremated (body/day)	8
Maximum Hourly Burn Rate (lb/hr)	75
Typical Annual Operating Days (day/yr)	365

Constants:	
Natural Gas Heating Value (BTU/ft^3)	1020
Average Body Weight (lbs)	150

Calculated Values:	
Annual Cremating Hours (hr/yr)	6000
Maximum Annual Daily Natural Gas Usage (MMft^3/day)	3.22E-02
Maximum Annual Natural Gas Usage (MM ft^3/yr)	1.21E+01

Natural Gas Combustion Emissions

Notes:
1. Emission factors from AP-42 for uncontrolled natural gas combustion in boilers < 100 MMBTU/hr. AP-42 Chapter 1.4 (Tables 1.4-1 and 1.4-2)

Emissions from Natural Gas Combustion

Pollutant	Emission Factor (lb/MMft^3)	Max.Daily (lb/day)	Annual (lb/yr)
PM10	7.6	0.24	91.65
NOx	100	3.22	1205.88
CO	84	2.70	1012.94
SO2	0.6	0.02	7.24
POC	5.5	0.18	66.32

Cremation Emissions

Notes:
1. PM10 emission factor from EPA's FIRE program.
2. Emission factors from other pollutants are from AP-42 for uncontrolled medical waste incineration. AP-42 Chapter 2.3 (Tables 2.3-1 and 2.3-2)

Emissions from Cremation of Body (including case wrappings)

Pollutant	Emission Factor (lb/ton)	Max.Daily (lb/day)	Annual (lb/yr)
PM10	1.13	0.68	254.25
NOx	3.56	2.14	801.00
CO	2.95	1.77	663.75
SO2	2.17	1.30	488.25
POC	0.30	0.18	67.28

Total Criteria Pollutant Emissions

Total Criteria Pollutant Emissions

Pollutant	Nat. Gas (lb/yr)	Cremation (lb/yr)	Annual (TPY)
PM10	91.65	254.25	0.17
NOx	1205.88	801.00	1.00
CO	1012.94	663.75	0.84
SO2	7.24	488.25	0.25
POC	66.32	67.28	0.07

Toxic Emissions from Crematory Retort

Pollutant	Emission Factor (lb/body)	Max. Hr. (lb/hr)	Trigger (lb/hr)	Annual (lb/yr)	Trigger (lb/yr)	Risk Screen (yes/no)
Acetaldehyde	1.30E-04	1.30E-04	1.00E+00	3.90E-01	3.80E+01	no
Antimony	3.00E-05		None		None	
Arsenic	3.00E-05	1.50E-05	4.40E-04	9.00E-02	7.20E-03	yes
Beryllium	1.40E-06		None	4.20E-03	4.70E-02	no
Cadmium	1.10E-05		None	3.30E-02	2.60E-02	yes
Chromium, hx	1.40E-05		None	4.20E-02	7.70E-04	yes
Copper	2.70E-05	1.35E-05	2.20E-01		None	no
Formaldehyde	3.40E-05	3.40E-05	1.20E-01	1.02E-01	1.80E+01	no
Hydrogen chloride	7.20E-02	7.20E-02	4.60E+00	2.16E+02	3.50E+02	no
Hydrogen fluoride	6.60E-04	6.60E-04	5.30E-01	1.98E+00	5.40E+02	no
Lead	6.60E-05		None	1.98E-01	3.20E+00	no
Mercury[3]	3.40E-03	1.30E-02	1.30E-03	1.02E+01	2.70E-01	yes
Nickel	3.80E-05	1.90E-05	1.30E-02	1.14E-01	4.30E-01	no
Selenium	4.40E-05		None	1.32E-01	7.70E+02	no
Zinc	3.50E-04		None		None	
Chlorinated dibenzodioxins and furans	1.40E-09		None	4.20E-06	3.40E-07	yes
PAH (benzo(a)pyrene equivalents)	4.90E-08		None	1.47E-04	6.90E-03	no

Note:
3. Maximum Hourly Rate for Acetaldehyde, Formaldehyde, Hydrogen chloride, Hydrogen fluoride, and Mercury is set based on one body per hour.

23-153 Heritage Oaks, San Jose Construction Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.3. Site Preparation (2025) - Unmitigated

3.5. Grading (2025) - Unmitigated

3.7. Building Construction (2025) - Unmitigated

3.9. Building Construction (2026) - Unmitigated

3.11. Paving (2026) - Unmitigated

3.13. Architectural Coating (2026) - Unmitigated

3.15. Trenching (2025) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	
Project Name	23-153 Heritage Oaks, San Jose Construction
Construction Start Date	1/01/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	34.4
Location	McKean Rd & Bailey Ave, Coyote, CA 95120, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1931
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

General Office Building	59.7	1000sqft	1.37	59,739	11,460,248	0.00	—	—

Parking Lot	459	1000sqft	10.5	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.								PM2.5T	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Unmit.	17.1	51.8	1.83	10.7	12.5	1.63	4.52	6.15	19,538
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.75	47.1	1.62	10.4	12.0	1.43	4.45	5.88	17,772
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	2.33	21.4	0.72	4.08	4.80	0.64	1.64	2.28	8,637
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.42	3.90	0.13	0.74	0.88	0.12	0.30	0.42	1,430

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									
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—
2025	4.39	51.8	1.83	10.7	12.5	1.63	4.52	6.15	19,538
2026	17.1	13.7	0.39	1.53	1.92	0.36	0.41	0.78	7,256

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	3.75	47.1	1.62	10.4	12.0	1.43	4.45	5.88	17,772
2026	0.42	3.91	0.14	0.26	0.40	0.13	0.07	0.19	1,326
Average Daily	—	—	—	—	—	—	—	—	—
2025	1.70	21.4	0.72	4.08	4.80	0.64	1.64	2.28	8,637
2026	2.33	2.49	0.07	0.23	0.30	0.07	0.06	0.13	1,135
Annual	—	—	—	—	—	—	—	—	—
2025	0.31	3.90	0.13	0.74	0.88	0.12	0.30	0.42	1,430
2026	0.42	0.45	0.01	0.04	0.06	0.01	0.01	0.02	188

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location								PM2.5T	
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	11.7	0.49	—	0.49	0.45	—	0.45	2,035
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
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.03	—	0.03	0.03	—	0.03	128
Demolition	—	—	—	< 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

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.01	—	0.01	0.01	—	0.01	21.2
Demolition	—	—	—	< 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	0.04	0.04	0.00	0.10	0.10	0.00	0.02	0.02	101
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	11.1
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.41
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	0.70
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12

3.3. Site Preparation (2025) - Unmitigated

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

Location									
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	16.2	0.70	—	0.70	0.64	—	0.64	2,723

Dust From Material Movement	—	—	—	3.93	3.93	—	2.02	2.02	—
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	1.70	16.2	0.70	—	0.70	0.64	—	0.64	2,723
Dust From Material Movement	—	—	—	3.93	3.93	—	2.02	2.02	—
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	0.40	3.78	0.16	—	0.16	0.15	—	0.15	634
Dust From Material Movement	—	—	—	0.91	0.91	—	0.47	0.47	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.69	0.03	—	0.03	0.03	—	0.03	105
Dust From Material Movement	—	—	—	0.17	0.17	—	0.09	0.09	—
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	0.04	0.00	0.14	0.14	0.00	0.03	0.03	152
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	0.05	0.00	0.14	0.14	0.00	0.03	0.03	141
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	0.03	0.03	0.00	0.01	0.01	33.2
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	5.49
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. Grading (2025) - Unmitigated

