397 BLOSSOM HILL ROAD AIR QUALITY & GREENHOUSE GAS ASSESSMENT

San José, California

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Introduction

The purpose of this report is to address air quality impacts and compute the greenhouse gas (GHG) emissions associated with the proposed mixed-use affordable housing development at 397 Blossom Hill Road in San José, California. The air quality impacts and GHG emissions would be associated with the construction of the new building and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using models. In addition, the potential construction health risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed residences were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The proposed project is a mixed-use affordable housing development on an approximate two-acre site located at 397 Blossom Hill Road in the City of San José. The project includes the demolition of an approximate 32,000 square feet (sf) furniture store.

The project would construct 147 residential units, distributed as follows: 102 studios, 15 junior one-bedroom units, 15 one-bedroom units, 13 two-bedroom units, and 2 three-bedroom units. The proposed residential units would be designated disabled persons and senior citizens. The ground floor would consist of 16,066-sf of commercial office space and resident serving support spaces. Site improvements and parking would be at-grade. A tentative map would reconfigure one lot on an approximately 2.0 gross acre site. The proposed development would include 108 parking spaces at-grade and 42 bicycle spaces. The property is zoned Commercial Neighborhood (CN) and has a designated land use of Neighborhood/Community Commercial.

Setting

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

Air Pollutants of Concern

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

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

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

Toxic Air Contaminants

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

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

Regulatory Agencies

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.[2] The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in

[2] Available online: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed: November 21, 2014.

this assessment to evaluate air quality impacts of projects.[3] The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

San José Envision 2040 General Plan

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

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize air pollutant emissions from new and existing development.

Applicable Policies – Air Pollutant Emission Reduction

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

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

Applicable Goals – Toxic Air Contaminants

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

Applicable Policies – Toxic Air Contaminants

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

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

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

[3] Bay Area Air Quality Management District. 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

Actions – Toxic Air Contaminants

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

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.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. The closest sensitive receptors to the project site are residences of an apartment complex adjacent to the northern site boundary. There are additional residences at farther distances from the project site. This project would introduce new sensitive receptors to the area.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

Table 1. Community Risk Significance and GHG Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) 660 metric tons annually or 2.6 metric tons per capita (for 2030)*		

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. GHG = greenhouse gases.

*BAAQMD does not have a recommended post-2020 GHG threshold.

Air Quality Impacts and Mitigation Measures

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

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

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

Construction period emissions

CalEEMod provided annual emissions for construction and estimates emissions 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. A construction build-out scenario, including equipment list and schedule, was based information provided by the project applicant. The proposed project land uses were input into CalEEMod, which included:

- 147 dwelling units entered as “Apartment Mid Rise”,
- 16,066-sf entered as “General Office Building”,
- 108 parking spaces entered as “Parking Lot”,
- 32,320-sf of building demolition,
- 768 tons of pavement demolished and hauled,
- 500 cubic yards (cy) of soil export during grading,
- 100 cement truck round-trips, and
- 288-cy of asphalt hauled during paving.

Construction was assumed to begin January 2020 and last 17 months. There were an estimated 435 construction workdays. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 2 shows 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 2, predicted the construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	1.1 tons	0.8 tons	0.02 tons	0.02 tons
Average daily emissions (pounds)[1]	5.0 lbs./day	3.7 lbs./day	0.1 lbs./day	0.1 lbs./day
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	**No**	**No**	**No**	**No**
Notes: [1]Assumes 435 workdays.				

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

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

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

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

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

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

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

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

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne

toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

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

Operational Period Emissions

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

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

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 the project could possibly be constructed and begin operating would be 2022. Emissions associated with build-out later than 2022 would be lower.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table. The Saturday and Sunday trip rates were assumed to be the weekday rate adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips. The project traffic analysis

provided project trip generation values for the proposed apartments and office space.[4] The trip generation values for the apartments and office are as follows:

- For the apartment trip generation estimate, the 12 percent *Location-Based Vehicle Mode Share Reduction* and 10 percent *Project-Specific Trip Reduction* were applied, resulting in a weekday rate of 4.31 trips per day (634 trips/147 dwelling units). The weekend trip rates were computed as 4.14 trips per day for Saturday and 3.80 trips per day for Sunday.

- For the ground-level office space, the 8 percent *Location-Based Vehicle Mode Share Reduction* and 10 percent *Project-Specific Trip Reduction* were applied, resulting in weekday rate of 8.03 trips per day (129 trips/16.066 thousand square feet). The weekend trip rates were computed as computed as 1.79 trips per day for Saturday and 0.76 trips per day for Sunday.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. The rate was adjusted to account for PG&E's projected 2020 CO_2 intensity rate. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. The derived 2020 rate for PG&E was estimated at 290 pounds of CO_2 per megawatt of electricity delivered.[5]

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. All hearths were assumed to be gas powered.

Existing Uses

A CalEEMod model for the existing land use was run for year 2022. The existing land use on the project site included 32,000-sf entered as "Strip Mall". Note that CalEEMod does not have a separate category for furniture store. The provided trip generation values for the furniture true included a 12 percent *Location-Based Vehicle Mode Share Reduction* which adjusted the weekday rate to 5.56 trips per day (178 trips/32 thousand square feet). The weekend trip rates were computed as 5.27 trips per day for Saturday and 2.56 trips per day for Sunday.

[4] Hexagon Transportation Consultants, Inc. 2019. "Table 1 Project Trip Generation Estimates for the 397 Blossom Hill Road Affordable Housing Mixed-Use Project. January.
[5] Pacific Gas & Electric, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*. November.

Table 3. Operational Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2022 Project Operational Emissions (*tons/year*)	0.86 tons	0.80 tons	0.64 tons	0.18 tons
2022 Existing Operational Emissions (*tons/year*)	0.18 tons	0.14 tons	0.09 tons	0.03 tons
Net Annual Emissions (*tons/year*)	0.68 tons	0.66 tons	0.54 tons	0.16 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	No	No	No	No
2022 Project Operational Emissions (*lbs/day*)[1]	3.7 lbs.	3.6 lbs.	3.0 lbs.	0.9 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	No	No	No	No
Notes: [1] Assumes 365-day operation.				

Impact 2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The project would introduce new residents that are sensitive receptors. There are several sources of TACs and localized air pollutants in the vicinity of the project. The impacts of these sources upon the project were assessed. Temporary project construction activity would also generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. A construction health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors. Operation of the project is not expected to be a source of TAC or localized air pollutant emissions, as the project would not generate substantial truck traffic or include stationary sources of emissions.

Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*.

Construction Community Health Risk Impacts

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[6] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting

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

from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.0160 tons (32 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0081 tons (16 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[7] For each of the construction sites modeled, the modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area sources. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 5 p.m., which are the construction hours the project applicant provided.

The modeling used a 5-year meteorological data set (2006-2010) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities at the project site during the 2020-2021 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) were used to represent the breathing height of nearby residences in nearby apartments and single-family homes.

The maximum-modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEIs). Using the maximum annual modeled DPM concentrations, the maximum increased cancer risks were calculated using BAAQMD

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

recommended methods and exposure parameters described in *Attachment 1*. Non-cancer health hazards and maximum $PM_{2.5}$ concentrations were also calculated and identified.

Results of this assessment indicated that the construction MEI was located on the second-floor of an apartment (4.5-meter breathing height) located adjacent to the northern project boundary as seen in Figure 1. The maximum excess residential cancer risks, $PM_{2.5}$ concentration, and Hazard Index from construction do not exceed their respective BAAQMD single-source thresholds. Table 4 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the residential MEI. As seen in Table 4, the construction risk impacts do not exceed the BAAQMD single-source thresholds for cancer risk, $PM_{2.5}$ concentrations, or HI. *Attachment 3* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and TAC Impacts

Table 4. Construction Risk Impacts at the Offsite MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction	6.3 (infant)	0.03	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Significant?	*No*	*No*	*No*

Operational Impacts – Off Site Sensitive Receptors

Project emissions would include traffic. Traffic from residential projects are not typically considered sources of TAC or PM2.5 emissions that could adversely affect sensitive receptors. The project would generate traffic associated with residential uses that would be distributed over various roadways. These are anticipated to consist of mostly passenger vehicles with a low percentage of diesel trucks that would emit TACs. Traffic associated with the project is not anticipated to contribute to community risk impacts. Maximum community risks based on use of the BAAQMD *Roadway Screening Analysis Calculator* would be a lifetime cancer risk of less than 0.5 chances per million, an annual $PM_{2.5}$ concentrations of less than 0.01$\mu g/m^3$, and and HI less than 0.03.

Operational Community Health Risk Impacts – New Residences

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Blossom Hill Road and Snell Avenue are busy roadways with an average daily traffic (ADT) of over 10,000 vehicles, which makes it a significant source of TACs. All other roadways within the area are assumed to have an ADT that is less than 10,000 vehicles. A review of BAAQMD's stationary source Google Earth map tool identified five sources with the potential to affect the project site. Figure 2 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 4.*

Since the proposed project would introduce permanent sensitive receptors (adult seniors), a cancer screening risk assessment was completed to adjust for annual, life, and lifetime exposure. For adult seniors living at the residence, the cancer risk assessment assumed that the sensitive receptors would experience continuous exposure to TAC sources.

BAAQMD screening tools provide lifetime cancer risk and these cancer risks were then adjusted for the adult seniors as follows (refer to *Attachment 1* for description of cancer risk calculations):

For the adult senior cancer risk, the screening level lifetime cancer risk was adjusted as follows:

1. Age sensitivity. BAAQMD screening data uses a factor of 1.7 for lifetime exposure. This was adjusted to a factor of 1.0 for adult exposures.

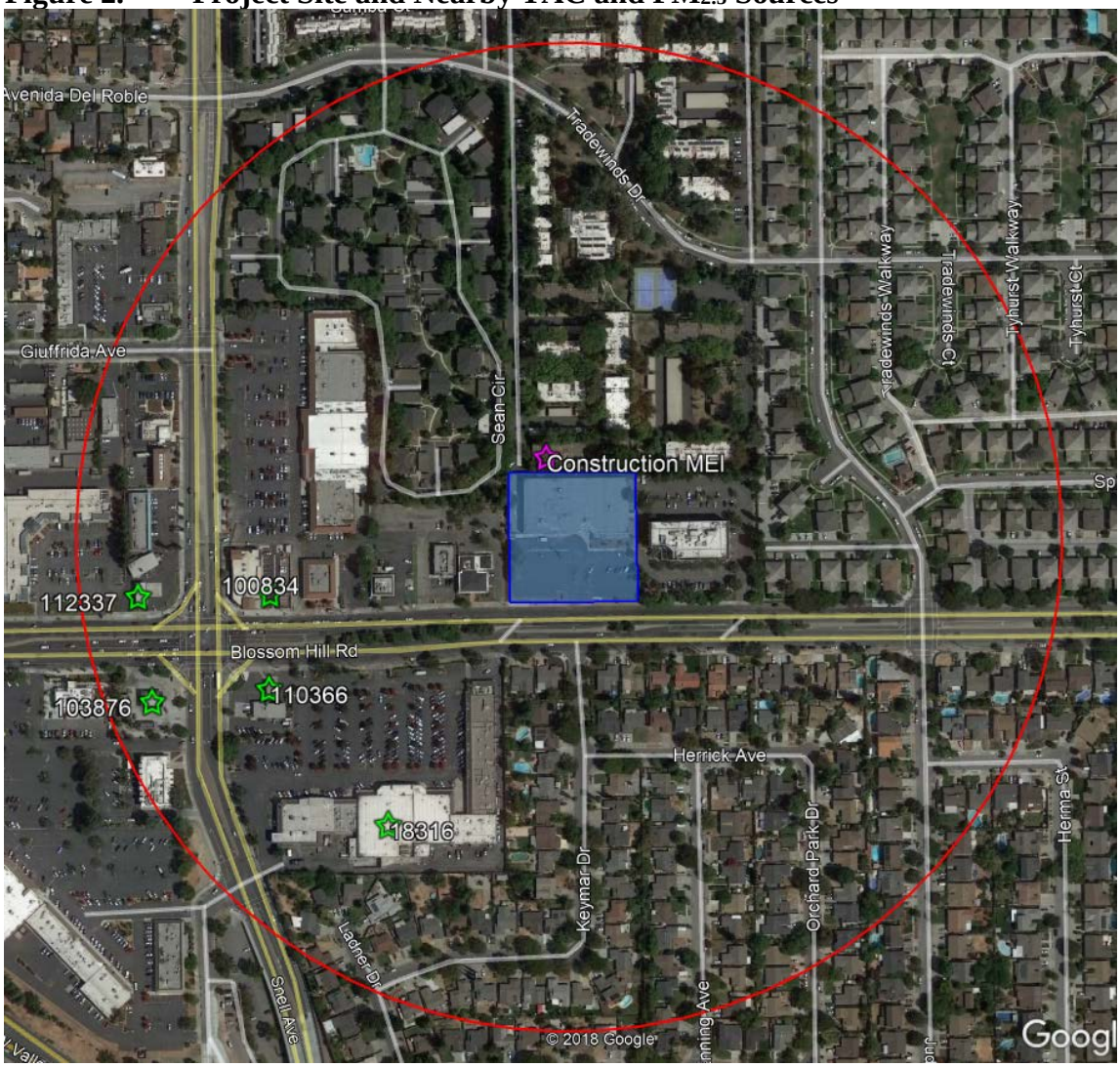
2. Daily exposure. Health risk assessments assume 24-hour per day exposure. This assumption was not changed because the adult seniors would be full-time residents.