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

Location							PM2.5D		
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.69	15.7	0.70	—	0.70	0.65	—	0.65	2,708
Dust From Material Movement	—	—	—	3.17	3.17	—	1.54	1.54	—
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	1.69	15.7	0.70	—	0.70	0.65	—	0.65	2,708
Dust From Material Movement	—	—	—	3.17	3.17	—	1.54	1.54	—
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	0.80	7.43	0.33	—	0.33	0.31	—	0.31	1,283
Dust From Material Movement	—	—	—	1.50	1.50	—	0.73	0.73	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.36	0.06	—	0.06	0.06	—	0.06	212
Dust From Material Movement	—	—	—	0.27	0.27	—	0.13	0.13	—
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	0.06	0.00	0.21	0.21	0.00	0.05	0.05	218
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.24	14.3	0.21	2.96	3.17	0.14	0.81	0.95	12,018
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.00	0.21	0.21	0.00	0.05	0.05	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.23	15.0	0.21	2.96	3.17	0.14	0.81	0.95	11,999
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.00	0.10	0.10	0.00	0.02	0.02	96.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	6.99	0.10	1.38	1.48	0.07	0.38	0.44	5,690
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	16.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.28	0.02	0.25	0.27	0.01	0.07	0.08	942

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									CO2e
Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.53	0.15	—	0.15	0.14	—	0.14	756
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	0.38	3.53	0.15	—	0.15	0.14	—	0.14	756
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	0.20	1.90	0.08	—	0.08	0.08	—	0.08	407
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	0.35	0.02	—	0.02	0.01	—	0.01	67.4
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	0.05	0.00	0.16	0.16	0.00	0.04	0.04	166
Vendor	0.01	0.34	< 0.005	0.07	0.07	< 0.005	0.02	0.02	277
Hauling	< 0.005	0.18	< 0.005	0.04	0.04	< 0.005	0.01	0.01	151
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.00	0.16	0.16	0.00	0.04	0.04	154

Vendor	0.01	0.36	< 0.005	0.07	0.07	< 0.005	0.02	0.02	276
Hauling	< 0.005	0.19	< 0.005	0.04	0.04	< 0.005	0.01	0.01	150
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	83.8
Vendor	0.01	0.19	< 0.005	0.04	0.04	< 0.005	0.01	0.01	149
Hauling	< 0.005	0.10	< 0.005	0.02	0.02	< 0.005	0.01	0.01	81.0
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	13.9
Vendor	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	24.6
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	13.4

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)

Onsite	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.33	0.13	—	0.13	0.12	—	0.12	756
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	0.36	3.33	0.13	—	0.13	0.12	—	0.12	756
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	0.06	0.59	0.02	—	0.02	0.02	—	0.02	135
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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
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	0.06	0.04	0.00	0.16	0.16	0.00	0.04	0.04	163
Vendor	0.01	0.32	< 0.005	0.07	0.07	< 0.005	0.02	0.02	272
Hauling	< 0.005	0.17	< 0.005	0.04	0.04	< 0.005	0.01	0.01	148
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.00	0.16	0.16	0.00	0.04	0.04	151
Vendor	0.01	0.34	< 0.005	0.07	0.07	< 0.005	0.02	0.02	271
Hauling	< 0.005	0.18	< 0.005	0.04	0.04	< 0.005	0.01	0.01	147
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	27.2
Vendor	< 0.005	0.06	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	48.4
Hauling	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	26.3
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.50
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.01
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.35

3.11. 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	0.76	7.12	0.32	—	0.32	0.29	—	0.29	1,516
Paving	0.63	—	—	—	—	—	—	—	—
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	0.09	0.86	0.04	—	0.04	0.04	—	0.04	183
Paving	0.08	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.01	—	0.01	0.01	—	0.01	30.3
Paving	0.01	—	—	—	—	—	—	—	—
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	0.05	0.03	0.00	0.12	0.12	0.00	0.03	0.03	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.12	6.56	0.07	1.41	1.48	0.07	0.39	0.45	5,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	14.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.82	0.01	0.17	0.18	0.01	0.05	0.05	676
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	112

3.13. 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	0.07	0.92	0.01	—	0.01	0.01	—	0.01	179
Architectural Coatings	17.1	—	—	—	—	—	—	—	—
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	0.11	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.6
Architectural Coatings	2.06	—	—	—	—	—	—	—	—
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	3.58
Architectural Coatings	0.38	—	—	—	—	—	—	—	—
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	0.01	0.01	0.00	0.03	0.03	0.00	0.01	0.01	32.6

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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.68
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	0.61
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

3.15. Trenching (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	0.15	1.45	0.05	—	0.05	0.05	—	0.05	325
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	0.02	0.17	0.01	—	0.01	0.01	—	0.01	39.2
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	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.49

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	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	43.5
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)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.91
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	0.81
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	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

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	1/1/2025	1/31/2025	5.00	23.0	—
Site Preparation	Site Preparation	2/1/2025	6/1/2025	5.00	85.0	—
Grading	Grading	2/15/2025	10/15/2025	5.00	173	—
Building Construction	Building Construction	4/1/2025	4/1/2026	5.00	262	—
Paving	Paving	6/3/2026	8/3/2026	5.00	44.0	—
Architectural Coating	Architectural Coating	4/2/2026	6/2/2026	5.00	44.0	—
Trenching	Trenching	4/15/2025	6/15/2025	5.00	44.0	—

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	Rubber Tired Dozers	Diesel	Average	1.00	7.70	367	0.40
Demolition	Excavators	Diesel	Average	1.00	7.70	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	0.20	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.70	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	4.10	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	4.10	84.0	0.37
Grading	Graders	Diesel	Average	2.00	3.70	148	0.41
Grading	Excavators	Diesel	Average	2.00	2.20	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	4.60	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	2.00	4.60	367	0.40
Grading	Concrete/Industrial Saws	Diesel	Average	1.00	0.30	33.0	0.73
Building Construction	Forklifts	Diesel	Average	3.00	4.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	4.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	0.60	367	0.29
Building Construction	Welders	Diesel	Average	1.00	0.50	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	4.60	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

Architectural Coating	Air Compressors	Diesel	Average	1.00	1.40	37.0	0.48
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	6.00	36.0	0.38

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	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.15	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	25.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	160	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	19.1	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	9.79	8.40	HHDT,MHDT

Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	76.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.82	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
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	—	8.40	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	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	0.00	0.00	89,609	29,870	27,541

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	10.0	—
Site Preparation	—	—	65.3	0.00	—
Grading	—	220,910	179	0.00	—
Paving	0.00	0.00	0.00	0.00	10.5

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
General Office Building	0.00	0%
Parking Lot	10.5	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	13.3	annual days of extreme heat
Extreme Precipitation	12.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.9	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	N/A	N/A	N/A	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	N/A	N/A	N/A	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 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	26.7
AQ-PM	9.51
AQ-DPM	6.70
Drinking Water	49.1
Lead Risk Housing	18.0
Pesticides	39.0
Toxic Releases	20.8
Traffic	17.6
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	57.2

Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	9.92
Cardio-vascular	6.13
Low Birth Weights	86.0
Socioeconomic Factor Indicators	—
Education	25.5
Housing	33.2
Linguistic	59.0
Poverty	17.2
Unemployment	4.89

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	79.37892981
Employed	42.16604645
Median HI	92.49326318
Education	—
Bachelor's or higher	82.90773771
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	66.18760426

Active commuting	25.61272937
Social	—
2-parent households	67.03451816
Voting	87.11664314
Neighborhood	—
Alcohol availability	85.06351854
Park access	51.64891569
Retail density	9.559861414
Supermarket access	20.32593353
Tree canopy	93.23752085
Housing	—
Homeownership	78.81432054
Housing habitability	73.14256384
Low-inc homeowner severe housing cost burden	42.33286283
Low-inc renter severe housing cost burden	43.78288207
Uncrowded housing	76.50455537
Health Outcomes	—
Insured adults	74.96471192
Arthritis	47.0
Asthma ER Admissions	92.9
High Blood Pressure	52.5
Cancer (excluding skin)	25.9
Asthma	61.7
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	70.2

Cognitively Disabled	74.6
Physically Disabled	67.1
Heart Attack ER Admissions	90.2
Mental Health Not Good	79.6
Chronic Kidney Disease	73.0
Obesity	78.7
Pedestrian Injuries	73.5
Physical Health Not Good	81.0
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	60.3
Current Smoker	82.7
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	12.2
English Speaking	44.2
Foreign-born	66.9
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.5
Traffic Density	15.8
Traffic Access	48.8
Other Indices	—
Hardship	15.4

Other Decision Support	—
2016 Voting	85.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	84.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	SJCE 2020 Rate = 178
Construction: Construction Phases	Applicant provided construction
Construction: Off-Road Equipment	Provided construction information, default paving
Construction: Trips and VMT	Pavement demo = 2 tons, estimated const build concrete trips = 2 trips/day, asphalt hauling = 13,966-cy

Construction: On-Road Fugitive Dust	BAAQMD & SJ BMPs = 15mph
Operations: Energy Use	—
Operations: Water and Waste Water	—

23-153 Heritage Oaks, San Jose Operational Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-153 Heritage Oaks, San Jose Operational
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	34.4
Location	McKean Rd & Bailey Ave, Coyote, CA 95120, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1931
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
General Office Building	36.0	1000sqft	0.83	35,989	0.00	0.00	—	—

Parking Lot	140	Space	1.26	0.00	0.00	—	—	—
City Park	275	Acre	275	0.00	11,460,248	11,460,248	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

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.	10.8	2.86	0.07	7.79	7.86	0.06	1.98	2.04	9,861
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	10.4	3.29	0.07	7.79	7.86	0.06	1.98	2.04	9,342
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	9.35	2.00	0.05	4.65	4.70	0.05	1.18	1.23	6,343
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	1.71	0.36	0.01	0.85	0.86	0.01	0.22	0.22	1,050

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	3.14	2.62	0.05	7.79	7.84	0.04	1.98	2.02	8,337

Area	7.65	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.46
Energy	0.01	0.23	0.02	—	0.02	0.02	—	0.02	674
Water	—	—	—	—	—	—	—	—	736
Waste	—	—	—	—	—	—	—	—	108
Refrig.	—	—	—	—	—	—	—	—	0.09
Total	10.8	2.86	0.07	7.79	7.86	0.06	1.98	2.04	9,861
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Mobile	3.01	3.06	0.05	7.79	7.84	0.04	1.98	2.02	7,824
Area	7.39	—	—	—	—	—	—	—	—
Energy	0.01	0.23	0.02	—	0.02	0.02	—	0.02	674
Water	—	—	—	—	—	—	—	—	736
Waste	—	—	—	—	—	—	—	—	108
Refrig.	—	—	—	—	—	—	—	—	0.09
Total	10.4	3.29	0.07	7.79	7.86	0.06	1.98	2.04	9,342
Average Daily	—	—	—	—	—	—	—	—	—
Mobile	1.82	1.76	0.03	4.65	4.68	0.03	1.18	1.21	4,822
Area	7.52	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.19
Energy	0.01	0.23	0.02	—	0.02	0.02	—	0.02	674
Water	—	—	—	—	—	—	—	—	736
Waste	—	—	—	—	—	—	—	—	108
Refrig.	—	—	—	—	—	—	—	—	0.09
Total	9.35	2.00	0.05	4.65	4.70	0.05	1.18	1.23	6,343
Annual	—	—	—	—	—	—	—	—	—
Mobile	0.33	0.32	0.01	0.85	0.85	< 0.005	0.22	0.22	798
Area	1.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.53
Energy	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	112
Water	—	—	—	—	—	—	—	—	122

Waste	—	—	—	—	—	—	—	—	17.8
Refrig.	—	—	—	—	—	—	—	—	0.01
Total	1.71	0.36	0.01	0.85	0.86	0.01	0.22	0.22	1,050

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)	—	—	—	—	—	—	—	—	—
General Office Building	1.15	0.96	0.02	2.87	2.88	0.02	0.73	0.74	3,067
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	1.98	1.65	0.03	4.93	4.96	0.03	1.25	1.28	5,270
Total	3.14	2.62	0.05	7.79	7.84	0.04	1.98	2.02	8,337
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	1.11	1.13	0.02	2.87	2.88	0.02	0.73	0.74	2,879
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	1.90	1.94	0.03	4.93	4.96	0.03	1.25	1.28	4,946
Total	3.01	3.06	0.05	7.79	7.84	0.04	1.98	2.02	7,824
Annual	—	—	—	—	—	—	—	—	—
General Office Building	0.15	0.15	< 0.005	0.39	0.39	< 0.005	0.10	0.10	364
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.18	0.17	< 0.005	0.46	0.46	< 0.005	0.12	0.12	434

Total	0.33	0.32	0.01	0.85	0.85	< 0.005	0.22	0.22	798

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)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	376
Parking Lot	—	—	—	—	—	—	—	—	23.7
City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	399
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	376
Parking Lot	—	—	—	—	—	—	—	—	23.7
City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	399
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	62.2
Parking Lot	—	—	—	—	—	—	—	—	3.93
City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	66.1

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)	—	—	—	—	—	—	—	—	—
General Office Building	0.01	0.23	0.02	—	0.02	0.02	—	0.02	275
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
City Park	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.01	0.23	0.02	—	0.02	0.02	—	0.02	275
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	0.01	0.23	0.02	—	0.02	0.02	—	0.02	275
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
City Park	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.01	0.23	0.02	—	0.02	0.02	—	0.02	275
Annual	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	45.5
Parking Lot	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
City Park	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	45.5

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)	—	—	—	—	—	—	—	—	—
Consumer Products	7.29	—	—	—	—	—	—	—	—

Architectural Coatings	0.11	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.46
Total	7.65	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.46
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Consumer Products	7.29	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—
Total	7.39	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—
Consumer Products	1.33	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.53
Total	1.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.53

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)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	73.0
Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	662

Total	—	—	—	—	—	—	—	—	736
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	73.0
Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	662
Total	—	—	—	—	—	—	—	—	736
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	12.1
Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	110
Total	—	—	—	—	—	—	—	—	122

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)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	63.1
Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	44.6
Total	—	—	—	—	—	—	—	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	63.1

Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	44.6
Total	—	—	—	—	—	—	—	—	108
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	10.4
Parking Lot	—	—	—	—	—	—	—	—	0.00
City Park	—	—	—	—	—	—	—	—	7.38
Total	—	—	—	—	—	—	—	—	17.8

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)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.09
City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	0.09
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.09
City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	0.09
Annual	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	0.01

City Park	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	0.01

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	—	—	—	—	—	—	—	—	—

4.8. 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	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—

4.10. 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	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

5. Activity Data

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
General Office Building	351	79.5	25.2	96,850	4,064	922	292	1,122,963
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	215	539	602	115,431	2,487	6,250	6,983	1,338,414

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

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)
0	0.00	53,984	17,995	3,293

5.10.3. Landscape Equipment

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)
General Office Building	761,838	178	0.0330	0.0040	854,749
Parking Lot	48,080	178	0.0330	0.0040	0.00
City Park	0.00	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)
General Office Building	6,396,460	0.00
Parking Lot	0.00	0.00
City Park	0.00	272,255,473

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	33.5	—
Parking Lot	0.00	—
City Park	23.6	—

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
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	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

5.16. 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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	13.3	annual days of extreme heat
Extreme Precipitation	12.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.9	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	N/A	N/A	N/A	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	N/A	N/A	N/A	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 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	26.7

AQ-PM	9.51
AQ-DPM	6.70
Drinking Water	49.1
Lead Risk Housing	18.0
Pesticides	39.0
Toxic Releases	20.8
Traffic	17.6
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	57.2
Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	9.92
Cardio-vascular	6.13
Low Birth Weights	86.0
Socioeconomic Factor Indicators	—
Education	25.5
Housing	33.2
Linguistic	59.0
Poverty	17.2
Unemployment	4.89

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	79.37892981
Employed	42.16604645
Median HI	92.49326318
Education	—
Bachelor's or higher	82.90773771
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	66.18760426
Active commuting	25.61272937
Social	—
2-parent households	67.03451816
Voting	87.11664314
Neighborhood	—
Alcohol availability	85.06351854
Park access	51.64891569
Retail density	9.559861414
Supermarket access	20.32593353
Tree canopy	93.23752085
Housing	—
Homeownership	78.81432054
Housing habitability	73.14256384
Low-inc homeowner severe housing cost burden	42.33286283
Low-inc renter severe housing cost burden	43.78288207
Uncrowded housing	76.50455537
Health Outcomes	—

Insured adults	74.96471192
Arthritis	47.0
Asthma ER Admissions	92.9
High Blood Pressure	52.5
Cancer (excluding skin)	25.9
Asthma	61.7
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	70.2
Cognitively Disabled	74.6
Physically Disabled	67.1
Heart Attack ER Admissions	90.2
Mental Health Not Good	79.6
Chronic Kidney Disease	73.0
Obesity	78.7
Pedestrian Injuries	73.5
Physical Health Not Good	81.0
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	60.3
Current Smoker	82.7
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3

Elderly	12.2
English Speaking	44.2
Foreign-born	66.9
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.5
Traffic Density	15.8
Traffic Access	48.8
Other Indices	—
Hardship	15.4
Other Decision Support	—
2016 Voting	85.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	84.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	SJCE 2020 Rate = 178
Construction: Construction Phases	Applicant provided construction
Construction: Off-Road Equipment	Provided construction information, default paving
Construction: Trips and VMT	Pavement demo = 2 tons, estimated const build concrete trips = 2 trips/day, asphalt hauling = 13,966-cy
Construction: On-Road Fugitive Dust	BAAQMD & SJ BMPs = 15mph
Operations: Energy Use	—
Operations: Water and Waste Water	—

23-153 Heritage Oaks, San Jose HRA Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.3. Site Preparation (2025) - Unmitigated

3.5. Grading (2025) - Unmitigated

3.7. Building Construction (2025) - Unmitigated

3.9. Building Construction (2026) - Unmitigated

3.11. Paving (2026) - Unmitigated

3.13. Architectural Coating (2026) - Unmitigated

3.15. Trenching (2025) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-153 Heritage Oaks, San Jose HRA
Construction Start Date	1/01/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	34.4
Location	McKean Rd & Bailey Ave, Coyote, CA 95120, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1931
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
General Office Building	59.7	1000sqft	1.37	59,739	11,460,248	0.00	—	—

Parking Lot	459	1000sqft	10.5	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	17.1	39.9	1.62	7.30	8.92	1.49	3.61	5.10	7,494
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	3.60	34.9	1.42	7.28	8.69	1.30	3.60	4.90	6,339
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	2.32	15.5	0.62	2.51	3.13	0.57	1.22	1.79	2,956
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.42	2.83	0.11	0.46	0.57	0.10	0.22	0.33	489

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)	—	—	—	—	—	—	—	—	—
2025	4.22	39.9	1.62	7.30	8.92	1.49	3.61	5.10	7,494
2026	17.1	8.47	0.32	0.08	0.40	0.30	0.02	0.32	1,935

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2025	3.60	34.9	1.42	7.28	8.69	1.30	3.60	4.90	6,339
2026	0.41	3.52	0.13	0.02	0.16	0.12	0.01	0.13	825
Average Daily	—	—	—	—	—	—	—	—	—
2025	1.62	15.5	0.62	2.51	3.13	0.57	1.22	1.79	2,956
2026	2.32	1.76	0.06	0.01	0.08	0.06	< 0.005	0.06	402
Annual	—	—	—	—	—	—	—	—	—
2025	0.30	2.83	0.11	0.46	0.57	0.10	0.22	0.33	489
2026	0.42	0.32	0.01	< 0.005	0.01	0.01	< 0.005	0.01	66.6

3. Construction Emissions Details

3.1. Demolition (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	1.23	11.7	0.49	—	0.49	0.45	—	0.45	2,035
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
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.03	—	0.03	0.03	—	0.03	128
Demolition	—	—	—	< 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

Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.01	—	0.01	0.01	—	0.01	21.2
Demolition	—	—	—	< 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	0.03	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.0
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	0.81
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.69
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	0.05
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.11
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	0.01

3.3. Site Preparation (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	1.70	16.2	0.70	—	0.70	0.64	—	0.64	2,723

Dust From Material Movement	—	—	—	3.93	3.93	—	2.02	2.02	—
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	1.70	16.2	0.70	—	0.70	0.64	—	0.64	2,723
Dust From Material Movement	—	—	—	3.93	3.93	—	2.02	2.02	—
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	0.40	3.78	0.16	—	0.16	0.15	—	0.15	634
Dust From Material Movement	—	—	—	0.91	0.91	—	0.47	0.47	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.69	0.03	—	0.03	0.03	—	0.03	105
Dust From Material Movement	—	—	—	0.17	0.17	—	0.09	0.09	—
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	0.05	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	16.1
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	15.4
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	3.58
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	0.59
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. Grading (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	1.69	15.7	0.70	—	0.70	0.65	—	0.65	2,708
Dust From Material Movement	—	—	—	3.17	3.17	—	1.54	1.54	—
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	1.69	15.7	0.70	—	0.70	0.65	—	0.65	2,708
Dust From Material Movement	—	—	—	3.17	3.17	—	1.54	1.54	—
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	0.80	7.43	0.33	—	0.33	0.31	—	0.31	1,283
Dust From Material Movement	—	—	—	1.50	1.50	—	0.73	0.73	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.36	0.06	—	0.06	0.06	—	0.06	212
Dust From Material Movement	—	—	—	0.27	0.27	—	0.13	0.13	—
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	0.02	0.02	0.00	< 0.005	< 0.005	23.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	2.85	0.01	0.15	0.16	0.01	0.04	0.05	867
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.07	0.02	0.00	0.02	0.02	0.00	< 0.005	< 0.005	22.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	2.99	0.01	0.15	0.16	0.01	0.04	0.05	871
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	1.38	0.01	0.07	0.07	< 0.005	0.02	0.02	411
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.25	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	68.1