3. Annual exposure. Health risk assessments assume 350 days of exposure per year. This assumption was not changed because the adult seniors would reside in the residence year-round.

4. Lifetime exposure. Health risk assessments that the screening data were based upon assume a 70-year exposure. The adult seniors were assumed to reside at the project for a maximum of 30 years.

5. Breathing rates. BAAQMD predictions were assumed to use an overall breathing rate of 302 liters per kilogram body weight. New exposure parameters issued by the California Office of Environmental Health Hazards Assessment (OEHHA) include parameters that account for different breathing rates. A breathing rate of 261 liters per kilogram (L/kg) was assumed for adult senior exposures.

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



Local Roadways – Blossom Hill Road & Snell Avenue

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a potentially significant effect on a proposed project. Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new OEHHA guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. In addition, a new version of the emissions factor model, EMFAC2014 is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018. The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

The ADT on Blossom Hill Road was estimated to be 32,425 vehicles and the ADT on Snell Avenue was estimated to be 24,750 vehicles. This estimate was based on the peak-hour traffic volumes included in the project's traffic analysis for background plus project conditions.[8] The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for Santa Clara County was used for these roadways. Blossom Hill Road was identified as an east-west roadway with the project's sensitive receptors and the construction MEI north of the roadway. Snell Avenue was identified as a north-south roadway with the project's sensitive receptors and the construction MEI east of the roadway. Note that the project's dwelling units begin on the second-floor; therefore, the distance between the project's sensitive receptors and the roadways was adjusted for elevation by using the Pythagorean Theorem. The roadway cancer risks identified at the project site were then adjusted with the screening level lifetime cancer risk parameters described above.

Estimated risk values for both roadways at the project's sensitive receptors and the Construction MEI are listed in Table 5 and 6, respectively. Note that BAAQMD has found that non-cancer hazards from all local roadways would be below a Hazard Index of 0.03.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of five stationary sources and their estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. They provided updated risk levels, emissions and adjustments to account for new OEHHA guidance.[9] The risk values were then adjusted with the appropriate distance multiplier values provided by BAAQMD or the emissions information was used in refined modeling.

[8] Hexagon Transportation Consultants, Inc., 2019. "Figure 15 Background Plus Project Traffic Volumes". February
[9] Correspondence with Areana Flores, BAAQMD, 27 February 2019.

Five stationary sources were identified with one of the stationary sources being a generator (e.g. Lucky) and the remaining four sources being gas stations (e.g. Blossom Shell, Conoco Phillips, Valero Refining, and Chevron) The screening risk levels for these stationary sources were provided by BAAQMD and adjusted for distance based on BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* or *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities* when appropriate. Concentrations and community risk impacts from these sources upon the project's sensitive receptors were then adjusted with the screening level lifetime parameters described above. Table 5 and 6 summarize the risk impacts at the project site and the Construction MEI.

Cumulative Community Health Risk at Project Site

Community risk impacts from combined sources upon the project site sensitive receptors are reported in Table 5. As shown, the annual cancer risks, annual $PM_{2.5}$ concentrations, and Hazard Indexes are all below their respective single-source and cumulative significance thresholds and would be considered a *less-than significant* impact.

Table 5. Community Risk Impact to New Project Residences

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Blossom Hill Road at 45 feet north, ADT 32,425 vehicles	2.9	0.28	<0.03
Snell Avenue at 740 feet east ADT 24,750 vehicles	0.4	0.05	<0.03
Lucky #765 (Generator, Plant #18316) at 600 feet	<0.1	<0.01	<0.01
Blossom Shell (Gas Station, Plant #112337) at 850 feet	<0.1	-	<0.01
Conoco Phillips (Gas Station, Plant #100834) at 400 feet	0.3	-	<0.01
Valero Refining (Gas Station, Plant #110366) at 590 feet	0.6	-	0.01
Chevron (Gas Station, Plant #103876) at 870 feet	0.4	-	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Significant?	*No*	*No*	*No*
Cumulative Total	4.8	0.34	<0.11
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Significant?	*No*	*No*	*No*

Cumulative Impact on Off-Site MEI

Table 6 reports both the project and cumulative community risk impacts at the sensitive receptor most affected by construction (i.e. the MEI). Without mitigation, the project would have a *less-than-significant* impact with respect to community risk caused by project construction activities, since the maximum cancer risk, $PM_{2.5}$ concentration, and HI do not exceed their single-source thresholds. The combined annual cancer risk, $PM_{2.5}$ concentration and Hazard risk values, which includes unmitigated and mitigated, would not exceed the cumulative threshold; therefore, the project would also have a *less-than-significant* impact in regards to the cumulative risk within the area.

Table 6. Impacts from Combined Sources at Off-Site MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction Unmitigated	6.3 (infant)	0.03	<0.01
Blossom Hill Road at 345 feet north, ADT 32,425 vehicles	3.4	0.09	<0.03
Snell Avenue at 770 feet east, ADT 24,750 vehicles	1.3	0.04	<0.03
Lucky #765 (Generator, Plant #18316) at 830 feet	<0.1	<0.01	<0.01
Blossom Shell (Gas Station, Plant #112337) at 940 feet	<0.1	-	<0.01
Conoco Phillips (Gas Station, Plant #100834) at 560 feet	1.2	-	0.01
Valero Refining (Gas Station, Plant #110366) at 800 feet	1.5	-	0.01
Chevron (Gas Station, Plant #103876) at 1,000 feet	1.4	-	0.01
Combined Sources Unmitigated	15.3 (infant)	0.17	<0.12
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Significant?	*No*	*No*	*No*

Greenhouse Gas Emissions

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

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

Recent Regulatory Actions

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards

Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

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

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

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

SB 350 Renewable Portfolio Standards

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

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term

goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

BAAQMD Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.6 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels[10]. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

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

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and

[10] Association of Environmental Professionals, 2016. *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*. April.

worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future residents and future employees. For this project, the number of future residents was estimated by multiplying the total number of units by the persons per household rate for San Jose found in the California Department of Finance Population and Housing Estimate report.[11] Using the 3.20 persons per household 2018 estimate for San Jose, the number of future residents is estimated to be 470 (i.e. 147 dwelling units multiplied by 3.20 person per household).

Construction Emissions

GHG emissions associated with construction were computed to be 315 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully-developed site under the proposed project. As shown in Table 7, the net annual emissions resulting from operation of the proposed project are predicted to be 721 MT of CO_2e for the year 2022 and 599 MT of CO_{2e} for the year 2030. The Service Population Emissions for the year 2022 would be 1.9 and 1.6 MT CO_{2e}/year/service population for the year 2030. The 2030 emissions do not exceed the 2030 "bright-line" threshold of 660 MT of CO_{2e}/year and the "Substantial Progress" efficiency metric of 2.6 MT CO_2e/year/service population. To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. This project does not exceed the metric tons bright-line significance threshold nor the service

[11] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2018*. Sacramento, California, May 2018.

population significance threshold. Therefore, the project would have a *less-than-significant* impact regarding GHG emissions.

Table 7. Annual Project GHG Emissions (CO_2e) in Metric Tons and Per Capita

Source Category	Existing Land Use in 2022	Proposed Project in 2022	Proposed Project in 2030
Area	1	8	8
Energy Consumption	49	203	203
Mobile	96	614	492
Solid Waste Generation	17	42	42
Water Usage	3	20	20
Total (MT CO_{2e}/year)	166	887	765
Net Emissions		721 MT CO_{2e}/year	599 MT CO_{2e}/year
Significance Threshold			***660 MT CO_2e/year***
Service Population Emissions (MT CO2e/year/service population)		1.9	1.6
Significance Threshold			***2.6 in 2030***
Significant (Exceeds both thresholds)?			***No***

Supporting Documentation

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

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

Attachment 3 is the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format

Attachment 4 includes the screening community risk calculations from sources affecting the project and MEI.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[12] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[13] This HRA used the recent 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[14] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

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

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways).

[12] 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.
[13] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[14] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

In the case of cancer risk associated with construction, residential receptors are assumed to include 3rd-trimester fetus and infants. From a cancer-risk perspective, infants would be the most sensitive because of their higher breathing rate. Construction projects that last two years or less assume infant exposure while projects lasting longer include 3rd-trimester fetus, infant and child exposures. These exposure assumptions provide the most conservative estimate of cancer risk.

Functionally, cancer risk is calculated using the following parameters and formulas:

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

Where:

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

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

Where:

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

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

	Exposure Type →	**Infant**		**Child**		**Adult**
Parameter	***Age Range →***	**3rd Trimester**	**0<2**	**2 < 9**	**2 < 16**	**16 - 30**
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day)*		361	1,090	631	572	261
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

* 95th percentile breathing rates for 3rd trimester and infants and 80th percentile for children and adults.

Non-Cancer Hazards

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

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

Annual $PM_{2.5}$ Concentrations

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

Attachment 2: CalEEMod Modeling Output

Project Name: 397 Blossom Hill Apartments Project

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size 147 Dwelling Units _____ total project acres disturbed

88,986 s.f. residential

16,000 s.f. retail

_____ s.f. office

35,666 s.f. other, specify: Common areas (circulation)

6,714 s.f. parking garage 37 spaces

23,422 s.f. parking lot 65 spaces

Construction Hours 7 am to 5 pm

Qty	Description	HP	Load Factor	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**		**1/6/2020**	**Total phase:**	**3**			**Overall Import/Export Volumes**
		End Date:		**1/8/2020**					
1	Excavators	162	0.38	0.38	8	3	8	24	**Demolition Volume**
									Square footage of buildings to be demolished
									(*or* total tons to be hauled)
									32,320 square feet *or*
									_?_ Hauling volume (tons)
	Site Preperation	**Start Date:**		**1/9/2020**	**Total phase:**	**2**			Any pavement demolished and hauled? **_768_ tons**
		End Date:		**1/10/2020**					
1	Graders	174	0.41	0.41	8	2	8	16	
	Grading / Excavation	**Start Date:**		**1/13/2020**	**Total phase:**	**7**			
		End Date:		**1/21/2020**					**Soil Hauling Volume**
1	Excavators	162	0.38	0.38	8	7	8	56	Export volume = **_500_** cubic yards
1	Graders	174	0.41	0.41	8	5	5.7142857	40	Import volume = **_?_** cubic yards?
	Other Equipment?								
	Trenching	**Start Date:**		**1/22/2020**	**Total phase:**	**15**			
		End Date:		**2/12/2020**					
1	Tractor/Loader/Backhoe	97	0.37	0.37	8	10	5.3333333	80	
1	Excavators	162	0.38	0.38	8	5	2.6666667	40	
	Other Equipment?								
	Building - Exterior	**Start Date:**		**2/13/2020**	**Total phase:**	**320**			**Cement Trucks? Y_?_100 Total Round-Trips**
		End Date:		**5/11/2021**					
1	Forklifts	89	0.2	0.2	4	90	1.125	360	Electric? (Y/N) Otherwise assumed diesel
1	Cement and Mortar Mixers	9		0.56	8	15	0.375	120	Liquid Propane (LPG)? (Y/N) Otherwise Assumed diesel
									Or temporary line power? (Y/N) _Y_
	Other Equipment?								
	Building - Interior/Architectural Coating	**Start Date:**		**2/26/2021**	**Total phase:**	**85**			
		End Date:		**6/25/2021**					
2	Air Compressors	78	0.48	0.48	8	85	8	1360	
	Other Equipment?								
	Paving	**Start Date:**		**6/28/2021**	**Total phase:**	**3**			
		Start Date:		**6/30/2021**					
1	Cement and Mortar Mixers	9	0.56	0.56	6	3	6	18	
1	Paving Equipment	130	0.36	0.36	8	2	5.3333333	16	**Asphalt? _228__ cubic yards or ____ round trips?**
1	Rollers	80	0.38	0.38	8	2	5.3333333	16	
	Other Equipment?								

397 Blossom Hill Apartment AQ TAC

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.07	1000sqft	0.00	16,066.00	0
Parking Lot	108.00	Space	0.00	43,200.00	0
Apartments Mid Rise	147.00	Dwelling Unit	2.04	124,652.00	420

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

397 Blossom Hill Apartment AQ TAC - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 Rate

Land Use - Applicant Land Use from Construction Sheet, added common areas to apartment land use

Construction Phase - Applicant Construction Schedule

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Trips and VMT - 300 hauling trips, 200 cement truck trips during construction, 55 paving trips, TAC Trip length 1 mile

Demolition - Existing Office Building Demolition

Grading - 500 cy of soil hauling export

Vehicle Trips - Apartment: 4.31, 4.14, 3.80; Office: 8.03, 1.79, 0.76

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, Tier 3 Mitigation

Woodstoves - all gas

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	NumDays	220.00	320.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	3.00

tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	PhaseEndDate	1/14/2021	6/24/2021
tblConstructionPhase	PhaseEndDate	12/17/2020	5/5/2021
tblConstructionPhase	PhaseEndDate	1/31/2020	1/8/2020
tblConstructionPhase	PhaseEndDate	2/13/2020	1/21/2020
tblConstructionPhase	PhaseEndDate	12/31/2020	6/30/2021
tblConstructionPhase	PhaseEndDate	2/5/2020	1/10/2020
tblConstructionPhase	PhaseStartDate	1/1/2021	2/26/2021
tblConstructionPhase	PhaseStartDate	2/14/2020	2/13/2020
tblConstructionPhase	PhaseStartDate	2/6/2020	1/13/2020
tblConstructionPhase	PhaseStartDate	12/18/2020	6/28/2021
tblConstructionPhase	PhaseStartDate	2/1/2020	1/9/2020
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	22.05	47.04
tblFireplaces	NumberWood	24.99	0.00
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	16,070.00	16,066.00
tblLandUse	LandUseSquareFeet	147,000.00	124,652.00
tblLandUse	LotAcreage	0.37	0.00
tblLandUse	LotAcreage	0.97	0.00
tblLandUse	LotAcreage	3.87	2.04
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	146.00	300.00
tblTripsAndVMT	HaulingTripNumber	63.00	62.00
tblTripsAndVMT	HaulingTripNumber	0.00	55.00
tblVehicleTrips	ST_TR	6.39	4.14
tblVehicleTrips	ST_TR	2.46	1.79
tblVehicleTrips	SU_TR	5.86	3.80
tblVehicleTrips	SU_TR	1.05	0.76
tblVehicleTrips	WD_TR	6.65	4.31
tblVehicleTrips	WD_TR	11.03	8.03
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0702	0.4928	0.5371	2.1700e-003	0.1584	6.4400e-003	0.1649	0.0405	6.0100e-003	0.0465	0.0000	200.6107	200.6107	9.5300e-003	0.0000	200.8491
2021	1.0215	0.3220	0.4076	1.1800e-003	0.0622	0.0120	0.0742	0.0167	0.0120	0.0287	0.0000	106.4521	106.4521	4.8100e-003	0.0000	106.5724
Maximum	**1.0215**	**0.4928**	**0.5371**	**2.1700e-003**	**0.1584**	**0.0120**	**0.1649**	**0.0405**	**0.0120**	**0.0465**	**0.0000**	**200.6107**	**200.6107**	**9.5300e-003**	**0.0000**	**200.8491**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0702	0.4928	0.5371	2.1700e-003	0.1487	6.4400e-003	0.1551	0.0385	6.0100e-003	0.0445	0.0000	200.6107	200.6107	9.5300e-003	0.0000	200.8490
2021	1.0215	0.3220	0.4076	1.1800e-003	0.0622	0.0120	0.0742	0.0167	0.0120	0.0287	0.0000	106.4521	106.4521	4.8100e-003	0.0000	106.5724
Maximum	**1.0215**	**0.4928**	**0.5371**	**2.1700e-003**	**0.1487**	**0.0120**	**0.1551**	**0.0385**	**0.0120**	**0.0445**	**0.0000**	**200.6107**	**200.6107**	**9.5300e-003**	**0.0000**	**200.8490**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**4.41**	**0.00**	**4.07**	**3.51**	**0.00**	**2.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.1674	0.1674
2	4-6-2020	7-5-2020	0.1256	0.1256
3	7-6-2020	10-5-2020	0.1272	0.1272
4	10-6-2020	1-5-2021	0.1305	0.1305
5	1-6-2021	4-5-2021	0.5007	0.5007
6	4-6-2021	7-5-2021	0.8351	0.8351
		Highest	0.8351	0.8351

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.8580**	**0.7959**	**3.0714**	**7.2500e-003**	**0.6190**	**0.0179**	**0.6368**	**0.1657**	**0.0175**	**0.1832**	**21.1601**	**835.8217**	**856.9818**	**1.0430**	**0.0139**	**887.2008**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.8580**	**0.7959**	**3.0714**	**7.2500e-003**	**0.6190**	**0.0179**	**0.6368**	**0.1657**	**0.0175**	**0.1832**	**21.1601**	**835.8217**	**856.9818**	**1.0430**	**0.0139**	**887.2008**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	1/8/2020	5	3	
2	Site Preparation	Site Preparation	1/9/2020	1/10/2020	5	2	
3	Grading	Grading	1/13/2020	1/21/2020	5	7	
4	Trenching	Trenching	1/22/2020	2/11/2020	5	15	
5	Building Construction	Building Construction	2/13/2020	5/5/2021	5	320	
6	Architectural Coating	Architectural Coating	2/26/2021	6/24/2021	5	85	
7	Paving	Paving	6/28/2021	6/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 2.63

Acres of Paving: 0

Residential Indoor: 252,420; Residential Outdoor: 84,140; Non-Residential Indoor: 24,099; Non-Residential Outdoor: 8,033; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	0	0.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Excavators	1	3.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	1.00	9	0.56
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	1.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	2	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	1	5.00	132	0.36
Paving	Rollers	1	5.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	3.00	0.00	300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	62.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	129.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	55.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0158	0.0000	0.0158	2.3800e-003	0.0000	2.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6400e-003	4.9300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.6000e-004	1.6000e-004	0.0000	0.6840	0.6840	2.2000e-004	0.0000	0.6895
Total	**3.7000e-004**	**3.6400e-003**	**4.9300e-003**	**1.0000e-005**	**0.0158**	**1.8000e-004**	**0.0159**	**2.3800e-003**	**1.6000e-004**	**2.5400e-003**	**0.0000**	**0.6840**	**0.6840**	**2.2000e-004**	**0.0000**	**0.6895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0435	8.9100e-003	1.2000e-004	2.5400e-003	1.4000e-004	2.6800e-003	7.0000e-004	1.4000e-004	8.3000e-004	0.0000	11.4406	11.4406	5.2000e-004	0.0000	11.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0306	0.0306	0.0000	0.0000	0.0306
Total	**1.2600e-003**	**0.0435**	**9.0200e-003**	**1.2000e-004**	**2.5800e-003**	**1.4000e-004**	**2.7200e-003**	**7.1000e-004**	**1.4000e-004**	**8.4000e-004**	**0.0000**	**11.4712**	**11.4712**	**5.2000e-004**	**0.0000**	**11.4843**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	5.4000e-004	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6400e-003	4.9300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.6000e-004	1.6000e-004	0.0000	0.6840	0.6840	2.2000e-004	0.0000	0.6895
Total	**3.7000e-004**	**3.6400e-003**	**4.9300e-003**	**1.0000e-005**	**7.0900e-003**	**1.8000e-004**	**7.2700e-003**	**5.4000e-004**	**1.6000e-004**	**7.0000e-004**	**0.0000**	**0.6840**	**0.6840**	**2.2000e-004**	**0.0000**	**0.6895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0435	8.9100e-003	1.2000e-004	2.5400e-003	1.4000e-004	2.6800e-003	7.0000e-004	1.4000e-004	8.3000e-004	0.0000	11.4406	11.4406	5.2000e-004	0.0000	11.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0306	0.0306	0.0000	0.0000	0.0306
Total	**1.2600e-003**	**0.0435**	**9.0200e-003**	**1.2000e-004**	**2.5800e-003**	**1.4000e-004**	**2.7200e-003**	**7.1000e-004**	**1.4000e-004**	**8.4000e-004**	**0.0000**	**11.4712**	**11.4712**	**5.2000e-004**	**0.0000**	**11.4843**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	6.3300e-003	1.8100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**4.8000e-004**	**6.3300e-003**	**1.8100e-003**	**1.0000e-005**	**5.3000e-004**	**2.0000e-004**	**7.3000e-004**	**6.0000e-005**	**1.9000e-004**	**2.5000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0204	0.0204	0.0000	0.0000	0.0204
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0204**

3.3 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	6.3300e-003	1.8100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**4.8000e-004**	**6.3300e-003**	**1.8100e-003**	**1.0000e-005**	**2.4000e-004**	**2.0000e-004**	**4.4000e-004**	**1.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0204	0.0204	0.0000	0.0000	0.0204
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0204**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4200e-003	0.0000	1.4200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1100e-003	0.0251	0.0163	4.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	3.1264	3.1264	1.0100e-003	0.0000	3.1517
Total	**2.1100e-003**	**0.0251**	**0.0163**	**4.0000e-005**	**1.4200e-003**	**9.4000e-004**	**2.3600e-003**	**1.5000e-004**	**8.7000e-004**	**1.0200e-003**	**0.0000**	**3.1264**	**3.1264**	**1.0100e-003**	**0.0000**	**3.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	9.0000e-003	1.8400e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.5000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3644	2.3644	1.1000e-004	0.0000	2.3671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1190	0.1190	0.0000	0.0000	0.1191
Total	**3.2000e-004**	**9.0400e-003**	**2.2800e-003**	**2.0000e-005**	**6.7000e-004**	**3.0000e-005**	**6.9000e-004**	**1.8000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**2.4834**	**2.4834**	**1.1000e-004**	**0.0000**	**2.4862**

3.4 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.4000e-004	0.0000	6.4000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1100e-003	0.0251	0.0163	4.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	3.1264	3.1264	1.0100e-003	0.0000	3.1517
Total	**2.1100e-003**	**0.0251**	**0.0163**	**4.0000e-005**	**6.4000e-004**	**9.4000e-004**	**1.5800e-003**	**3.0000e-005**	**8.7000e-004**	**9.0000e-004**	**0.0000**	**3.1264**	**3.1264**	**1.0100e-003**	**0.0000**	**3.1517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	9.0000e-003	1.8400e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.5000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3644	2.3644	1.1000e-004	0.0000	2.3671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1190	0.1190	0.0000	0.0000	0.1191
Total	**3.2000e-004**	**9.0400e-003**	**2.2800e-003**	**2.0000e-005**	**6.7000e-004**	**3.0000e-005**	**6.9000e-004**	**1.8000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**2.4834**	**2.4834**	**1.1000e-004**	**0.0000**	**2.4862**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0167	0.0199	3.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	2.5562	2.5562	8.3000e-004	0.0000	2.5769
Total	**1.6700e-003**	**0.0167**	**0.0199**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**2.5562**	**2.5562**	**8.3000e-004**	**0.0000**	**2.5769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	9.4000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2551	0.2551	1.0000e-005	0.0000	0.2552
Total	**1.2000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2551**	**0.2551**	**1.0000e-005**	**0.0000**	**0.2552**

3.5 Trenching - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0167	0.0199	3.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	2.5562	2.5562	8.3000e-004	0.0000	2.5769
Total	**1.6700e-003**	**0.0167**	**0.0199**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**2.5562**	**2.5562**	**8.3000e-004**	**0.0000**	**2.5769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	9.4000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2551	0.2551	1.0000e-005	0.0000	0.2552
Total	**1.2000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2551**	**0.2551**	**1.0000e-005**	**0.0000**	**0.2552**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9300e-003	0.0241	0.0215	3.0000e-005		1.6000e-003	1.6000e-003		1.4900e-003	1.4900e-003	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**2.9300e-003**	**0.0241**	**0.0215**	**3.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3288	0.0876	7.9000e-004	0.0190	1.6300e-003	0.0206	5.4900e-003	1.5600e-003	7.0500e-003	0.0000	75.4916	75.4916	3.4600e-003	0.0000	75.5782
Worker	0.0495	0.0356	0.3729	1.1200e-003	0.1182	7.6000e-004	0.1189	0.0314	7.0000e-004	0.0321	0.0000	101.3389	101.3389	2.4900e-003	0.0000	101.4010
Total	**0.0609**	**0.3643**	**0.4604**	**1.9100e-003**	**0.1372**	**2.3900e-003**	**0.1396**	**0.0369**	**2.2600e-003**	**0.0392**	**0.0000**	**176.8305**	**176.8305**	**5.9500e-003**	**0.0000**	**176.9792**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9300e-003	0.0241	0.0215	3.0000e-005		1.6000e-003	1.6000e-003		1.4900e-003	1.4900e-003	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**2.9300e-003**	**0.0241**	**0.0215**	**3.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3288	0.0876	7.9000e-004	0.0190	1.6300e-003	0.0206	5.4900e-003	1.5600e-003	7.0500e-003	0.0000	75.4916	75.4916	3.4600e-003	0.0000	75.5782
Worker	0.0495	0.0356	0.3729	1.1200e-003	0.1182	7.6000e-004	0.1189	0.0314	7.0000e-004	0.0321	0.0000	101.3389	101.3389	2.4900e-003	0.0000	101.4010
Total	**0.0609**	**0.3643**	**0.4604**	**1.9100e-003**	**0.1372**	**2.3900e-003**	**0.1396**	**0.0369**	**2.2600e-003**	**0.0392**	**0.0000**	**176.8305**	**176.8305**	**5.9500e-003**	**0.0000**	**176.9792**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0500e-003	8.6100e-003	8.2100e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**1.0500e-003**	**8.6100e-003**	**8.2100e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6300e-003	0.1143	0.0304	3.0000e-004	7.3200e-003	2.5000e-004	7.5700e-003	2.1200e-003	2.4000e-004	2.3600e-003	0.0000	28.8170	28.8170	1.2600e-003	0.0000	28.8484
Worker	0.0177	0.0122	0.1313	4.2000e-004	0.0455	2.9000e-004	0.0458	0.0121	2.6000e-004	0.0124	0.0000	37.6888	37.6888	8.6000e-004	0.0000	37.7102
Total	**0.0213**	**0.1266**	**0.1618**	**7.2000e-004**	**0.0529**	**5.4000e-004**	**0.0534**	**0.0142**	**5.0000e-004**	**0.0147**	**0.0000**	**66.5058**	**66.5058**	**2.1200e-003**	**0.0000**	**66.5586**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0500e-003	8.6100e-003	8.2100e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**1.0500e-003**	**8.6100e-003**	**8.2100e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6300e-003	0.1143	0.0304	3.0000e-004	7.3200e-003	2.5000e-004	7.5700e-003	2.1200e-003	2.4000e-004	2.3600e-003	0.0000	28.8170	28.8170	1.2600e-003	0.0000	28.8484
Worker	0.0177	0.0122	0.1313	4.2000e-004	0.0455	2.9000e-004	0.0458	0.0121	2.6000e-004	0.0124	0.0000	37.6888	37.6888	8.6000e-004	0.0000	37.7102
Total	**0.0213**	**0.1266**	**0.1618**	**7.2000e-004**	**0.0529**	**5.4000e-004**	**0.0534**	**0.0142**	**5.0000e-004**	**0.0147**	**0.0000**	**66.5058**	**66.5058**	**2.1200e-003**	**0.0000**	**66.5586**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1730	0.2060	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	28.9369	28.9369	1.9900e-003	0.0000	28.9865
Total	**0.9951**	**0.1730**	**0.2060**	**3.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**	**0.0000**	**28.9369**	**28.9369**	**1.9900e-003**	**0.0000**	**28.9865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-003	2.3600e-003	0.0253	8.0000e-005	8.7600e-003	6.0000e-005	8.8200e-003	2.3300e-003	5.0000e-005	2.3800e-003	0.0000	7.2548	7.2548	1.6000e-004	0.0000	7.2589
Total	**3.4000e-003**	**2.3600e-003**	**0.0253**	**8.0000e-005**	**8.7600e-003**	**6.0000e-005**	**8.8200e-003**	**2.3300e-003**	**5.0000e-005**	**2.3800e-003**	**0.0000**	**7.2548**	**7.2548**	**1.6000e-004**	**0.0000**	**7.2589**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1730	0.2060	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	28.9368	28.9368	1.9900e-003	0.0000	28.9865
Total	**0.9951**	**0.1730**	**0.2060**	**3.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**	**0.0000**	**28.9368**	**28.9368**	**1.9900e-003**	**0.0000**	**28.9865**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-003	2.3600e-003	0.0253	8.0000e-005	8.7600e-003	6.0000e-005	8.8200e-003	2.3300e-003	5.0000e-005	2.3800e-003	0.0000	7.2548	7.2548	1.6000e-004	0.0000	7.2589
Total	**3.4000e-003**	**2.3600e-003**	**0.0253**	**8.0000e-005**	**8.7600e-003**	**6.0000e-005**	**8.8200e-003**	**2.3300e-003**	**5.0000e-005**	**2.3800e-003**	**0.0000**	**7.2548**	**7.2548**	**1.6000e-004**	**0.0000**	**7.2589**