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	0.38	3.53	0.15	—	0.15	0.14	—	0.14	756
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	0.38	3.53	0.15	—	0.15	0.14	—	0.14	756
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	0.20	1.90	0.08	—	0.08	0.08	—	0.08	407
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	0.35	0.02	—	0.02	0.01	—	0.01	67.4
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	0.05	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	17.6
Vendor	0.01	0.13	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	42.5
Hauling	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	16.8

Vendor	< 0.005	0.13	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	42.6
Hauling	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.9
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.03	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	9.03
Vendor	< 0.005	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	22.9
Hauling	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.85
Annual	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.49
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.79
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.97

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)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.33	0.13	—	0.13	0.12	—	0.12	756
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	0.36	3.33	0.13	—	0.13	0.12	—	0.12	756
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	0.06	0.59	0.02	—	0.02	0.02	—	0.02	135
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	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
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	0.05	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	17.3
Vendor	< 0.005	0.12	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.8
Hauling	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.05	0.02	0.00	0.01	0.01	0.00	< 0.005	< 0.005	16.5
Vendor	< 0.005	0.13	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	41.9
Hauling	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	10.7
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.93
Vendor	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.45
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.90
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.49
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.23
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31

3.11. 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	0.76	7.12	0.32	—	0.32	0.29	—	0.29	1,516
Paving	0.63	—	—	—	—	—	—	—	—
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	0.09	0.86	0.04	—	0.04	0.04	—	0.04	183
Paving	0.08	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.01	—	0.01	0.01	—	0.01	30.3
Paving	0.01	—	—	—	—	—	—	—	—
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	0.04	0.01	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	1.34	< 0.005	0.07	0.07	< 0.005	0.02	0.02	405
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.17	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	48.9
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.10

3.13. 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	0.07	0.92	0.01	—	0.01	0.01	—	0.01	179
Architectural Coatings	17.1	—	—	—	—	—	—	—	—
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	0.11	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.6
Architectural Coatings	2.06	—	—	—	—	—	—	—	—
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	3.58
Architectural Coatings	0.38	—	—	—	—	—	—	—	—
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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.46

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)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.40
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	0.07
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

3.15. Trenching (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	0.15	1.45	0.05	—	0.05	0.05	—	0.05	325
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	0.02	0.17	0.01	—	0.01	0.01	—	0.01	39.2
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	0.03	< 0.005	—	< 0.005	< 0.005	—	< 0.005	6.49

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	0.01	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.61
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)	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.53
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	0.09
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	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

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	1/1/2025	1/31/2025	5.00	23.0	—
Site Preparation	Site Preparation	2/1/2025	6/1/2025	5.00	85.0	—
Grading	Grading	2/15/2025	10/15/2025	5.00	173	—
Building Construction	Building Construction	4/1/2025	4/1/2026	5.00	262	—
Paving	Paving	6/3/2026	8/3/2026	5.00	44.0	—
Architectural Coating	Architectural Coating	4/2/2026	6/2/2026	5.00	44.0	—
Trenching	Trenching	4/15/2025	6/15/2025	5.00	44.0	—

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	Rubber Tired Dozers	Diesel	Average	1.00	7.70	367	0.40
Demolition	Excavators	Diesel	Average	1.00	7.70	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	0.20	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.70	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	4.10	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	4.10	84.0	0.37
Grading	Graders	Diesel	Average	2.00	3.70	148	0.41
Grading	Excavators	Diesel	Average	2.00	2.20	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	4.60	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	2.00	4.60	367	0.40
Grading	Concrete/Industrial Saws	Diesel	Average	1.00	0.30	33.0	0.73
Building Construction	Forklifts	Diesel	Average	3.00	4.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	4.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	0.60	367	0.29
Building Construction	Welders	Diesel	Average	1.00	0.50	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	4.60	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38

Architectural Coating	Air Compressors	Diesel	Average	1.00	1.40	37.0	0.48
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	6.00	36.0	0.38

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	12.5	1.00	LDA,LDT1,LDT2
Demolition	Vendor	—	1.00	HHDT,MHDT
Demolition	Hauling	0.15	1.00	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	1.00	LDA,LDT1,LDT2
Site Preparation	Vendor	—	1.00	HHDT,MHDT
Site Preparation	Hauling	0.00	1.00	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	25.0	1.00	LDA,LDT1,LDT2
Grading	Vendor	—	1.00	HHDT,MHDT
Grading	Hauling	160	1.00	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	19.1	1.00	LDA,LDT1,LDT2
Building Construction	Vendor	9.79	1.00	HHDT,MHDT

Building Construction	Hauling	2.00	1.00	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	1.00	LDA,LDT1,LDT2
Paving	Vendor	—	1.00	HHDT,MHDT
Paving	Hauling	76.0	1.00	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.82	1.00	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	1.00	HHDT,MHDT
Architectural Coating	Hauling	0.00	1.00	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	1.00	LDA,LDT1,LDT2
Trenching	Vendor	—	1.00	HHDT,MHDT
Trenching	Hauling	0.00	1.00	HHDT
Trenching	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	0.00	0.00	89,609	29,870	27,541

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	10.0	—
Site Preparation	—	—	65.3	0.00	—
Grading	—	220,910	179	0.00	—
Paving	0.00	0.00	0.00	0.00	10.5

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
General Office Building	0.00	0%
Parking Lot	10.5	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	13.3	annual days of extreme heat
Extreme Precipitation	12.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.9	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	N/A	N/A	N/A	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	N/A	N/A	N/A	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 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	26.7
AQ-PM	9.51
AQ-DPM	6.70
Drinking Water	49.1
Lead Risk Housing	18.0
Pesticides	39.0
Toxic Releases	20.8
Traffic	17.6
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	57.2

Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	9.92
Cardio-vascular	6.13
Low Birth Weights	86.0
Socioeconomic Factor Indicators	—
Education	25.5
Housing	33.2
Linguistic	59.0
Poverty	17.2
Unemployment	4.89

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	79.37892981
Employed	42.16604645
Median HI	92.49326318
Education	—
Bachelor's or higher	82.90773771
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	66.18760426

Active commuting	25.61272937
Social	—
2-parent households	67.03451816
Voting	87.11664314
Neighborhood	—
Alcohol availability	85.06351854
Park access	51.64891569
Retail density	9.559861414
Supermarket access	20.32593353
Tree canopy	93.23752085
Housing	—
Homeownership	78.81432054
Housing habitability	73.14256384
Low-inc homeowner severe housing cost burden	42.33286283
Low-inc renter severe housing cost burden	43.78288207
Uncrowded housing	76.50455537
Health Outcomes	—
Insured adults	74.96471192
Arthritis	47.0
Asthma ER Admissions	92.9
High Blood Pressure	52.5
Cancer (excluding skin)	25.9
Asthma	61.7
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	70.2