3.8 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0400e-003	4.4900e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-004**	**4.0400e-003**	**4.4900e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	7.3500e-003	1.6000e-003	2.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.0708	2.0708	9.0000e-005	0.0000	2.0732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**2.6000e-004**	**7.3800e-003**	**1.8700e-003**	**2.0000e-005**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**1.6000e-004**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**2.1496**	**2.1496**	**9.0000e-005**	**0.0000**	**2.1520**

3.8 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0400e-003	4.4900e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-004**	**4.0400e-003**	**4.4900e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	7.3500e-003	1.6000e-003	2.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.0708	2.0708	9.0000e-005	0.0000	2.0732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**2.6000e-004**	**7.3800e-003**	**1.8700e-003**	**2.0000e-005**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**1.6000e-004**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**2.1496**	**2.1496**	**9.0000e-005**	**0.0000**	**2.1520**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Unmitigated	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	633.57	608.58	558.60	1,430,317	1,430,317
General Office Building	129.04	28.77	12.21	234,260	234,260
Parking Lot	0.00	0.00	0.00		
Total	762.61	637.35	570.81	1,664,577	1,664,577

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
General Office Building	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Parking Lot	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
NaturalGas Mitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928
NaturalGas Unmitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Unmitigated	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0331	0.0126	1.0938	6.0000e-005		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	1.7852	1.7852	1.7300e-003	0.0000	1.8283
Total	**0.6831**	**0.0177**	**1.0960**	**9.0000e-005**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8400e-003**	**1.1000e-004**	**7.7356**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0331	0.0126	1.0938	6.0000e-005		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	1.7852	1.7852	1.7300e-003	0.0000	1.8283
Total	**0.6831**	**0.0177**	**1.0960**	**9.0000e-005**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8400e-003**	**1.1000e-004**	**7.7356**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8350	0.0164	9.8200e-003	20.1722
Unmitigated	16.8350	0.0164	9.8200e-003	20.1722

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.7610	0.9905	0.0000	41.5246
Unmitigated	16.7610	0.9905	0.0000	41.5246

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

397 Blossom Hill Apartment AQ 2030 AQ

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.07	1000sqft	0.00	16,066.00	0
Parking Lot	108.00	Space	0.00	43,200.00	0
Apartments Mid Rise	147.00	Dwelling Unit	2.04	124,652.00	420

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 Rate

Land Use - Applicant Land Use from Construction Sheet, added common areas to apartment land use

Construction Phase - Applicant Construction Schedule

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Trips and VMT - 300 hauling trips, 200 cement truck trips during construction, 55 paving trips, TAC Trip length 1 mile

Demolition - Existing Office Building Demolition

Grading - 500 cy of soil hauling export

Vehicle Trips - Apartment: 4.31, 4.14, 3.80; Office: 8.03, 1.79, 0.76

Woodstoves - all gas

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, Tier 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	NumDays	220.00	320.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	3.00

tblConstructionPhase	NumDays	3.00	2.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	22.05	47.04
tblFireplaces	NumberWood	24.99	0.00
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	16,070.00	16,066.00
tblLandUse	LandUseSquareFeet	147,000.00	124,652.00
tblLandUse	LotAcreage	0.37	0.00
tblLandUse	LotAcreage	0.97	0.00
tblLandUse	LotAcreage	3.87	2.04
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00

tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripNumber	146.00	300.00
tblTripsAndVMT	HaulingTripNumber	63.00	62.00
tblTripsAndVMT	HaulingTripNumber	0.00	55.00
tblVehicleTrips	ST_TR	6.39	4.14
tblVehicleTrips	ST_TR	2.46	1.79
tblVehicleTrips	SU_TR	5.86	3.80
tblVehicleTrips	SU_TR	1.05	0.76
tblVehicleTrips	WD_TR	6.65	4.31

tblVehicleTrips	WD_TR	11.03	8.03
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0702	0.4927	0.5371	2.1700e-003	0.1584	6.4400e-003	0.1649	0.0405	6.0100e-003	0.0465	0.0000	200.5982	200.5982	9.5300e-003	0.0000	200.8364
2021	1.0215	0.3220	0.4076	1.1800e-003	0.0622	0.0120	0.0742	0.0167	0.0120	0.0287	0.0000	106.4521	106.4521	4.8100e-003	0.0000	106.5724
Maximum	**1.0215**	**0.4927**	**0.5371**	**2.1700e-003**	**0.1584**	**0.0120**	**0.1649**	**0.0405**	**0.0120**	**0.0465**	**0.0000**	**200.5982**	**200.5982**	**9.5300e-003**	**0.0000**	**200.8364**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0702	0.4927	0.5371	2.1700e-003	0.1487	6.4400e-003	0.1551	0.0385	6.0100e-003	0.0445	0.0000	200.5982	200.5982	9.5300e-003	0.0000	200.8364
2021	1.0215	0.3220	0.4076	1.1800e-003	0.0622	0.0120	0.0742	0.0167	0.0120	0.0287	0.0000	106.4521	106.4521	4.8100e-003	0.0000	106.5724
Maximum	**1.0215**	**0.4927**	**0.5371**	**2.1700e-003**	**0.1487**	**0.0120**	**0.1551**	**0.0385**	**0.0120**	**0.0445**	**0.0000**	**200.5982**	**200.5982**	**9.5300e-003**	**0.0000**	**200.8364**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**4.41**	**0.00**	**4.07**	**3.51**	**0.00**	**2.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.1673	0.1673
2	4-6-2020	7-5-2020	0.1256	0.1256
3	7-6-2020	10-5-2020	0.1272	0.1272
4	10-6-2020	1-5-2021	0.1305	0.1305
5	1-6-2021	4-5-2021	0.5007	0.5007
6	4-6-2021	7-5-2021	0.8351	0.8351
		Highest	0.8351	0.8351

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6827	0.0176	1.0919	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	7.6576	7.6576	1.8200e-003	1.1000e-004	7.7351
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1075	0.4643	1.2399	5.3500e-003	0.6188	3.5800e-003	0.6224	0.1656	3.3300e-003	0.1689	0.0000	491.9811	491.9811	0.0141	0.0000	492.3346
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.7984**	**0.5534**	**2.3675**	**5.8900e-003**	**0.6188**	**0.0158**	**0.6346**	**0.1656**	**0.0155**	**0.1811**	**21.1601**	**713.3797**	**734.5397**	**1.0364**	**0.0139**	**764.5932**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6827	0.0176	1.0919	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	7.6576	7.6576	1.8200e-003	1.1000e-004	7.7351
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1075	0.4643	1.2399	5.3500e-003	0.6188	3.5800e-003	0.6224	0.1656	3.3300e-003	0.1689	0.0000	491.9811	491.9811	0.0141	0.0000	492.3346
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.7984**	**0.5534**	**2.3675**	**5.8900e-003**	**0.6188**	**0.0158**	**0.6346**	**0.1656**	**0.0155**	**0.1811**	**21.1601**	**713.3797**	**734.5397**	**1.0364**	**0.0139**	**764.5932**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	1/8/2020	5	3	
2	Site Preparation	Site Preparation	1/9/2020	1/10/2020	5	2	
3	Grading	Grading	1/13/2020	1/21/2020	5	7	
4	Trenching	Trenching	1/22/2020	2/11/2020	5	15	
5	Building Construction	Building Construction	2/13/2020	5/5/2021	5	320	
6	Architectural Coating	Architectural Coating	2/26/2021	6/24/2021	5	85	
7	Paving	Paving	6/28/2021	6/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 2.63

Acres of Paving: 0

Residential Indoor: 252,420; Residential Outdoor: 84,140; Non-Residential Indoor: 24,099; Non-Residential Outdoor: 8,033; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	0	0.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Excavators	1	3.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	1.00	9	0.56
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	1.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	2	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	1	5.00	132	0.36
Paving	Rollers	1	5.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	3.00	0.00	300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	62.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	129.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	55.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0158	0.0000	0.0158	2.3800e-003	0.0000	2.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6200e-003	4.9000e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.6000e-004	1.6000e-004	0.0000	0.6806	0.6806	2.2000e-004	0.0000	0.6861
Total	**3.7000e-004**	**3.6200e-003**	**4.9000e-003**	**1.0000e-005**	**0.0158**	**1.8000e-004**	**0.0159**	**2.3800e-003**	**1.6000e-004**	**2.5400e-003**	**0.0000**	**0.6806**	**0.6806**	**2.2000e-004**	**0.0000**	**0.6861**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0435	8.9100e-003	1.2000e-004	2.5400e-003	1.4000e-004	2.6800e-003	7.0000e-004	1.4000e-004	8.3000e-004	0.0000	11.4406	11.4406	5.2000e-004	0.0000	11.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0306	0.0306	0.0000	0.0000	0.0306
Total	**1.2600e-003**	**0.0435**	**9.0200e-003**	**1.2000e-004**	**2.5800e-003**	**1.4000e-004**	**2.7200e-003**	**7.1000e-004**	**1.4000e-004**	**8.4000e-004**	**0.0000**	**11.4712**	**11.4712**	**5.2000e-004**	**0.0000**	**11.4843**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	5.4000e-004	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6200e-003	4.9000e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.6000e-004	1.6000e-004	0.0000	0.6806	0.6806	2.2000e-004	0.0000	0.6861
Total	**3.7000e-004**	**3.6200e-003**	**4.9000e-003**	**1.0000e-005**	**7.0900e-003**	**1.8000e-004**	**7.2700e-003**	**5.4000e-004**	**1.6000e-004**	**7.0000e-004**	**0.0000**	**0.6806**	**0.6806**	**2.2000e-004**	**0.0000**	**0.6861**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0435	8.9100e-003	1.2000e-004	2.5400e-003	1.4000e-004	2.6800e-003	7.0000e-004	1.4000e-004	8.3000e-004	0.0000	11.4406	11.4406	5.2000e-004	0.0000	11.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0306	0.0306	0.0000	0.0000	0.0306
Total	**1.2600e-003**	**0.0435**	**9.0200e-003**	**1.2000e-004**	**2.5800e-003**	**1.4000e-004**	**2.7200e-003**	**7.1000e-004**	**1.4000e-004**	**8.4000e-004**	**0.0000**	**11.4712**	**11.4712**	**5.2000e-004**	**0.0000**	**11.4843**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	6.3300e-003	1.8100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**4.8000e-004**	**6.3300e-003**	**1.8100e-003**	**1.0000e-005**	**5.3000e-004**	**2.0000e-004**	**7.3000e-004**	**6.0000e-005**	**1.9000e-004**	**2.5000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0204	0.0204	0.0000	0.0000	0.0204
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0204**

3.3 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	6.3300e-003	1.8100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**4.8000e-004**	**6.3300e-003**	**1.8100e-003**	**1.0000e-005**	**2.4000e-004**	**2.0000e-004**	**4.4000e-004**	**1.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0204	0.0204	0.0000	0.0000	0.0204
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0204**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4200e-003	0.0000	1.4200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1100e-003	0.0251	0.0162	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.1185	3.1185	1.0100e-003	0.0000	3.1437
Total	**2.1100e-003**	**0.0251**	**0.0162**	**4.0000e-005**	**1.4200e-003**	**9.4000e-004**	**2.3600e-003**	**1.5000e-004**	**8.6000e-004**	**1.0100e-003**	**0.0000**	**3.1185**	**3.1185**	**1.0100e-003**	**0.0000**	**3.1437**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	9.0000e-003	1.8400e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.5000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3644	2.3644	1.1000e-004	0.0000	2.3671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1190	0.1190	0.0000	0.0000	0.1191
Total	**3.2000e-004**	**9.0400e-003**	**2.2800e-003**	**2.0000e-005**	**6.7000e-004**	**3.0000e-005**	**6.9000e-004**	**1.8000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**2.4834**	**2.4834**	**1.1000e-004**	**0.0000**	**2.4862**

3.4 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.4000e-004	0.0000	6.4000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1100e-003	0.0251	0.0162	4.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	3.1185	3.1185	1.0100e-003	0.0000	3.1437
Total	**2.1100e-003**	**0.0251**	**0.0162**	**4.0000e-005**	**6.4000e-004**	**9.4000e-004**	**1.5800e-003**	**3.0000e-005**	**8.6000e-004**	**8.9000e-004**	**0.0000**	**3.1185**	**3.1185**	**1.0100e-003**	**0.0000**	**3.1437**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	9.0000e-003	1.8400e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.5000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3644	2.3644	1.1000e-004	0.0000	2.3671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1190	0.1190	0.0000	0.0000	0.1191
Total	**3.2000e-004**	**9.0400e-003**	**2.2800e-003**	**2.0000e-005**	**6.7000e-004**	**3.0000e-005**	**6.9000e-004**	**1.8000e-004**	**3.0000e-005**	**2.1000e-004**	**0.0000**	**2.4834**	**2.4834**	**1.1000e-004**	**0.0000**	**2.4862**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0167	0.0199	3.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	2.5550	2.5550	8.3000e-004	0.0000	2.5757
Total	**1.6700e-003**	**0.0167**	**0.0199**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**2.5550**	**2.5550**	**8.3000e-004**	**0.0000**	**2.5757**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	9.4000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2551	0.2551	1.0000e-005	0.0000	0.2552
Total	**1.2000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2551**	**0.2551**	**1.0000e-005**	**0.0000**	**0.2552**

3.5 Trenching - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0167	0.0199	3.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	2.5550	2.5550	8.3000e-004	0.0000	2.5757
Total	**1.6700e-003**	**0.0167**	**0.0199**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**2.5550**	**2.5550**	**8.3000e-004**	**0.0000**	**2.5757**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	9.4000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2551	0.2551	1.0000e-005	0.0000	0.2552
Total	**1.2000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2551**	**0.2551**	**1.0000e-005**	**0.0000**	**0.2552**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9300e-003	0.0241	0.0215	3.0000e-005		1.6000e-003	1.6000e-003		1.4900e-003	1.4900e-003	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**2.9300e-003**	**0.0241**	**0.0215**	**3.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3288	0.0876	7.9000e-004	0.0190	1.6300e-003	0.0206	5.4900e-003	1.5600e-003	7.0500e-003	0.0000	75.4916	75.4916	3.4600e-003	0.0000	75.5782
Worker	0.0495	0.0356	0.3729	1.1200e-003	0.1182	7.6000e-004	0.1189	0.0314	7.0000e-004	0.0321	0.0000	101.3389	101.3389	2.4900e-003	0.0000	101.4010
Total	**0.0609**	**0.3643**	**0.4604**	**1.9100e-003**	**0.1372**	**2.3900e-003**	**0.1396**	**0.0369**	**2.2600e-003**	**0.0392**	**0.0000**	**176.8305**	**176.8305**	**5.9500e-003**	**0.0000**	**176.9792**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9300e-003	0.0241	0.0215	3.0000e-005		1.6000e-003	1.6000e-003		1.4900e-003	1.4900e-003	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**2.9300e-003**	**0.0241**	**0.0215**	**3.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.3288	0.0876	7.9000e-004	0.0190	1.6300e-003	0.0206	5.4900e-003	1.5600e-003	7.0500e-003	0.0000	75.4916	75.4916	3.4600e-003	0.0000	75.5782
Worker	0.0495	0.0356	0.3729	1.1200e-003	0.1182	7.6000e-004	0.1189	0.0314	7.0000e-004	0.0321	0.0000	101.3389	101.3389	2.4900e-003	0.0000	101.4010
Total	**0.0609**	**0.3643**	**0.4604**	**1.9100e-003**	**0.1372**	**2.3900e-003**	**0.1396**	**0.0369**	**2.2600e-003**	**0.0392**	**0.0000**	**176.8305**	**176.8305**	**5.9500e-003**	**0.0000**	**176.9792**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0500e-003	8.6100e-003	8.2100e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**1.0500e-003**	**8.6100e-003**	**8.2100e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6300e-003	0.1143	0.0304	3.0000e-004	7.3200e-003	2.5000e-004	7.5700e-003	2.1200e-003	2.4000e-004	2.3600e-003	0.0000	28.8170	28.8170	1.2600e-003	0.0000	28.8484
Worker	0.0177	0.0122	0.1313	4.2000e-004	0.0455	2.9000e-004	0.0458	0.0121	2.6000e-004	0.0124	0.0000	37.6888	37.6888	8.6000e-004	0.0000	37.7102
Total	**0.0213**	**0.1266**	**0.1618**	**7.2000e-004**	**0.0529**	**5.4000e-004**	**0.0534**	**0.0142**	**5.0000e-004**	**0.0147**	**0.0000**	**66.5058**	**66.5058**	**2.1200e-003**	**0.0000**	**66.5586**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0500e-003	8.6100e-003	8.2100e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**1.0500e-003**	**8.6100e-003**	**8.2100e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6300e-003	0.1143	0.0304	3.0000e-004	7.3200e-003	2.5000e-004	7.5700e-003	2.1200e-003	2.4000e-004	2.3600e-003	0.0000	28.8170	28.8170	1.2600e-003	0.0000	28.8484
Worker	0.0177	0.0122	0.1313	4.2000e-004	0.0455	2.9000e-004	0.0458	0.0121	2.6000e-004	0.0124	0.0000	37.6888	37.6888	8.6000e-004	0.0000	37.7102
Total	**0.0213**	**0.1266**	**0.1618**	**7.2000e-004**	**0.0529**	**5.4000e-004**	**0.0534**	**0.0142**	**5.0000e-004**	**0.0147**	**0.0000**	**66.5058**	**66.5058**	**2.1200e-003**	**0.0000**	**66.5586**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1730	0.2060	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	28.9369	28.9369	1.9900e-003	0.0000	28.9865
Total	**0.9951**	**0.1730**	**0.2060**	**3.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**	**0.0000**	**28.9369**	**28.9369**	**1.9900e-003**	**0.0000**	**28.9865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-003	2.3600e-003	0.0253	8.0000e-005	8.7600e-003	6.0000e-005	8.8200e-003	2.3300e-003	5.0000e-005	2.3800e-003	0.0000	7.2548	7.2548	1.6000e-004	0.0000	7.2589
Total	**3.4000e-003**	**2.3600e-003**	**0.0253**	**8.0000e-005**	**8.7600e-003**	**6.0000e-005**	**8.8200e-003**	**2.3300e-003**	**5.0000e-005**	**2.3800e-003**	**0.0000**	**7.2548**	**7.2548**	**1.6000e-004**	**0.0000**	**7.2589**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1730	0.2060	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	28.9368	28.9368	1.9900e-003	0.0000	28.9865
Total	**0.9951**	**0.1730**	**0.2060**	**3.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**	**0.0000**	**28.9368**	**28.9368**	**1.9900e-003**	**0.0000**	**28.9865**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-003	2.3600e-003	0.0253	8.0000e-005	8.7600e-003	6.0000e-005	8.8200e-003	2.3300e-003	5.0000e-005	2.3800e-003	0.0000	7.2548	7.2548	1.6000e-004	0.0000	7.2589
Total	**3.4000e-003**	**2.3600e-003**	**0.0253**	**8.0000e-005**	**8.7600e-003**	**6.0000e-005**	**8.8200e-003**	**2.3300e-003**	**5.0000e-005**	**2.3800e-003**	**0.0000**	**7.2548**	**7.2548**	**1.6000e-004**	**0.0000**	**7.2589**

3.8 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0400e-003	4.4900e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-004**	**4.0400e-003**	**4.4900e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	7.3500e-003	1.6000e-003	2.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.0708	2.0708	9.0000e-005	0.0000	2.0732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**2.6000e-004**	**7.3800e-003**	**1.8700e-003**	**2.0000e-005**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**1.6000e-004**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**2.1496**	**2.1496**	**9.0000e-005**	**0.0000**	**2.1520**

3.8 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0400e-003	4.4900e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-004**	**4.0400e-003**	**4.4900e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	7.3500e-003	1.6000e-003	2.0000e-005	4.7000e-004	2.0000e-005	4.9000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	2.0708	2.0708	9.0000e-005	0.0000	2.0732
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0788
Total	**2.6000e-004**	**7.3800e-003**	**1.8700e-003**	**2.0000e-005**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**1.6000e-004**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**2.1496**	**2.1496**	**9.0000e-005**	**0.0000**	**2.1520**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1075	0.4643	1.2399	5.3500e-003	0.6188	3.5800e-003	0.6224	0.1656	3.3300e-003	0.1689	0.0000	491.9811	491.9811	0.0141	0.0000	492.3346
Unmitigated	0.1075	0.4643	1.2399	5.3500e-003	0.6188	3.5800e-003	0.6224	0.1656	3.3300e-003	0.1689	0.0000	491.9811	491.9811	0.0141	0.0000	492.3346

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	633.57	608.58	558.60	1,430,317	1,430,317
General Office Building	129.04	28.77	12.21	234,260	234,260
Parking Lot	0.00	0.00	0.00		
Total	762.61	637.35	570.81	1,664,577	1,664,577

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
General Office Building	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651
Parking Lot	0.621541	0.034056	0.180136	0.101248	0.011859	0.005060	0.013110	0.022881	0.002221	0.001470	0.005122	0.000646	0.000651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
NaturalGas Mitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928
NaturalGas Unmitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6827	0.0176	1.0919	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	7.6576	7.6576	1.8200e-003	1.1000e-004	7.7351
Unmitigated	0.6827	0.0176	1.0919	9.0000e-005		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	7.6576	7.6576	1.8200e-003	1.1000e-004	7.7351

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0327	0.0126	1.0897	6.0000e-005		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	1.7852	1.7852	1.7000e-003	0.0000	1.8278
Total	**0.6827**	**0.0176**	**1.0919**	**9.0000e-005**		**6.4700e-003**	**6.4700e-003**		**6.4700e-003**	**6.4700e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8100e-003**	**1.1000e-004**	**7.7351**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0327	0.0126	1.0897	6.0000e-005		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	1.7852	1.7852	1.7000e-003	0.0000	1.8278
Total	**0.6827**	**0.0176**	**1.0919**	**9.0000e-005**		**6.4700e-003**	**6.4700e-003**		**6.4700e-003**	**6.4700e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8100e-003**	**1.1000e-004**	**7.7351**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8350	0.0164	9.8200e-003	20.1722
Unmitigated	16.8350	0.0164	9.8200e-003	20.1722

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.7610	0.9905	0.0000	41.5246
Unmitigated	16.7610	0.9905	0.0000	41.5246

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

397 Blossom Hill Road Existing Site

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	32.00	1000sqft	2.04	32,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 Rate

Land Use - Existing Furniture Store

Construction Phase - No construction phasing for existing site

Off-road Equipment - No equipment for existing site

Grading -

Vehicle Trips - weekday trip rate: 5.56, sat 5.27, sun 2.56

Water And Wastewater - 100% aerobic

397 Blossom Hill Road Existing Site - Santa Clara County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	3.00	1.00
tblConstructionPhase	PhaseEndDate	2/5/2020	2/3/2020
tblGrading	AcresOfGrading	0.00	1.50
tblLandUse	LotAcreage	0.73	2.04
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblVehicleTrips	ST_TR	42.04	5.27
tblVehicleTrips	SU_TR	20.43	2.56
tblVehicleTrips	WD_TR	44.32	5.56
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	8.3000e-004	0.0000	8.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0272	0.0272	0.0000	0.0000	0.0272
Maximum	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.0272**	**0.0272**	**0.0000**	**0.0000**	**0.0272**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	8.3000e-004	0.0000	8.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0272	0.0272	0.0000	0.0000	0.0272
Maximum	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.0272**	**0.0272**	**0.0000**	**0.0000**	**0.0272**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.0001	0.0001
		Highest	0.0001	0.0001