Cognitively Disabled	74.6
Physically Disabled	67.1
Heart Attack ER Admissions	90.2
Mental Health Not Good	79.6
Chronic Kidney Disease	73.0
Obesity	78.7
Pedestrian Injuries	73.5
Physical Health Not Good	81.0
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	60.3
Current Smoker	82.7
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	12.2
English Speaking	44.2
Foreign-born	66.9
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.5
Traffic Density	15.8
Traffic Access	48.8
Other Indices	—
Hardship	15.4

Other Decision Support	—
2016 Voting	85.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	84.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	SJCE 2020 Rate = 178
Construction: Construction Phases	Applicant provided construction
Construction: Off-Road Equipment	Provided construction information, default paving
Construction: Trips and VMT	Pavement demo = 2 tons, estimated const build concrete trips = 2 trips/day, asphalt hauling = 13,966-cy. HRA = 1 mile trip length for localized emissions.

Construction: On-Road Fugitive Dust	BAAQMD & SJ BMPs = 15mph
Operations: Energy Use	San Jose reach code = no natural gas, converted to electricity
Operations: Water and Waste Water	Wastewater treatment 100% aerobic, no septic tanks or lagoons

23-153 Heritage Oaks Crematorium Water Line BMPs Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

3.3. Trenching (2026) - Unmitigated

3.5. Paving (2026) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-153 Heritage Oaks Crematorium Water Line BMPs
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	34.4
Location	McKean Rd & Bailey Ave, Santa Teresa Hills, CA 95120, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1931
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

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
Road Construction	4.20	Mile	2.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	0.23	3.18	0.07	0.33	0.40	0.07	0.09	0.15	1,602
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.52	5.35	0.20	0.36	0.43	0.19	0.10	0.25	1,718
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.16	2.22	0.06	0.21	0.27	0.05	0.06	0.11	1,064
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.40	0.01	0.04	0.05	0.01	0.01	0.02	176

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)	—	—	—	—	—	—	—	—	—
2026	0.23	3.18	0.07	0.33	0.40	0.07	0.09	0.15	1,602
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2026	0.52	5.35	0.20	0.36	0.43	0.19	0.10	0.25	1,718
Average Daily	—	—	—	—	—	—	—	—	—

2026	0.16	2.22	0.06	0.21	0.27	0.05	0.06	0.11	1,064
Annual	—	—	—	—	—	—	—	—	—
2026	0.03	0.40	0.01	0.04	0.05	0.01	0.01	0.02	176

3. Construction Emissions Details

3.1. Demolition (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	0.02	0.19	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.6
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	0.02	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.35
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	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.56

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)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	19.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.68	0.02	0.34	0.36	0.02	0.09	0.11	1,362
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.18	< 0.005	0.04	0.04	< 0.005	0.01	0.01	149
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	24.7

3.3. Trenching (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	0.20	1.86	0.06	—	0.06	0.05	—	0.05	433

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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.86	0.06	—	0.06	0.05	—	0.05	433
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
Average Daily	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.86	0.03	—	0.03	0.03	—	0.03	202
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
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	< 0.005	—	< 0.005	< 0.005	—	< 0.005	33.4
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)	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.00	0.04	0.04	0.00	0.01	0.01	42.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.32	0.01	0.28	0.30	0.01	0.08	0.09	1,125
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	39.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.39	0.01	0.28	0.30	0.01	0.08	0.09	1,124
Average Daily	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	18.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.63	0.01	0.13	0.14	0.01	0.04	0.04	524
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	< 0.005	0.02	0.02	< 0.005	0.01	0.01	86.7

3.5. 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)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.59	0.19	—	0.19	0.18	—	0.18	1,049
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	0.44	0.02	—	0.02	0.02	—	0.02	101
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	0.08	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.7

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	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	79.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.73	0.01	0.15	0.16	0.01	0.04	0.05	590
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	56.6
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.27
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	9.37

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	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

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	Linear, Grubbing & Land Clearing	1/1/2026	2/25/2026	5.00	40.0	—
Trenching	Linear, Drainage, Utilities, & Sub-Grade	2/26/2026	10/21/2026	5.00	170	—
Paving	Linear, Paving	10/22/2026	12/9/2026	5.00	35.0	—

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	1.00	33.0	0.73
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

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	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.40	HHDT,MHDT
Demolition	Hauling	18.5	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	0.00	8.40	HHDT,MHDT
Trenching	Hauling	15.2	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	10.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.40	HHDT,MHDT
Paving	Hauling	8.00	20.0	HHDT
Paving	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	—	—	2.00	0.00	—
Trenching	10,074	10,649	2.00	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

Road Construction	2.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	13.3	annual days of extreme heat
Extreme Precipitation	12.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.9	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	26.7
AQ-PM	9.51
AQ-DPM	6.70
Drinking Water	49.1

Lead Risk Housing	18.0
Pesticides	39.0
Toxic Releases	20.8
Traffic	17.6
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	57.2
Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	9.92
Cardio-vascular	6.13
Low Birth Weights	86.0
Socioeconomic Factor Indicators	—
Education	25.5
Housing	33.2
Linguistic	59.0
Poverty	17.2
Unemployment	4.89

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	79.37892981
Employed	42.16604645
Median HI	92.49326318

Education	—
Bachelor's or higher	82.90773771
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	66.18760426
Active commuting	25.61272937
Social	—
2-parent households	67.03451816
Voting	87.11664314
Neighborhood	—
Alcohol availability	85.06351854
Park access	51.64891569
Retail density	9.559861414
Supermarket access	20.32593353
Tree canopy	93.23752085
Housing	—
Homeownership	78.81432054
Housing habitability	73.14256384
Low-inc homeowner severe housing cost burden	42.33286283
Low-inc renter severe housing cost burden	43.78288207
Uncrowded housing	76.50455537
Health Outcomes	—
Insured adults	74.96471192
Arthritis	47.0
Asthma ER Admissions	92.9
High Blood Pressure	52.5
Cancer (excluding skin)	25.9

Asthma	61.7
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	70.2
Cognitively Disabled	74.6
Physically Disabled	67.1
Heart Attack ER Admissions	90.2
Mental Health Not Good	79.6
Chronic Kidney Disease	73.0
Obesity	78.7
Pedestrian Injuries	73.5
Physical Health Not Good	81.0
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	60.3
Current Smoker	82.7
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	12.2
English Speaking	44.2
Foreign-born	66.9
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.5

Traffic Density	15.8
Traffic Access	48.8
Other Indices	—
Hardship	15.4
Other Decision Support	—
2016 Voting	85.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	84.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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 rate is 162 lb /mwh.
Construction: Construction Phases	Total work days for each phase from provided construction worksheet.

Construction: Off-Road Equipment	Information from filled out construction worksheet.
Construction: Demolition	Provided demolition of roadway and open lands.
Construction: Trips and VMT	Demolition = 2,433 tons (12.17 trips/day), Paving = 140 truck loads of asphalt (8 trips/day).
Construction: On-Road Fugitive Dust	BAAQMD & SJ BMPs = 15 mph.