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1417	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	49.0449	49.0449	4.5800e-003	1.0100e-003	49.4589
Mobile	0.0335	0.1313	0.3314	1.0500e-003	0.0933	9.2000e-004	0.0942	0.0250	8.5000e-004	0.0258	0.0000	95.8725	95.8725	3.5600e-003	0.0000	95.9613
Waste						0.0000	0.0000		0.0000	0.0000	6.8205	0.0000	6.8205	0.4031	0.0000	16.8975
Water						0.0000	0.0000		0.0000	0.0000	0.8386	2.3560	3.1946	3.1200e-003	1.8700e-003	3.8307
Total	**0.1756**	**0.1351**	**0.3348**	**1.0700e-003**	**0.0933**	**1.2000e-003**	**0.0945**	**0.0250**	**1.1300e-003**	**0.0261**	**7.6591**	**147.2739**	**154.9331**	**0.4143**	**2.8800e-003**	**166.1490**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1417	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Energy	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	49.0449	49.0449	4.5800e-003	1.0100e-003	49.4589
Mobile	0.0335	0.1313	0.3314	1.0500e-003	0.0933	9.2000e-004	0.0942	0.0250	8.5000e-004	0.0258	0.0000	95.8725	95.8725	3.5600e-003	0.0000	95.9613
Waste						0.0000	0.0000		0.0000	0.0000	6.8205	0.0000	6.8205	0.4031	0.0000	16.8975
Water						0.0000	0.0000		0.0000	0.0000	0.8386	2.3560	3.1946	3.1200e-003	1.8700e-003	3.8307
Total	**0.1756**	**0.1351**	**0.3348**	**1.0700e-003**	**0.0933**	**1.2000e-003**	**0.0945**	**0.0250**	**1.1300e-003**	**0.0261**	**7.6591**	**147.2739**	**154.9331**	**0.4143**	**2.8800e-003**	**166.1490**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	2/1/2020	2/3/2020	5	1	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Site Preparation	Scrapers	0	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-004**	**0.0000**	**8.0000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0272	0.0272	0.0000	0.0000	0.0272
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0272**	**0.0272**	**0.0000**	**0.0000**	**0.0272**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-004**	**0.0000**	**8.0000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0272	0.0272	0.0000	0.0000	0.0272
Total	**1.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0272**	**0.0272**	**0.0000**	**0.0000**	**0.0272**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0335	0.1313	0.3314	1.0500e-003	0.0933	9.2000e-004	0.0942	0.0250	8.5000e-004	0.0258	0.0000	95.8725	95.8725	3.5600e-003	0.0000	95.9613
Unmitigated	0.0335	0.1313	0.3314	1.0500e-003	0.0933	9.2000e-004	0.0942	0.0250	8.5000e-004	0.0258	0.0000	95.8725	95.8725	3.5600e-003	0.0000	95.9613

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	177.92	168.64	81.92	250,841	250,841
Total	177.92	168.64	81.92	250,841	250,841

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.9978	44.9978	4.5000e-003	9.3000e-004	45.3877
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	44.9978	44.9978	4.5000e-003	9.3000e-004	45.3877
NaturalGas Mitigated	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0471	4.0471	8.0000e-005	7.0000e-005	4.0712
NaturalGas Unmitigated	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0471	4.0471	8.0000e-005	7.0000e-005	4.0712

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	75840	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0471	4.0471	8.0000e-005	7.0000e-005	4.0712
Total		**4.1000e-004**	**3.7200e-003**	**3.1200e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0471**	**4.0471**	**8.0000e-005**	**7.0000e-005**	**4.0712**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	75840	4.1000e-004	3.7200e-003	3.1200e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0471	4.0471	8.0000e-005	7.0000e-005	4.0712
Total		**4.1000e-004**	**3.7200e-003**	**3.1200e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.0471**	**4.0471**	**8.0000e-005**	**7.0000e-005**	**4.0712**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	342080	44.9978	4.5000e-003	9.3000e-004	45.3877
Total		**44.9978**	**4.5000e-003**	**9.3000e-004**	**45.3877**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	342080	44.9978	4.5000e-003	9.3000e-004	45.3877
Total		**44.9978**	**4.5000e-003**	**9.3000e-004**	**45.3877**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1417	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Unmitigated	0.1417	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	**0.1417**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.7000e-004**	**5.7000e-004**	**0.0000**	**0.0000**	**6.1000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0167					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1250					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.7000e-004	5.7000e-004	0.0000	0.0000	6.1000e-004
Total	**0.1417**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.7000e-004**	**5.7000e-004**	**0.0000**	**0.0000**	**6.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.1946	3.1200e-003	1.8700e-003	3.8307
Unmitigated	3.1946	3.1200e-003	1.8700e-003	3.8307

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	2.37032 / 1.45278	3.1946	3.1200e-003	1.8700e-003	3.8307
Total		**3.1946**	**3.1200e-003**	**1.8700e-003**	**3.8307**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	2.37032 / 1.45278	3.1946	3.1200e-003	1.8700e-003	3.8307
Total		**3.1946**	**3.1200e-003**	**1.8700e-003**	**3.8307**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.8205	0.4031	0.0000	16.8975
Unmitigated	6.8205	0.4031	0.0000	16.8975

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	33.6	6.8205	0.4031	0.0000	16.8975
Total		**6.8205**	**0.4031**	**0.0000**	**16.8975**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	33.6	6.8205	0.4031	0.0000	16.8975
Total		**6.8205**	**0.4031**	**0.0000**	**16.8975**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.07	1000sqft	0.00	16,066.00	0
Parking Lot	108.00	Space	0.00	43,200.00	0
Apartments Mid Rise	147.00	Dwelling Unit	2.04	124,652.00	420

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2020 290 Rate

Land Use - Applicant Land Use from Construction Sheet, added common areas to apartment land use

Construction Phase - Applicant Construction Schedule

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Off-road Equipment - Applicant Equipment Usage and Quantity

Trips and VMT - 300 hauling trips, 200 cement truck trips during construction, 55 paving trips, TAC Trip length 1 mile

Demolition - Existing Office Building Demolition

Grading - 500 cy of soil hauling export

Vehicle Trips - Apartment: 4.31, 4.14, 3.80; Office: 8.03, 1.79, 0.76

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPS, Tier 3 Mitigation

Woodstoves - all gas

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	85.00
tblConstructionPhase	NumDays	220.00	320.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	PhaseEndDate	1/14/2021	6/24/2021
tblConstructionPhase	PhaseEndDate	12/17/2020	5/5/2021
tblConstructionPhase	PhaseEndDate	1/31/2020	1/8/2020
tblConstructionPhase	PhaseEndDate	2/13/2020	1/21/2020
tblConstructionPhase	PhaseEndDate	12/31/2020	6/30/2021
tblConstructionPhase	PhaseEndDate	2/5/2020	1/10/2020
tblConstructionPhase	PhaseStartDate	1/1/2021	2/26/2021
tblConstructionPhase	PhaseStartDate	2/14/2020	2/13/2020
tblConstructionPhase	PhaseStartDate	2/6/2020	1/13/2020
tblConstructionPhase	PhaseStartDate	12/18/2020	6/28/2021

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tblConstructionPhase	PhaseStartDate	2/1/2020	1/9/2020
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	22.05	47.04
tblFireplaces	NumberWood	24.99	0.00
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	16,070.00	16,066.00
tblLandUse	LandUseSquareFeet	147,000.00	124,652.00
tblLandUse	LotAcreage	0.37	0.00
tblLandUse	LotAcreage	0.97	0.00
tblLandUse	LotAcreage	3.87	2.04
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
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tblTripsAndVMT	HaulingTripNumber	146.00	300.00
tblTripsAndVMT	HaulingTripNumber	63.00	62.00
tblTripsAndVMT	HaulingTripNumber	0.00	55.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
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tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblVehicleTrips	ST_TR	6.39	4.14
tblVehicleTrips	ST_TR	2.46	1.79

tblVehicleTrips	SU_TR	5.86	3.80
tblVehicleTrips	SU_TR	1.05	0.76
tblVehicleTrips	WD_TR	6.65	4.31
tblVehicleTrips	WD_TR	11.03	8.03
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0300	0.2951	0.2191	5.1000e-004	0.0317	4.3600e-003	0.0360	6.3900e-003	4.0400e-003	0.0104	0.0000	47.2483	47.2483	5.9800e-003	0.0000	47.3978
2021	1.0054	0.2622	0.2787	5.1000e-004	6.1500e-003	0.0116	0.0177	1.6700e-003	0.0115	0.0132	0.0000	45.1283	45.1283	3.5100e-003	0.0000	45.2159
Maximum	**1.0054**	**0.2951**	**0.2787**	**5.1000e-004**	**0.0317**	**0.0116**	**0.0360**	**6.3900e-003**	**0.0115**	**0.0132**	**0.0000**	**47.2483**	**47.2483**	**5.9800e-003**	**0.0000**	**47.3978**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0249	0.2706	0.2260	5.1000e-004	0.0219	3.2800e-003	0.0252	4.3800e-003	3.2600e-003	7.6400e-003	0.0000	47.2483	47.2483	5.9800e-003	0.0000	47.3978
2021	0.9862	0.2383	0.2789	5.1000e-004	6.1500e-003	0.0114	0.0176	1.6700e-003	0.0114	0.0131	0.0000	45.1283	45.1283	3.5100e-003	0.0000	45.2159
Maximum	**0.9862**	**0.2706**	**0.2789**	**5.1000e-004**	**0.0219**	**0.0114**	**0.0252**	**4.3800e-003**	**0.0114**	**0.0131**	**0.0000**	**47.2483**	**47.2483**	**5.9800e-003**	**0.0000**	**47.3978**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.34**	**8.70**	**-1.42**	**0.00**	**25.77**	**7.60**	**20.35**	**24.94**	**5.47**	**12.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.1059	0.0897
2	4-6-2020	7-5-2020	0.0713	0.0674
3	7-6-2020	10-5-2020	0.0720	0.0680
4	10-6-2020	1-5-2021	0.0703	0.0663
5	1-6-2021	4-5-2021	0.4484	0.4328
6	4-6-2021	7-5-2021	0.8139	0.7869
		Highest	0.8139	0.7869

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.8580**	**0.7959**	**3.0714**	**7.2500e-003**	**0.6190**	**0.0179**	**0.6368**	**0.1657**	**0.0175**	**0.1832**	**21.1601**	**835.8217**	**856.9818**	**1.0430**	**0.0139**	**887.2008**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Energy	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	201.3051	201.3051	0.0135	3.9700e-003	202.8267
Mobile	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Waste						0.0000	0.0000		0.0000	0.0000	16.7610	0.0000	16.7610	0.9905	0.0000	41.5246
Water						0.0000	0.0000		0.0000	0.0000	4.3991	12.4359	16.8350	0.0164	9.8200e-003	20.1722
Total	**0.8580**	**0.7959**	**3.0714**	**7.2500e-003**	**0.6190**	**0.0179**	**0.6368**	**0.1657**	**0.0175**	**0.1832**	**21.1601**	**835.8217**	**856.9818**	**1.0430**	**0.0139**	**887.2008**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	1/8/2020	5	3	
2	Site Preparation	Site Preparation	1/9/2020	1/10/2020	5	2	
3	Grading	Grading	1/13/2020	1/21/2020	5	7	
4	Trenching	Trenching	1/22/2020	2/11/2020	5	15	
5	Building Construction	Building Construction	2/13/2020	5/5/2021	5	320	
6	Architectural Coating	Architectural Coating	2/26/2021	6/24/2021	5	85	
7	Paving	Paving	6/28/2021	6/30/2021	5	3	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 2.63

Acres of Paving: 0

Residential Indoor: 252,420; Residential Outdoor: 84,140; Non-Residential Indoor: 24,099; Non-Residential Outdoor: 8,033; Striped Parking Area: 2,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	0	0.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Excavators	1	3.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	1.00	9	0.56
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	1.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Architectural Coating	Air Compressors	2	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	1	5.00	132	0.36
Paving	Rollers	1	5.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	3.00	0.00	300.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	3.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	62.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	129.00	25.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	26.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	55.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0158	0.0000	0.0158	2.3800e-003	0.0000	2.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	3.6400e-003	4.9300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.6000e-004	1.6000e-004	0.0000	0.6840	0.6840	2.2000e-004	0.0000	0.6895
Total	**3.7000e-004**	**3.6400e-003**	**4.9300e-003**	**1.0000e-005**	**0.0158**	**1.8000e-004**	**0.0159**	**2.3800e-003**	**1.6000e-004**	**2.5400e-003**	**0.0000**	**0.6840**	**0.6840**	**2.2000e-004**	**0.0000**	**0.6895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0155	2.5300e-003	2.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	1.9482	1.9482	2.1000e-004	0.0000	1.9534
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6600e-003	3.6600e-003	0.0000	0.0000	3.6600e-003
Total	**3.3000e-004**	**0.0155**	**2.5600e-003**	**2.0000e-005**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**1.9519**	**1.9519**	**2.1000e-004**	**0.0000**	**1.9570**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	5.4000e-004	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	3.7000e-003	5.9100e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6840	0.6840	2.2000e-004	0.0000	0.6895
Total	**1.9000e-004**	**3.7000e-003**	**5.9100e-003**	**1.0000e-005**	**7.0900e-003**	**1.8000e-004**	**7.2700e-003**	**5.4000e-004**	**1.8000e-004**	**7.2000e-004**	**0.0000**	**0.6840**	**0.6840**	**2.2000e-004**	**0.0000**	**0.6895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0155	2.5300e-003	2.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	1.9482	1.9482	2.1000e-004	0.0000	1.9534
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6600e-003	3.6600e-003	0.0000	0.0000	3.6600e-003
Total	**3.3000e-004**	**0.0155**	**2.5600e-003**	**2.0000e-005**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**1.9519**	**1.9519**	**2.1000e-004**	**0.0000**	**1.9570**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e-004	6.3300e-003	1.8100e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**4.8000e-004**	**6.3300e-003**	**1.8100e-003**	**1.0000e-005**	**5.3000e-004**	**2.0000e-004**	**7.3000e-004**	**6.0000e-005**	**1.9000e-004**	**2.5000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.4400e-003	2.4400e-003	0.0000	0.0000	2.4400e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4400e-003**	**2.4400e-003**	**0.0000**	**0.0000**	**2.4400e-003**