23-153 Heritage Oaks Crematorium Potable Waterline BMPs Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

3.3. Trenching (2026) - Unmitigated

3.5. Paving (2026) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-153 Heritage Oaks Crematorium Potable Waterline BMPs
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40
Precipitation (days)	34.4
Location	McKean Rd & Bailey Ave, Santa Teresa Hills, CA 95120, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1931
EDFZ	1
Electric Utility	San Jose Clean Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

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
Road Construction	0.95	Mile	2.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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, Winter (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.59	9.72	0.24	1.12	1.37	0.23	0.30	0.53	5,257
Average Daily (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.56	0.01	0.07	0.08	0.01	0.02	0.03	308
Annual (Max)	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.10	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	51.0

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)	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—
2026	0.59	9.72	0.24	1.12	1.37	0.23	0.30	0.53	5,257
Average Daily	—	—	—	—	—	—	—	—	—
2026	0.04	0.56	0.01	0.07	0.08	0.01	0.02	0.03	308
Annual	—	—	—	—	—	—	—	—	—
2026	0.01	0.10	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	51.0

3. Construction Emissions Details

3.1. Demolition (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	0.02	0.19	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.6
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	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.67
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	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.11
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)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.00	0.02	0.02	0.00	< 0.005	< 0.005	19.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.09	0.03	0.63	0.66	0.03	0.17	0.20	2,507
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	55.0
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	9.10

3.3. Trenching (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	0.20	1.86	0.06	—	0.06	0.05	—	0.05	433
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
Average Daily	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.20	0.01	—	0.01	0.01	—	0.01	47.5
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
Annual	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.86
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	0.01	0.01	0.00	0.04	0.04	0.00	0.01	0.01	39.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.44	0.01	0.29	0.31	0.01	0.08	0.09	1,165
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	4.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.15	< 0.005	0.03	0.03	< 0.005	0.01	0.01	128
Annual	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	21.1

3.5. 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)	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.59	0.19	—	0.19	0.18	—	0.18	1,049
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	0.06	< 0.005	—	< 0.005	< 0.005	—	< 0.005	14.4
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	0.01	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.38
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	0.03	0.03	0.00	0.08	0.08	0.00	0.02	0.02	79.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	5.10	0.05	1.04	1.09	0.05	0.28	0.33	4,129
Average Daily	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	56.6
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	9.37

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	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

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	Linear, Grubbing & Land Clearing	1/1/2026	1/12/2026	5.00	8.00	—
Trenching	Linear, Drainage, Utilities, & Sub-Grade	1/13/2026	3/9/2026	5.00	40.0	—
Paving	Linear, Paving	3/10/2026	3/16/2026	5.00	5.00	—

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	1.00	33.0	0.73
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

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	2.50	11.7	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.40	HHDT,MHDT
Demolition	Hauling	34.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	5.00	11.7	LDA,LDT1,LDT2
Trenching	Vendor	0.00	8.40	HHDT,MHDT
Trenching	Hauling	15.8	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	10.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.40	HHDT,MHDT
Paving	Hauling	56.0	20.0	HHDT
Paving	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	—	—	2.00	0.00	—
Trenching	2,382	2,670	2.00	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
Road Construction	2.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	13.3	annual days of extreme heat
Extreme Precipitation	12.6	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.9	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	26.7
AQ-PM	9.51
AQ-DPM	6.70
Drinking Water	49.1
Lead Risk Housing	18.0
Pesticides	39.0
Toxic Releases	20.8
Traffic	17.6
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	57.2
Haz Waste Facilities/Generators	40.1
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	9.92
Cardio-vascular	6.13
Low Birth Weights	86.0
Socioeconomic Factor Indicators	—

Education	25.5
Housing	33.2
Linguistic	59.0
Poverty	17.2
Unemployment	4.89

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	79.37892981
Employed	42.16604645
Median HI	92.49326318
Education	—
Bachelor's or higher	82.90773771
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	66.18760426
Active commuting	25.61272937
Social	—
2-parent households	67.03451816
Voting	87.11664314
Neighborhood	—
Alcohol availability	85.06351854
Park access	51.64891569
Retail density	9.559861414
Supermarket access	20.32593353

Tree canopy	93.23752085
Housing	—
Homeownership	78.81432054
Housing habitability	73.14256384
Low-inc homeowner severe housing cost burden	42.33286283
Low-inc renter severe housing cost burden	43.78288207
Uncrowded housing	76.50455537
Health Outcomes	—
Insured adults	74.96471192
Arthritis	47.0
Asthma ER Admissions	92.9
High Blood Pressure	52.5
Cancer (excluding skin)	25.9
Asthma	61.7
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	70.2
Cognitively Disabled	74.6
Physically Disabled	67.1
Heart Attack ER Admissions	90.2
Mental Health Not Good	79.6
Chronic Kidney Disease	73.0
Obesity	78.7
Pedestrian Injuries	73.5
Physical Health Not Good	81.0
Stroke	75.8
Health Risk Behaviors	—

Binge Drinking	60.3
Current Smoker	82.7
No Leisure Time for Physical Activity	82.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	12.2
English Speaking	44.2
Foreign-born	66.9
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.5
Traffic Density	15.8
Traffic Access	48.8
Other Indices	—
Hardship	15.4
Other Decision Support	—
2016 Voting	85.7

7.3. Overall Health & Equity Scores

M	
CalEnviroScreen 4.0 Score for Project Location (a)	14.0
Healthy Places Index Score for Project Location (b)	84.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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

Characteristics: Utility Information	San Jose Clean Energy rate is 162 lb /mwh.
Construction: Construction Phases	Total work days for each phase from provided construction worksheet.
Construction: Off-Road Equipment	Information from filled out construction worksheet.
Construction: Demolition	Provided demolition of roadway and open lands.
Construction: Trips and VMT	Demolition = 600 tons (15 trips/day), Paving = 140 truck loads of asphalt (56 trips/day).
Construction: On-Road Fugitive Dust	BAAQMD & SJ BMPs = 15 mph.

Attachment 2: Project Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

Heritage Oaks, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.1135	CON_DPM	227.0	0.06220	7.84E-03	187256	4.19E-08
2026	Construction	0.0117	CON_DPM	23.4	0.00640	8.07E-04	187256	4.31E-09
Total		***0.1252***		***250.4***	***0.0686***	***0.0086***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

Heritage Oaks, San Jose, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	CON_FUG	0.2233	446.6	0.12236	1.54E-02	187,256	8.23E-08
2026	Construction	CON_FUG	0.0007	1.3	0.00037	4.65E-05	187,256	2.49E-10
Total			***0.2240***	***448.0***	***0.1227***	***0.0155***		

Construction Hours

hr/day =	10	(7am - 5pm)
days/yr =	365	
hours/year =	3650	

Heritage Oaks, 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 ($\mu g/m^3$)
2025	0.0161	0.0379	2.86	0.05	0.003	0.05
2026	0.0017	0.0001	0.27	0.00	0.000	0.00
Total	-	-	**3.13**	**0.05**	-	-
Maximum	0.0161	0.0379	**-**	**-**	**0.003**	**0.05**

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			
							Modeled			
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Infant/Child Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Adult Cancer Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2025	0.0161	10	0.22	2025	0.0161	-	-
1	1	0 - 1	2025	0.0161	10	2.64	2025	0.0161	1	0.05
2	1	1 - 2	2026	0.0017	10	0.27	2026	0.0017	1	0.00
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						**3.13**				**0.05**