3.3 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6000e-004	3.1400e-003	3.5200e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.5831	0.5831	1.9000e-004	0.0000	0.5878
Total	**1.6000e-004**	**3.1400e-003**	**3.5200e-003**	**1.0000e-005**	**2.4000e-004**	**1.2000e-004**	**3.6000e-004**	**1.0000e-005**	**1.2000e-004**	**1.3000e-004**	**0.0000**	**0.5831**	**0.5831**	**1.9000e-004**	**0.0000**	**0.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.4400e-003	2.4400e-003	0.0000	0.0000	2.4400e-003
Total	**0.0000**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4400e-003**	**2.4400e-003**	**0.0000**	**0.0000**	**2.4400e-003**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4200e-003	0.0000	1.4200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1100e-003	0.0251	0.0163	4.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	3.1264	3.1264	1.0100e-003	0.0000	3.1517
Total	**2.1100e-003**	**0.0251**	**0.0163**	**4.0000e-005**	**1.4200e-003**	**9.4000e-004**	**2.3600e-003**	**1.5000e-004**	**8.7000e-004**	**1.0200e-003**	**0.0000**	**3.1264**	**3.1264**	**1.0100e-003**	**0.0000**	**3.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	3.2000e-003	5.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.4026	0.4026	4.0000e-005	0.0000	0.4037
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0142	0.0142	0.0000	0.0000	0.0143
Total	**9.0000e-005**	**3.2100e-003**	**6.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.4169**	**0.4169**	**4.0000e-005**	**0.0000**	**0.4180**

3.4 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.4000e-004	0.0000	6.4000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	0.0169	0.0230	4.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	3.1264	3.1264	1.0100e-003	0.0000	3.1517
Total	**8.7000e-004**	**0.0169**	**0.0230**	**4.0000e-005**	**6.4000e-004**	**7.3000e-004**	**1.3700e-003**	**3.0000e-005**	**7.3000e-004**	**7.6000e-004**	**0.0000**	**3.1264**	**3.1264**	**1.0100e-003**	**0.0000**	**3.1517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	3.2000e-003	5.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.4026	0.4026	4.0000e-005	0.0000	0.4037
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0142	0.0142	0.0000	0.0000	0.0143
Total	**9.0000e-005**	**3.2100e-003**	**6.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.4169**	**0.4169**	**4.0000e-005**	**0.0000**	**0.4180**

3.5 Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0167	0.0199	3.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	2.5562	2.5562	8.3000e-004	0.0000	2.5769
Total	**1.6700e-003**	**0.0167**	**0.0199**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**2.5562**	**2.5562**	**8.3000e-004**	**0.0000**	**2.5769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0305	0.0305	0.0000	0.0000	0.0305
Total	**4.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0000**	**0.0305**

3.5 Trenching - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.1000e-004	0.0150	0.0220	3.0000e-005		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	2.5562	2.5562	8.3000e-004	0.0000	2.5769
Total	**7.1000e-004**	**0.0150**	**0.0220**	**3.0000e-005**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**2.5562**	**2.5562**	**8.3000e-004**	**0.0000**	**2.5769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0305	0.0305	0.0000	0.0000	0.0305
Total	**4.0000e-005**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0000**	**0.0305**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9300e-003	0.0241	0.0215	3.0000e-005		1.6000e-003	1.6000e-003		1.4900e-003	1.4900e-003	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**2.9300e-003**	**0.0241**	**0.0215**	**3.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4500e-003	0.1931	0.0536	2.4000e-004	2.6700e-003	3.1000e-004	2.9800e-003	7.8000e-004	3.0000e-004	1.0800e-003	0.0000	23.1802	23.1802	2.2600e-003	0.0000	23.2367
Worker	0.0165	7.5600e-003	0.0977	1.3000e-004	0.0111	1.5000e-004	0.0112	2.9600e-003	1.4000e-004	3.1000e-003	0.0000	12.1163	12.1163	5.2000e-004	0.0000	12.1294
Total	**0.0220**	**0.2007**	**0.1513**	**3.7000e-004**	**0.0138**	**4.6000e-004**	**0.0142**	**3.7400e-003**	**4.4000e-004**	**4.1800e-003**	**0.0000**	**35.2965**	**35.2965**	**2.7800e-003**	**0.0000**	**35.3661**

3.6 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4000e-004	0.0124	0.0168	3.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	2.6005	2.6005	7.0000e-004	0.0000	2.6179
Total	**5.4000e-004**	**0.0124**	**0.0168**	**3.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**2.6005**	**2.6005**	**7.0000e-004**	**0.0000**	**2.6179**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4500e-003	0.1931	0.0536	2.4000e-004	2.6700e-003	3.1000e-004	2.9800e-003	7.8000e-004	3.0000e-004	1.0800e-003	0.0000	23.1802	23.1802	2.2600e-003	0.0000	23.2367
Worker	0.0165	7.5600e-003	0.0977	1.3000e-004	0.0111	1.5000e-004	0.0112	2.9600e-003	1.4000e-004	3.1000e-003	0.0000	12.1163	12.1163	5.2000e-004	0.0000	12.1294
Total	**0.0220**	**0.2007**	**0.1513**	**3.7000e-004**	**0.0138**	**4.6000e-004**	**0.0142**	**3.7400e-003**	**4.4000e-004**	**4.1800e-003**	**0.0000**	**35.2965**	**35.2965**	**2.7800e-003**	**0.0000**	**35.3661**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0500e-003	8.6100e-003	8.2100e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**1.0500e-003**	**8.6100e-003**	**8.2100e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8800e-003	0.0707	0.0191	9.0000e-005	1.0300e-003	6.0000e-005	1.0900e-003	3.0000e-004	6.0000e-005	3.6000e-004	0.0000	8.8457	8.8457	8.2000e-004	0.0000	8.8663
Worker	5.8100e-003	2.5700e-003	0.0339	5.0000e-005	4.2700e-003	6.0000e-005	4.3200e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	4.5097	4.5097	1.8000e-004	0.0000	4.5141
Total	**7.6900e-003**	**0.0733**	**0.0530**	**1.4000e-004**	**5.3000e-003**	**1.2000e-004**	**5.4100e-003**	**1.4400e-003**	**1.1000e-004**	**1.5500e-003**	**0.0000**	**13.3555**	**13.3555**	**1.0000e-003**	**0.0000**	**13.3804**

3.6 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-004	4.7800e-003	6.4600e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	1.0019	1.0019	2.7000e-004	0.0000	1.0086
Total	**2.1000e-004**	**4.7800e-003**	**6.4600e-003**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**1.0019**	**1.0019**	**2.7000e-004**	**0.0000**	**1.0086**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8800e-003	0.0707	0.0191	9.0000e-005	1.0300e-003	6.0000e-005	1.0900e-003	3.0000e-004	6.0000e-005	3.6000e-004	0.0000	8.8457	8.8457	8.2000e-004	0.0000	8.8663
Worker	5.8100e-003	2.5700e-003	0.0339	5.0000e-005	4.2700e-003	6.0000e-005	4.3200e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	4.5097	4.5097	1.8000e-004	0.0000	4.5141
Total	**7.6900e-003**	**0.0733**	**0.0530**	**1.4000e-004**	**5.3000e-003**	**1.2000e-004**	**5.4100e-003**	**1.4400e-003**	**1.1000e-004**	**1.5500e-003**	**0.0000**	**13.3555**	**13.3555**	**1.0000e-003**	**0.0000**	**13.3804**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1730	0.2060	3.4000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	28.9369	28.9369	1.9900e-003	0.0000	28.9865
Total	**0.9951**	**0.1730**	**0.2060**	**3.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**	**0.0000**	**28.9369**	**28.9369**	**1.9900e-003**	**0.0000**	**28.9865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	4.9000e-004	6.5300e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.8681	0.8681	3.0000e-005	0.0000	0.8689
Total	**1.1200e-003**	**4.9000e-004**	**6.5300e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.8681**	**0.8681**	**3.0000e-005**	**0.0000**	**0.8689**

3.7 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7400e-003	0.1538	0.2077	3.4000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	28.9368	28.9368	1.9900e-003	0.0000	28.9865
Total	**0.9770**	**0.1538**	**0.2077**	**3.4000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**28.9368**	**28.9368**	**1.9900e-003**	**0.0000**	**28.9865**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	4.9000e-004	6.5300e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.8681	0.8681	3.0000e-005	0.0000	0.8689
Total	**1.1200e-003**	**4.9000e-004**	**6.5300e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.8681**	**0.8681**	**3.0000e-005**	**0.0000**	**0.8689**

3.8 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0400e-003	4.4900e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2000e-004**	**4.0400e-003**	**4.4900e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.7300e-003	4.5000e-004	0.0000	2.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.3534	0.3534	4.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	9.4300e-003	9.4300e-003	0.0000	0.0000	9.4400e-003
Total	**7.0000e-005**	**2.7400e-003**	**5.2000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.3628**	**0.3628**	**4.0000e-005**	**0.0000**	**0.3638**

3.8 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5000e-004	3.2000e-003	4.7700e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.6031	0.6031	1.8000e-004	0.0000	0.6077
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5000e-004**	**3.2000e-003**	**4.7700e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.6031**	**0.6031**	**1.8000e-004**	**0.0000**	**0.6077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.7300e-003	4.5000e-004	0.0000	2.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.3534	0.3534	4.0000e-005	0.0000	0.3543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	9.4300e-003	9.4300e-003	0.0000	0.0000	9.4400e-003
Total	**7.0000e-005**	**2.7400e-003**	**5.2000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.3628**	**0.3628**	**4.0000e-005**	**0.0000**	**0.3638**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417
Unmitigated	0.1666	0.7068	1.9397	6.7100e-003	0.6190	5.7000e-003	0.6247	0.1657	5.3200e-003	0.1710	0.0000	614.4231	614.4231	0.0207	0.0000	614.9417

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	633.57	608.58	558.60	1,430,317	1,430,317
General Office Building	129.04	28.77	12.21	234,260	234,260
Parking Lot	0.00	0.00	0.00		
Total	762.61	637.35	570.81	1,664,577	1,664,577

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
General Office Building	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740
Parking Lot	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	119.4984	119.4984	0.0120	2.4700e-003	120.5339
NaturalGas Mitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928
NaturalGas Unmitigated	8.2700e-003	0.0714	0.0357	4.5000e-004		5.7100e-003	5.7100e-003		5.7100e-003	5.7100e-003	0.0000	81.8067	81.8067	1.5700e-003	1.5000e-003	82.2928

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.27e+006	6.8500e-003	0.0585	0.0249	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7720	67.7720	1.3000e-003	1.2400e-003	68.1747
General Office Building	263000	1.4200e-003	0.0129	0.0108	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0347	14.0347	2.7000e-004	2.6000e-004	14.1181
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2700e-003**	**0.0714**	**0.0357**	**4.5000e-004**		**5.7100e-003**	**5.7100e-003**		**5.7100e-003**	**5.7100e-003**	**0.0000**	**81.8067**	**81.8067**	**1.5700e-003**	**1.5000e-003**	**82.2928**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	606867	79.8284	7.9800e-003	1.6500e-003	80.5202
General Office Building	286457	37.6810	3.7700e-003	7.8000e-004	38.0076
Parking Lot	15120	1.9889	2.0000e-004	4.0000e-005	2.0062
Total		**119.4984**	**0.0120**	**2.4700e-003**	**120.5339**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356
Unmitigated	0.6831	0.0177	1.0960	9.0000e-005		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	7.6576	7.6576	1.8400e-003	1.1000e-004	7.7356

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0331	0.0126	1.0938	6.0000e-005		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	1.7852	1.7852	1.7300e-003	0.0000	1.8283
Total	**0.6831**	**0.0177**	**1.0960**	**9.0000e-005**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8400e-003**	**1.1000e-004**	**7.7356**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0970					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.9000e-004	5.0700e-003	2.1600e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	5.8724	5.8724	1.1000e-004	1.1000e-004	5.9073
Landscaping	0.0331	0.0126	1.0938	6.0000e-005		6.0400e-003	6.0400e-003		6.0400e-003	6.0400e-003	0.0000	1.7852	1.7852	1.7300e-003	0.0000	1.8283
Total	**0.6831**	**0.0177**	**1.0960**	**9.0000e-005**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**7.6576**	**7.6576**	**1.8400e-003**	**1.1000e-004**	**7.7356**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8350	0.0164	9.8200e-003	20.1722
Unmitigated	16.8350	0.0164	9.8200e-003	20.1722