Maximum		
Hazard Index	Fugitive PM2.5	Total PM2.5
0.003	0.04	0.05
0.0003	0.0001	0.002

* Third trimester of pregnancy

Crematory Health Risk Assessment and Calculations

Heritage Oaks Crematory, San Jose, CA
TAC Health Impacts at 1000ft
Maximum DPM Cancer Risk at 1000ft Receptors

Cancer Risk Calculation Method

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

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

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

Where: C_{air} = concentration in air ($\mu g/m^3$)

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

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10^{-6} = Conversion factor

Values	Infant/Child			Adult
Age -->	3rd Trimester	0 - <2	2 - <16	16 - 30
Parameter				
ASF	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
ED =	0.25	2	14	14
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

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

Heritage Oaks Crematory, San Jose, CA - Health Impact Modeling

Source Parameters for Point Sources Used in Modeling Creamatory Stacks

Source	Stack Height (ft)	Stack Diam (in)	Exhaust Temp (F)	Volume Flow (acfm)	Velocity (ft/min)	Velocity (ft/sec)
Crematory Exhaust Stacks	25.0	20	1650	-	984	16.4
Source	**Stack Height (m)**	**Stack Diam (m)**	**Exhaust Temp (K)**			**Velocity (m/sec)**
Crematory Exhaust Stacks	7.62	0.508	1172			5.0

Heritage Oaks Crematory TAC Emissions, Maximum-Modeled Concentrations, and Health Impacts at 1,000-ft
Off-Site Receptors - +1,000-ft Receptors - 1.5 meter height

										Reference Exposure Levels[d]			Cancer	Hazard Index			
	TAC Emissions[a]			Maximum Unit Concentration (X/Q)[b]			Maximum TAC Concentrations[c]				Chronic	Chronic	Potency		Chronic	Chronic	Cancer
				1-hour	8-hour	Annual	1-hour	8-hour	Annual	Acute	8-hour	Annual	Factor	Acute	8-hour	Annual	Risk
TAC	(lb/day)	(lb/hr)	(g/s)	$(\mu g/m^3)/(g/s)$	$(\mu g/m^3)/(g/s)$	$(\mu g/m^3)/(g/s)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(mg/kg\text{-}day)^{-1}$	(-)	(-)	(-)	(per million)
Acetaldehyde	1.07E-03	4.45E-05	5.61E-06	5.75E+01	3.00E+01	3.13E+00	3.23E-04	1.68E-04	1.76E-05	4.7E+02	3.0E+02	1.4E+02	1.0E-02	6.86E-07	5.61E-07	1.25E-07	1.19E-04
Arsenic (all)	2.47E-04	1.03E-05	1.29E-06	5.75E+01	3.00E+01	3.13E+00	7.44E-05	3.88E-05	4.05E-06	2.00E-01	1.50E-02	1.50E-02	1.20E+01	3.72E-04	2.59E-03	2.70E-04	3.29E-02
Beryllium (all) pollutant	1.15E-05	4.79E-07	6.04E-08	5.75E+01	3.00E+01	3.13E+00	3.47E-06	1.81E-06	1.89E-07			7.00E-03	8.40E+00	0.00E+00	0.00E+00	2.70E-05	1.08E-03
Cadmium	9.04E-05	3.77E-06	4.75E-07	5.75E+01	3.00E+01	3.13E+00	2.73E-05	1.42E-05	1.49E-06			2.00E-02	1.50E+01	0.00E+00	0.00E+00	7.43E-05	1.51E-02
Chromium (hexavalent)	1.15E-04	4.79E-06	6.04E-07	5.75E+01	3.00E+01	3.13E+00	3.47E-05	1.81E-05	1.89E-06			2.00E-01	5.10E+02	0.00E+00	0.00E+00	9.46E-06	6.53E-01
Formaldehyde	2.79E-04	1.16E-05	1.47E-06	5.75E+01	3.00E+01	3.13E+00	8.44E-05	4.40E-05	4.59E-06	5.50E+01	9.00E+00	9.00E+00	2.10E-02	1.53E-06	4.89E-06	5.11E-07	6.53E-05
Hydrogen Chloride (HCl)	5.92E-01	2.47E-02	3.11E-03	5.75E+01	3.00E+01	3.13E+00	1.79E-01	9.31E-02	9.73E-03	2.10E+03		9.00E+00		8.51E-05	0.00E+00	1.08E-03	0.00E+00
Hydrogen Fluoride (HF)	5.42E-03	2.26E-04	2.85E-05	5.75E+01	3.00E+01	3.13E+00	1.64E-03	8.54E-04	8.92E-05	2.40E+02		1.40E+01		6.82E-06	0.00E+00	6.37E-06	0.00E+00
Lead (all) pollutant	5.42E-04	2.26E-05	2.85E-06	5.75E+01	3.00E+01	3.13E+00	1.64E-04	8.54E-05	8.92E-06				4.20E-02	0.00E+00	0.00E+00	0.00E+00	2.53E-04
Mercury (all) pollutant	2.79E-02	1.16E-03	1.47E-04	5.75E+01	3.00E+01	3.13E+00	8.44E-03	4.40E-03	4.59E-04	6.00E-01	6.00E-02	3.00E-02	1.60E-04	1.41E-02	7.33E-02	1.53E-02	4.97E-05
Nickel pollutant	3.12E-04	1.30E-05	1.64E-06	5.75E+01	3.00E+01	3.13E+00	9.43E-05	4.92E-05	5.14E-06	2.00E-01	6.00E-02	1.40E-02	9.10E-01	4.71E-04	8.19E-04	3.67E-04	3.16E-03
Selenium	3.62E-04	1.51E-05	1.90E-06	5.75E+01	3.00E+01	3.13E+00	1.09E-04	5.69E-05	5.95E-06			2.00E+01		0.00E+00	0.00E+00	2.97E-07	0.00E+00
Chlorinated dioxins & furans (Calif TCDD equiv)	1.15E-08	4.79E-10	6.04E-11	5.75E+01	3.00E+01	3.13E+00	3.47E-09	1.81E-09	1.89E-10			4.00E-05	1.30E+05	0.00E+00	0.00E+00	4.73E-06	1.66E-02
PAH's (benzo[a]pyrene equiv)	4.03E-07	1.68E-08	2.11E-09	5.75E+01	3.00E+01	3.13E+00	1.22E-07	6.34E-08	6.62E-09			0.00E+00	3.90E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05
PM2.5	9.48E-01	3.95E-02	4.98E-03	5.75E+01	3.00E+01	3.13E+00	-	-	0.02								
													Total	***0.01***	***0.08***	***0.02***	***0.72***

a TAC emissions (lb/yr) from applicant provided crematory data and BAAQMD Permit Handbook emissions calculations for crematory spreadsheet.

b The maximum unit concentration is the maximum modeled concentration using a 1.0 gram per second (g/s) emission rate.

c Maximum TAC concentrations calculated using the maximum unit concentration $(\mu g/m^3)/(g/s)$ and the TAC emission rate (g/s).

d Reference Exposure Levels (RELs) and cancer potency factors from BAAQMD Regulation 2 Rule 5 - New Source Review of Toxic Air Contaminants.