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.57764 / 6.03808	12.9856	0.0126	7.5700e-003	15.5563
General Office Building	2.85618 / 1.75056	3.8494	3.7600e-003	2.2600e-003	4.6159
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.8350**	**0.0164**	**9.8300e-003**	**20.1722**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.7610	0.9905	0.0000	41.5246
Unmitigated	16.7610	0.9905	0.0000	41.5246

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	67.62	13.7263	0.8112	0.0000	34.0062
General Office Building	14.95	3.0347	0.1794	0.0000	7.5184
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**16.7610**	**0.9906**	**0.0000**	**41.5246**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: Construction Health Risk Calculations

397 Blossom Hill, San Jose, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model 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 ($g/s/m^2$)
2020	Construction	0.0044	DPM	8.7	0.00239	3.01E-04	8,252	**3.65E-08**
2021	Construction	0.0116	DPM	23.2	0.00636	8.01E-04	8,252	**9.71E-08**
Total		***0.0160***		***31.9***	***0.0087***	***0.0011***		

Operation Hours

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

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 $g/s/m^2$
2020	Construction	FUG	0.0064	12.8	0.00352	4.43E-04	8,252	**5.37E-08**
2021	Construction	FUG	0.0017	3.4	0.00093	1.17E-04	8,252	**1.41E-08**
Total			***0.0081***	***16.2***	***0.0044***	***0.0006***		

Operation Hours

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

397 Blossom Hill, San Jose, CA
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2020	0.0105	0.0175	1.72	0.03	0.002	0.03
2021	0.0279	0.0046	4.58	0.08	0.006	0.03
Total	-	-	**6.3**	**0.1**	-	-
Maximum	0.0279	0.0175	-	-	**0.006**	**0.03**

397 Blossom Hill, San Jose, CA - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-4.5 meter

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 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
							Modeled					
Exposure	Exposure Duration		DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Age Sensitivity	Cancer Risk	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
0	0.25	-0.25 - 0*			10	0.00			-	-		
1	1	0 - 1	2020	0.0105	10	1.72	2020	0.0105	1	0.03	0.0175	0.0280
2	1	1 - 2	2021	0.0279	10	4.58	2021	0.0279	1	0.08	0.0046	0.0325
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						**6.3**				**0.11**		

* Third trimester of pregnancy

397 Blossom Hill, San Jose, CA - Unmitigated Emissions
Maximum DPM Cancer Risk Calculations From Construction
Impacts at Off-Site Receptors-1.5 meter receptor height

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

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
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 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

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

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult		
							Modeled					
Exposure	**Exposure Duration**		**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**	**DPM Conc (ug/m3)**		**Age Sensitivity**	**Cancer Risk**	**Fugitive**	**Total**
Year	**(years)**	**Age**	**Year**	**Annual**	**Factor**	**(per million)**	**Year**	**Annual**	**Factor**	**(per million)**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*	0	-	10			-	-	-		
1	1	0 - 1	2020	0.0093	10	1.52	2020	0.0093	1	0.03	0.0261	0.0349
2	1	1 - 2	2021	0.0247	10	4.05	2021	0.0247	1	0.07	0.0069	0.0303
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						**5.6**				**0.10**		

* Third trimester of pregnancy

Attachment 4: Screening Community Risk Calculations

397 Blossom Hill Road Adult Senior Housing in San Jose, CA

Screening Community Risk Assessment - Adult Senior Exposures

Source	Daily Exposure Duration (hours)	BAAQMD Screening Tools: Screening Risk (per million)	BAAQMD Screening Tools: Screening PM2.5 ($\mu g/m^3$)	Adjusted for Exposure*: Lifetime Cancer Risk for Adult Seniors (per million)
Blossom Hill Road (45 feet north) ADT 32,425	Adult 24	13.46	0.28	**2.93**
Snell Avenue (740 feet east) ADT 24,750	Adult 24	2.03	0.05	**0.44**
Lucky #765 (Generator, Plant #18316)	Adult 24	0.00	-	**0.00**
Blossom Shell (Gas Station, Plant #112337)	Adult 24	0.05	-	**0.01**
Conoco Phillips (Gas Station, Plant #100834)	Adult 24	1.18	-	**0.26**
Valero Refining (Gas Station, Plant #110366)	Adult 24	2.53	-	**0.55**
Chevron (Gas Station, Plant #103876)	Adult 24	1.74	-	**0.38**
Cumulative Levels				**4.57**

* Adjustments

Breathing rate adjustment (CR)	0.86	, where old lifetime risk = 302, new OEHHA = 261 L/kg-day
Age sensitivity factor (CR)	0.59	, lifetime risk = 1.7 and adult =1
Exposure duration (hrs/day) (CR)	1.00	, lifetime = 24 hours and care facility = 24 hours
Exposure duration (days/year) (CR)	1.00	, where lifetime risk = 350 days, care facility = 350
Exposure duration (years) (CR)	0.429	, where lifetime risk = 70 years, facility = 30 years.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	345 feet
Annual Average Daily Traffic (ADT)	32,425

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.094 ($\mu g/m^3$)

Cancer Risk

4.99 (per million) pytha

Blossom Hill Road, MEI

Cumulative plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

3.43

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	East-West
Side of the Roadway	North
Distance from Roadway	45 feet
Annual Average Daily Traffic (ADT)	32,425

Results

Santa Clara County

EAST-WEST DIRECTIONAL ROADWAY

PM2.5 annual average

0.267 ($\mu g/m^3$)

Cancer Risk

13.46 (per million)

Blossom Hill Road, Project Site

Cumulative plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

9.25

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	East
Distance from Roadway	770 feet
Annual Average Daily Traffic (ADT)	24,750

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.044 ($\mu g/m^3$)

Cancer Risk

1.92 (per million)

Snell Avenue, MEI

Cumulative plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

1.32

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Notes and References listed below the Search Boxes

Search Parameters

County	Santa Clara
Roadway Direction	North-South
Side of the Roadway	East
Distance from Roadway	740 feet
Annual Average Daily Traffic (ADT)	24,750

Results

Santa Clara County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.046 ($\mu g/m^3$)

Cancer Risk

2.03 (per million)

Snell Avenue, Project Site

Cumulative plus project volumes from traffic report

Data for Santa Clara County based on meteorological data collected from San Jose Airport in 1997

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

1.39

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggragate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using ~~CALINE4~~ Cal3qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

BAAQMD RESPONSE

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

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

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

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

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

Table A: Requester Contact Information

Date of Request	**1/14/2019**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-040 X111
Email	mmcnamara@illingworthrodkin.com
Project Name	397 Blossom Hill Road
Address	397 Blossom Hill Road
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Mixed-use
Project Size (# of units or building square feet)	147 units
Comments:	

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

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

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

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

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

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

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

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

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

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[4]	Type of Source[5]	Fuel Code[5]	Status/Comments
600	Lucky #765	430 Blossom Hill Rd	18316	0.0024258	0.0000	0.000699		Generator		use ICE multiplier
850	Blossom Shell SS #135995	5599 Snell Ave	112337	2.450	0.0121			Gas Dispensing Facility		Use GDF multiplier
500	ConocoPhillips #2611229-Chalal	449 Blossom Hill Rd	100834	17.818	0.0880			Gas Dispensing Facility		Shutdown
590	Valero Refining Co SS#7266	448 Blossom Hill Rd	110366	73.596683	0.3633			Gas Dispensing Facility		Use GDF multiplier
870	Chevron #9-5771	452 Blossom Hill Rd	103876	94.901	0.4685			Gas Dispensing Facility		Use GDF multiplier

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

Date last updated:
03/13/2018

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

ADJUSTED RISK

Risk & Hazard Stationary Source Inquiry Form

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

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

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

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

Table A: Requester Contact Information

Date of Request	**1/14/2019**
Contact Name	Mimi McNamara
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-040 X111
Email	mmcnamara@illingworthrodkin.com
Project Name	397 Blossom Hill Road
Address	397 Blossom Hill Road
City	San Jose
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Mixed-use
Project Size (# of units or building square feet)	147 units
Comments:	

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

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

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

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

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

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

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

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

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

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (feet) or MEI[1]	Facility Name	Address	Plant No.	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	**Project Site** Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5	**Construction MEI** Distance from Receptor (feet) or MEI	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
600	Lucky #765	430 Blossom Hill Rd	18316	0.0024258	0.0000	0.0007		Generator		use ICE multiplier	0.09	0.00	0.00	0.00	830	0.06	0.00	0.00	0.00
850	Blossom Shell SS #135995	5599 Snell Ave	112337	2.450	0.0121			Gas Dispensing Facility		Use GDF multiplier	0.02	0.05	0.00		940	0.02	0.04	0.00	
400	ConocoPhillips #2611229-Chalal	449 Blossom Hill Rd	100834	17.818	0.0880			Gas Dispensing Facility		Shutdown	0.07	1.18	0.01		560	0.07	1.18	0.01	
590	Valero Refining Co SS#7266	448 Blossom Hill Rd	110366	73.596683	0.3633			Gas Dispensing Facility		Use GDF multiplier	0.03	2.53	0.01		800	0.02	1.53	0.01	
870	Chevron #9-5771	452 Blossom Hill Rd	103876	94.901	0.4685			Gas Dispensing Facility		Use GDF multiplier	0.02	1.74	0.01		>1,000	0.01	1.42	0.01	

Footnotes:

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

Date last updated:
03/13/2018

How to Use the Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities (GDF)

This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions (GDF's).

1. Obtain the GDF cancer risk and/or chronic hazard index from the District's Stationary Source Screening Analysis tool for facilities where the Plant No. is preceded with a 'G'. If the distance to the nearest receptor is less than 20 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk and/or chronic hazard index estimate.

2. Determine the shortest distance from the GDF to the nearest receptor.

3. In the table below, enter the cancer risk and/or chronic hazard index found in step 1 for the GDF in the row which aligns with the shortest distance from each GDF to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 300 meters, use the multiplier 0.015. The resulting product is the adjusted cancer risk in a million or the adjusted chronic hazard index for the GDF.

Note: These distance adjustment multipliers may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for gasoline dispensing facilities. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Distance meters	Distance feet	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Chronic Hazard Index	Adjusted Chronic Hazard Index
20	66	1.000		0		0
25	82	0.728		0		0
30	98	0.559		0		0
35	115	0.445		0		0
40	131	0.365		0		0
45	148	0.305		0		0
50	164	0.260		0		0
55	180	0.225		0		0
60	197	0.197		0		0
65	213	0.174		0		0
70	230	0.155		0		0
75	246	0.139		0		0
80	262	0.126		0		0
85	279	0.114		0		0
90	295	0.104		0		0
95	312	0.096		0		0
100	328	0.088		0		0
105	344	0.082		0		0
110	361	0.076		0		0
115	377	0.071		0		0
120	394	0.066		0		0
125	410	0.062		0		0
130	426	0.058		0		0
135	443	0.055		0		0
140	459	0.052		0		0
145	476	0.049		0		0
150	492	0.046		0		0
155	508	0.044		0		0
160	525	0.042		0		0
165	541	0.040		0		0
170	558	0.038		0		0
175	574	0.036		0		0
180	590	0.034		0		0
185	607	0.033		0		0
190	623	0.031		0		0
195	640	0.030		0		0
200	656	0.029		0		0
205	672	0.028		0		0
210	689	0.027		0		0
215	705	0.026		0		0
220	722	0.025		0		0
225	738	0.024		0		0
230	754	0.023		0		0
235	771	0.022		0		0
240	787	0.022		0		0
245	804	0.021		0		0
250	820	0.020		0		0
255	836	0.020		0		0
260	853	0.019		0		0
265	869	0.018		0		0
270	886	0.018		0		0
275	902	0.017		0		0
280	918	0.017		0		0
285	935	0.016		0		0
290	951	0.016		0		0
295	968	0.015		0		0
300	984	0.015		0		0

How to Use the Distance Adjustment Multiplier Tool for Diesel Internal Combustion (IC) Engines

This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

1. Obtain the facility diesel IC engine(s) cancer risk and/or PM2.5 concentration from the District's Stationary Source Screening Analysis tool only for facilities where the source is listed as "generator." If the distance to the nearest receptor is less than 25 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk, chronic hazard index or PM2.5 estimates.

2. Determine the shortest distance from each diesel IC engine to the nearest receptor. Select the shortest distance to receptor found.

3. In the table below, enter the cancer risk and/or PM2.5 concentration found in step 1 for the diesel IC engine in the row which aligns with the shortest distance from each diesel IC engine to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 280 meters, use the multiplier 0.04. The resulting product is the adjusted cancer risk in a million or the adjusted PM2.5 concentration for the diesel IC engine

Note: This distance adjustment multiplier may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for diesel IC engines. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Note: This distance adjustment multiplier may also be used to adjust the screening values for chronic hazard index found in the District's Stationary Source Screening Analysis Tool for facilities with only diesel IC engines.

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
25	82	0.85		0		0
30	98.4	0.73		0		0
35	115	0.64		0		0
40	131	0.58		0		0
50	164	0.5		0		0
60	197	0.41		0		0
70	230	0.31		0		0
80	262	0.28		0		0
90	295	0.25		0		0
100	328	0.22		0		0
110	361	0.18		0		0
120	394	0.16		0		0
130	426	0.15		0		0
140	459	0.14		0		0
150	492	0.12		0		0
160	525	0.1		0		0
180	590	0.09		0		0
200	656	0.08		0		0
220	722	0.07		0		0
240	787	0.06		0		0
260	853	0.05		0		0
280	918	0.04		0		0